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**Development of the Medicaid
Analytic Extract Enrollee Master
(MAXEM) File, 2005 and 2006**

Final Report

September 14, 2010

John L. Czajka
Audra Wenzlow
Julie Sykes



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Policy Research, Inc.

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EXECUTIVE SUMMARY

Beginning in 1999, all states and the District of Columbia have been required to report Medicaid enrollee eligibility and claims data quarterly in a standard format into the Medicaid Statistical Information System (MSIS). The research files derived from these data, the Medicaid Analytic extract (MAX), have since been produced by Mathematica Policy Research for the Centers for Medicare & Medicaid Services (CMS) for each state, by calendar year. As the quality of the data has improved, MAX has become one of the most important research tools for understanding patterns of Medicaid service use and expenditures across states.

Recent policy developments have highlighted the importance of developing a more effective means of linking Medicaid records over time and across states. To address this and related needs, CMS contracted with Mathematica to design and implement a new MAX Enrollee Master file (MAXEM) that will provide researchers Medicaid records that have been unduplicated both within and across years and within and across states and will give them the means to link MAX records over both dimensions as well. This report describes Mathematica's design and development of the first MAXEM files, for 2005 and 2006.

Linkage Variables

To link Medicaid records efficiently and accurately and to evaluate the quality of the linkages afterwards requires variables that can reliably and uniquely identify each Medicaid enrollee. Accordingly, the first task in the design phase of this project was to evaluate the strengths and limitations of state-reported identifiers contained in MAX. Our analysis concluded that five personal identifiers—the MSIS ID, Social Security number (SSN), health insurance claim number (HIC), date of birth (DOB), and sex—could be used to link MAX records within states and that the last four of these could be used to link MAX records across states. The MSIS ID assigned by the state is designed to uniquely identify each enrollee within that jurisdiction, so it is highly effective in linking enrollee records within a state, but it is of no use in linking enrollee records across states. SSNs collected during Medicaid enrollment are available for most enrollees. SSNs are also obtained independently from Medicare Enrollment Database (EDB) records that are linked to the Medicaid files for Medicare enrollees. The EDB is also the most reliable source of the HIC. In the 2005 MAX Person Summary (PS) file, 89 percent of records contained an SSN or HIC along with a DOB and sex. Race/ethnicity, Medicaid eligibility group, and Medicaid service use were found to be useful for quality review but not for linking. Such variables cannot confirm an individual linkage, but they can be useful in the aggregate for assessing the comparative quality of linkages across different subpopulations or linkage methodologies, and we used them in both capacities.

Linkage Algorithm

A second key component of this project was the identification or development of an algorithm suitable for linking MAX records within and across years and within and across states. After reviewing a number of algorithms for linking administrative records we selected three for further evaluation: (1) an approach used by CMS to merge Medicare Modernization Act (MMA) Part D data to the Medicare Master Beneficiary Database (MBD), (2) an approach used to link MAX data with the EDB, and (3) probabilistic record linkage. The MMA-MBD approach uses a

point system to determine the level of agreement on seven variables that is sufficient to classify a record pair as a link—that is, representing the same person. The MAX-EDB approach differs in the combinations of variables that define a record pair as a link and does not use a point system. Probabilistic linkage differs from the first two “deterministic” methods in that it assigns a score based on the likelihood that the agreement observed between variables on two records could occur by chance. This method takes into account that agreement on some variables—for example, sex—provides less information than agreement on other variables, such as date of birth. Probabilistic linking also allows for partial agreement on a variable. This is particularly useful when the linking variables include names or addresses, but it can be useful with identification numbers as well, providing an important advantage over the deterministic methods.

We selected three states—Arizona, California, and Nevada—for a prototype implementation and evaluation of the three algorithms. The prototype design included combining files across years and states, implementing the linking algorithm, and performing a link quality review to assess whether the linked records represented the same person. The three states allowed us to address a wide range of programming, linkage variable quality, and data processing challenges likely to be encountered when implementing the final algorithm on all of the states.

Lacking a means to determine true agreement, we assessed the quality of any two linked record pairs by their agreement on six measures—race/ethnicity, BOE, non-overlapping months of enrollment, use of any services, use of institutional care, and use of prescription drugs. In addition to examining the quality of the linkages, we also compared the algorithms with respect to their processing time and computational efficiency. After preliminary testing we rejected probabilistic linking as an option because it required inordinate amounts of computer time to run, even when we restricted the record pairs to be evaluated to those that would have been defined as links under the other two algorithms. In addition, with this degree of “blocking” to restrict the record pairs that could be linked, probabilistic record linkage lost its chief advantages over the deterministic methods.

Overall, in our more extensive evaluation of the two deterministic approaches, the MMA-MBD and MAX-EDB linkage algorithms produced similar linkage rates, with the MMA-MBD increasing the number of links by less than 0.2 percent for within-state linkages and by 1 percent for cross-state linkages over MAX-EDB. Our analysis also suggested that data entry errors in SSNs, resulting in two transposed digits or disagreement on one digit, cannot be differentiated from records for distinct individuals and should not be included in the MAXEM linking algorithm unless names become available as linking variables, in which case strategies for accounting for data entry errors in SSNs should be reconsidered. Based on these findings, we recommended to CMS that MAXEM implement the MMA-MBD algorithm with a few modifications: allow linkages by MSIS ID within state (without regard to DOB and gender agreement) and do not allow linkages based on HIC when they do not have equatable beneficiary identification codes (BICs).

CMS accepted the proposed modified version of the MMA-MBD algorithm but also requested three additional changes: require agreement on sex, require agreement on at least 2 parts of the date of birth, and eliminate the scoring methodology. The final algorithm, then, allowed a pair of records to be linked if they agreed on any one of the following:

- MSIS ID

- MAX SSN + sex + at least two of (DOB year, DOB month, DOB, day)
- EDB-SSN + sex + at least two of (DOB year, DOB month, DOB, day)
- EDB-HIC (using equatable BIC) + sex + at least two of (DOB year, DOB month, DOB, day)

This algorithm was applied first to link records within states, both within and across years, and then to link records across states.

Linkages Within States

Over the two years we found comparatively few linked pairs within a state and year—only 327,000 out of 121 million records. MSIS IDs are not duplicated on MAX files within a state and year, but some duplicates were created in MAXEM processing when we applied the corrections to temporary IDs supplied by the states. These duplicates accounted for only 5.17 percent of the total linked pairs within state and year. Net additional links by MAX SSN accounted for 93.15 percent of the two-year total, with another 1.37 percent by EDB-SSN and the remaining 0.31 percent by EDB-HIC. In eight states, however, links by EDB-SSN and EDB-HIC accounted for more than half of the within-year total, implying that most of the within-year duplication in these states occurred among beneficiaries dually enrolled in Medicaid and Medicare.

While within-year links were comparatively rare, high rates of enrollee retention were responsible for a substantial number of across-year linkages. We identified 50.2 million linked pairs between the two years, which means that 83 percent of the 60.5 million enrollee records in 2005 linked to records in the same state in 2006. Virtually all of these links—99.38 percent—were based on MSIS ID. The proportion of enrollee records in 2005 that linked to records in 2006 did not vary greatly among the states. All but a handful of states had rates between 79 and 87 percent, but there were outliers, with Louisiana the highest at 90 percent and Nevada the lowest at 68 percent. The narrow distribution of across-year linkage rates implies considerable similarity in caseload turnover across states.

After the within-state record linkage was complete, the process of unduplication within each state involved three steps: (1) assignment of a common MAXEM ID to all records representing the same individual, (2) reconciliation of identifiers and demographic variables across records with the same MAXEM ID, and (3) consolidation of linked records within the same year. Replacement of missing or inconsistent values under step (2) was much less frequent in 2006 than 2005 due to the fact that most of the replacement values for 2005 came from 2006. This implies that the addition of 2007 data to MAXEM will yield corrections to the 2006 data.

Linkages Across States

Records were linked across states in order to produce an unduplicated count of enrollees in each year for the entire United States. These linkages could not use the MSIS ID, as it is assigned at the state level. For the nation as a whole and in virtually every state, 99.9 percent of the across-state linkages were due to the MAX SSN.

On average, 4.2 percent of enrollee records in the two years linked to a record in another state in the same year, which means that about half that fraction of individual enrollees were

enrolled in two or more states in the same year. An additional 0.4 percent of records in 2005 linked to a record in another state in 2006. For the across-year linkages we can identify an origin (2005) and a destination (2006) state. California and New York have pronounced net out-migration among enrollees while Nevada, Oklahoma, Tennessee, and Wyoming have pronounced net in-migration.

Quality of Linkages within States

Ultimately, the effectiveness of any record-linkage endeavor depends upon the quality of the underlying data. Because of missing, incomplete, or incorrect identifiers, records belonging to different individuals may be linked, and records belonging to the same individual may go unlinked. To fully evaluate the quality of any record linkages, we would need independent information that would enable us to verify at least a random sample of the linkages. Lacking that, we examined how often linked pairs agreed on characteristics that were not used in linking them but which ought to be identical all or most of the time when a linked pair represents the same individual.

Nationally, 99.5 percent of the within-state pairs linked by MSIS ID have full agreement on DOB and sex. Another 0.17 percent differ on just one part of the DOB. In three states, however, more than one percent of the linked pairs differ on sex or at least two parts of the DOB or have missing data on one or both fields: Nebraska (4.4 percent), Wyoming (2.4 percent), and New York (1.5 percent). Missing DOBs account for most of these differences, which means that the differences do not contradict the linkages but simply fail to confirm them.

Over all states, 89.1 percent of the linked pairs agree on both race and basis of eligibility (BOE)—that is, aged, disabled, child, or adult. Among states this varies from a high of 98.1 percent in Wyoming down to a low of 58.9 percent in Vermont. Most of the low levels of agreement are due to missing race in one or both years. Different values of race are found on only 0.7 percent of all linked pairs nationally while 3.8 percent of linked pairs differ on BOE while agreeing on race. Among the states with comparatively high rates of disagreement on either variable, only two states have high rates of disagreement on both, suggesting that measurement issues rather than linkage errors may account for most of the observed disagreement.

While records that were linked despite disagreement on one part of the DOB were inconsequential numerically, we found evidence of more false positive linkages among these pairs than among records linked with full agreement on the DOB. Nevertheless, it appears that eliminating these linkages would remove substantially more good links than bad links, so we do not recommend altering this element of the linkage algorithm in future linkages.

Quality of Linkages across States

Linkages of records across states are potentially more problematic than linkages within states because no across-state linkages have been validated by the states through the assignment of a common Medicaid identifier. Because the linkages across states depend almost entirely on SSNs, missing or incorrect SSNs will depress linkage rates. After reconciliation, when missing SSNs were replaced with nonmissing SSNs from records linked within states, 9.2 percent of SSNs were still missing in 2005 and 9.8 percent were missing in 2006. About two-thirds of the

missing SSNs were due to California, where SSNs are frequently not obtained for enrollees who qualify for limited benefits available only in that state. The missing SSNs from California are likely to have little impact on linkage rates across states, therefore. Based on this, we estimate that 3 to 4 percent of the true pairs across states could not be identified because of missing SSNs. A separate analysis of within-state linkages that would have been missed if the MSIS ID were not available leads to the same conclusion.

While the overriding concern about linkage errors across states involves the impact of missing SSNs in lowering the linkage rate, another potential problem involves individuals sharing the same SSN, which could have the opposite effect. In 2005, 1.419 million MAX SSNs appeared in two or more states, with one SSN being reported in 10 states. When we applied our linkage algorithm with its requirement that linked pairs agree not only on SSN or HIC but sex and at least two parts of DOB, some of the records with duplicate SSNs did not link. The vast majority did, however. Specifically, 1.368 million MAXEM IDs appeared in two or more states, with one showing up in 10 states as well. While it is difficult to imagine that an individual could enroll in Medicaid in more than three states in a single year, even when the year included the hurricane-related displacement of people across several states, the fraction of individuals who appear to have done so is exceedingly small. Thus, our cross-state linkage rates have been boosted only marginally by enrollees with implausible numbers of appearances in different states.

Impact of Unduplication

Our principal findings can be expressed in terms of the impact of unduplication on the estimated number of unique individuals enrolled in Medicaid in 2005 and 2006. Eliminating duplicate records within each state and year had a very small impact on the total number of records. We removed 181,000 records or 0.30 percent of the initial total records in 2005 and 137,705 or 0.23 percent of the initial total records in 2006. Unduplication across state did not entail removing any records but, rather, counting each unique individual only once in a national total for a given year. To obtain an unduplicated count of Medicaid enrollment nationally in 2005 we excluded an additional 1,417,953 records or 2.34 percent of the initial total Medicaid enrollment. To obtain an unduplicated count of Medicaid enrollment nationally in 2006 we excluded 1,368,740 records or 2.25 percent of the initial total Medicaid enrollment. The net impact of unduplication was to reduce the 2005 Medicaid enrollment by 2.64 percentage points and the 2006 Medicaid enrollment by 2.48 percentage points.

Output Files

The files produced for this project include a MAXEM research file and a cross-reference file for each of the two years, 2005 and 2006. Each MAXEM file contains one record for each unique person enrolled in Medicaid or S-CHIP (for states that submit S-CHIP data to MSIS) in each state in the indicated calendar year. The file includes a MAXEM person identifier, the number of states in which that identifier was found, and a subset of variables from the MAX PS files. The cross-reference file contains a record for every record in the MAX PS file for the corresponding year. It includes the MSIS ID, state, and year (needed to link to the MAX PS file) plus the MAXEM person identifier needed to link all records belonging to the same unique person within and across both state and year.

Recommendations

Our experience in developing the first two years of MAXEM leads us to offer a number of observations and recommendations regarding future MAXEM development. These fall into (1) priorities for MSIS/MAX enhancements and (2) process improvements.

MSIS/MAX Enhancements. The single greatest obstacle to full unduplication of MAX records is the absence of SSNs for a significant percentage of records in many states. Improved capture of SSNs would do more to improve the unduplication of MAX records than any other enhancement to the data or the unduplication process. When SSNs are present, the evidence suggests that their quality is high but not perfect. A validation check by the Census Bureau found that 1.2 percent of the Medicaid SSNs that passed range tests failed validation. Invalid SSNs are not likely to link to other SSNs, so improving their accuracy would increase the cross-state linkage rate. Duplicate records for enrollees within a state and year are a very minor problem, largely confined to a handful of states, whereas varied data anomalies, such as temporary and permanent MSIS IDs being used for the same person, continue to appear in several states. Lastly, while the identifiers used to establish links among records are clearly effective, what is lacking is information with which to confirm that these linkages are correct. This makes it difficult to assess the impact of small refinements to our linkage methods.

Process Improvements. The linkage algorithm performed very well, and we see little value in exploring small refinements that will provide too few additional linkages to offset the risk of increased numbers of false positives. Our pair-wise approach to unduplicating records proved effective, but there may be a better way to deal with sets of three or more records that have inconsistencies among their linkage variables. A major issue that must be addressed when MAXEM is expanded to additional years is how to incorporate potential updates to previously released files without making the earlier data obsolete; we suggest a strategy for the MAXEM ID, but this is only one element. Finally, the public-use tables created by this project are at present the only vehicle for dissemination of findings. Other vehicles such as issue briefs or journal articles should be considered.

I. INTRODUCTION

A. Background

Beginning in 1999, all states and the District of Columbia have been required to report Medicaid enrollee eligibility and claims data quarterly in a standard format into the Medicaid Statistical Information System (MSIS). The research files derived from these data, the Medicaid Analytic eXtract (MAX), have since been produced by Mathematica Policy Research for the Centers for Medicare & Medicaid Services (CMS) for each state, by calendar year. MAX is a cleaned and enhanced version of MSIS in which claims are combined into final action events, errors are corrected, and enrollee information is summarized at the person level. The consistent format and state-by-year nature of MAX have facilitated a wide range of studies of Medicaid enrollment, service use, and expenditures each calendar year. As the quality of the data has improved, MAX has become one of the most important research tools for understanding patterns of Medicaid service use and expenditures across states.

Although the format of the files has facilitated yearly cross-state comparisons, the structure of MAX has been less conducive to use in national and cross-year studies. Three limitations of MAX make it particularly challenging to identify unique Medicaid enrollees nationally and across years. First, the MSIS Identification Number (MSIS ID)—a unique Medicaid enrollee identifier—is assigned within each state. Any enrollee who moves from one state to another will be assigned a different MSIS ID in each state. Although Social Security numbers (SSNs) or other identifiers can be used to link individuals across states, such identifiers are sometimes not available, and those that are available are not error-free. Second, due to re-enrollment or other administrative changes, an individual's MSIS ID sometimes changes within a year or between years. Efforts are made by states to ensure that no two records are for the same person within a year, but this is not always possible. Third, while corrections to an enrollee's MSIS ID or SSN

are usually included in an audit trail in the year in which the changes take place, these corrections are not applied retrospectively. As a result of these limitations, it may be difficult for users of MAX to merge records for the same person across years, and even more difficult to merge records for the same person across states. For these reasons, aggregate counts of Medicaid enrollees based on MAX overrepresent the number of people enrolled in Medicaid and underestimate the number of people enrolled for longer than a year. Prior to the current project, the extent of these problems had not been evaluated.

Recent policy developments have highlighted the importance of developing a more effective means of linking Medicaid records across states and over time. With the passage of health care reform, Medicaid's role in covering the uninsured will be expanded over time, further increasing the need for an accurate, unduplicated count of people covered by the program. Better methods of linking Medicaid records will also aid research on methods to control costs and improve the quality of care for Medicaid enrollees in general, and long-term care recipients in particular. Finally, there has been increased interest in understanding whether any savings could be gained by coordinating care across multiple public programs, such as Medicare and Medicaid. Studying service use across programs will require merging MAX data with other data sources using existing identifiers. Before undertaking such work, researchers need to understand how well these identifiers perform in this context and how to use them most effectively.

To address these needs, CMS contracted with Mathematica to design and implement a new MAX Enrollee Master file (MAXEM) that enables researchers to unduplicate records within and across states. MAXEM and its associated cross-reference file will enable improved estimates of the number of Medicaid enrollees. These files will also enable researchers to easily link data within MAX, and between MAX and other data sources, to facilitate research efforts. This report describes Mathematica's design and development of the first MAXEM files.

This effort used the most current MAX files—data for calendar years 2005 and 2006—to develop yearly MAXEM research files containing one record per individual enrolled in Medicaid in each state during a calendar year.¹ The records for an individual within each research file have been unduplicated within a state and year. A new MAXEM ID, unique to each person, is included in each file to enable researchers to unduplicate individuals who were enrolled in more than one state in the same calendar year or across the two years. A cross-reference file that associates MAX records with the new MAXEM ID will enable researchers to link eligibility and claim records in MAX within year, across years, and across states.

B. Overview of the Design and Implementation of MAXEM

Mathematica's development of MAXEM and its cross-reference file proceeded in four stages. In the first stage, we identified and assessed the quality of variables that could be used to link records across MAX files. In the second stage we developed a prototype record-linking algorithm using data from three states. This involved selecting the three states for prototype analysis, implementing state-provided cross-reference files to correct records for people with more than one MSIS ID, and applying and reviewing the results of several linking algorithms. We used the lessons learned in the second stage to select a final matching algorithm for MAXEM. The third stage—the final design implementation—entailed creating final MAXEM research and cross-reference files covering all 50 states and the District of Columbia. In the fourth and final stage, we produced this report, which includes extensive tables for internal

¹ As agreed in discussions with CMS, we used 2005 and 2006 MAX instead of 2004 and 2005, as listed in the Statement of Work, because linkage variable data improved substantially between 2004 and 2005 as states made improvements to their data systems in preparation for Part D, and methods used to link Medicare to MAX were refined.

documentation and quality review of the linkage process and public-use tables to disseminate the study findings. The entire design and development process is illustrated in Figure I.1.

The four stages of the MAXEM file development are briefly described below. Table I.1 summarizes critical design questions and our design approach.

1. Linkage Variables and Data Quality

To improve upon previous efforts to merge Medicaid files, we began the development of MAXEM with an evaluation of the strengths and limitations of state-reported identifiers in MAX before choosing linking variables and variables to use for link quality review. Chapter II describes the quality and completeness of MSIS IDs, SSNs, health insurance claim numbers (HIC), dates of birth (DOB), sex, race/ethnicity, eligibility group, and service use. The analysis suggests that five identifiers (MSIS ID, various recorded SSNs, the HIC obtained from the Medicare Enrollment Database (EDB-HIC), DOB, and sex) can be used to link MAX records within states, and four identifiers (various recorded SSNs, the HIC obtained from the EDB, DOB, and sex) can be used to link MAX records across states. Race/ethnicity, eligibility group, and service use were found to be useful for quality review but not for linking.

2. Design of the Linking Algorithm

Chapter III describes how the linking algorithm for MAXEM was selected. Our goal was to efficiently identify the maximum number of linkages between records for the same individual within a state and year, and across states and years, while minimizing any chance of misidentifying records as being for the same person when in fact they are for two different people. Three key features of the linking design ensure that MAXEM will maximize the number of linked records for unique individuals while minimizing records linked in error: testing of a prototype design, comparison of probabilistic linking method with two commonly used deterministic linking approaches, and review of the quality of linked records.

Figure I.1. Process Model for the Design and Development of MAXEM

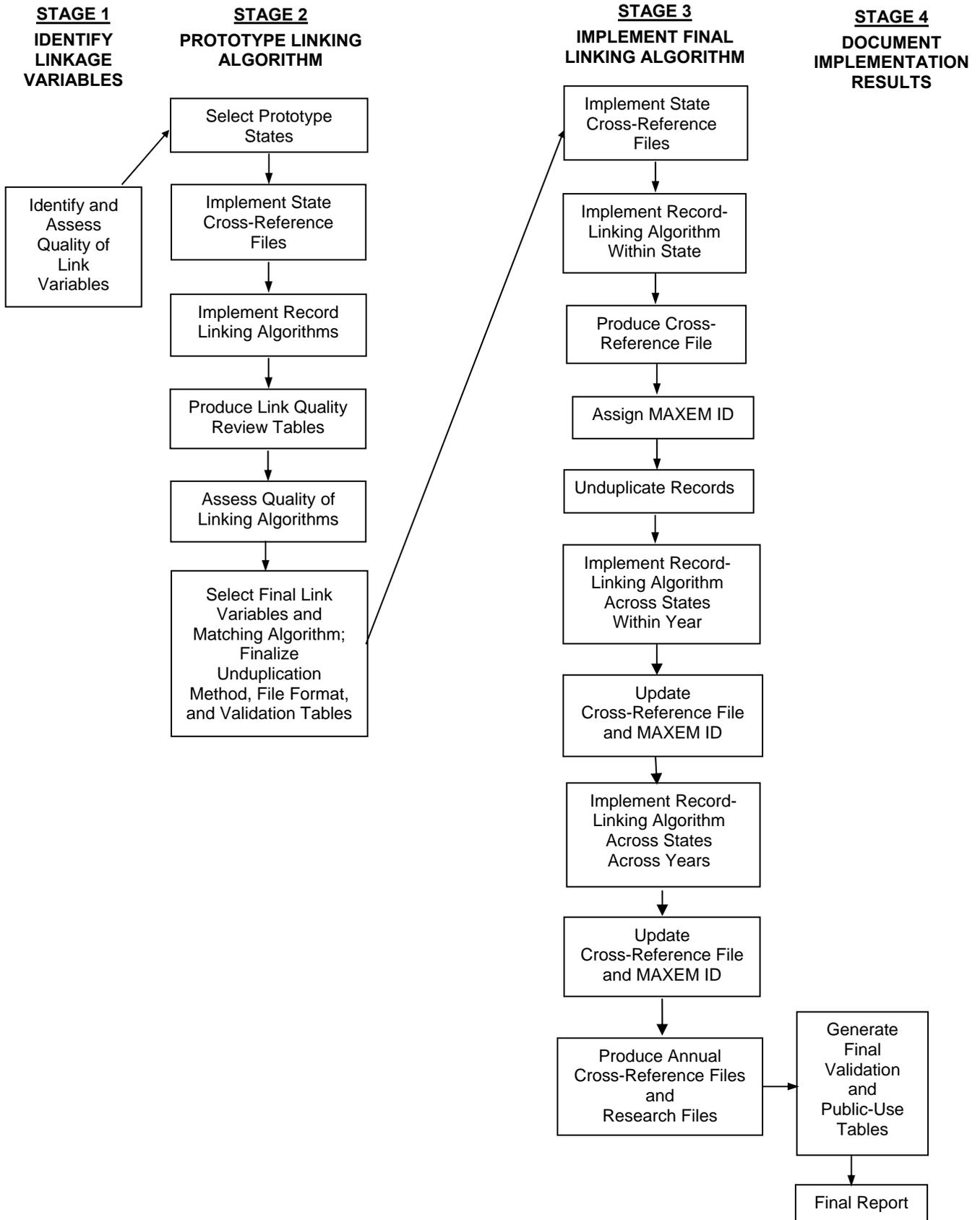


Table I.1 Key Elements of the MAXEM Design Approach

| Design Question | Design Approach |
|--|--|
| Linkage Variables and Data Quality | |
| What linkage variables will be used to identify two records for the same individual? | MSIS ID, SSNs from MAX and the Medicare Enrollment Database (EDB), health insurance claim numbers from the EDB, date of birth, sex |
| What variables will be used to review linkage quality? | Race/ethnicity, eligibility group, type of service use |
| Design of the Linking Algorithm | |
| Which states will be analyzed in the prototype design? | Arizona, California, Nevada |
| What linking algorithms will be tested and reviewed in the prototype? | Two deterministic approaches (one used by Medicare and another developed for linking MAX with EDB) and probabilistic linking were tested and reviewed for linkage quality and efficiency before selecting a final algorithm |
| How will link quality be assessed? | Linked and nonlinked record pairs were compared in terms of their agreement on race/ethnicity, eligibility group (aged, disabled, child/adult), months of enrollment, any service use, and patterns of prescription drug and institutional long-term care use |
| How will the MAXEM link algorithm be chosen? | Linkage quality of the algorithms was compared |
| Design of MAXEM Cross-Reference and Research Files | |
| What variables will be included in the MAXEM cross-reference file? | MAXEM ID, MSIS ID, state, and year |
| Will the MAXEM cross-reference file contain unduplicated records? | The MAXEM cross-reference file contains one record for each record in the 2005 and 2006 MAX Person Summary files but includes a unique MAXEM ID that enables researchers to unduplicate records |
| What variables will be included in the MAXEM research files? | MAXEM ID, total number of states where the person is enrolled (total records for this MAXEM ID), MSIS ID, state, year, SSN, DOB, sex, race/ethnicity, CHIP enrollment, annual and monthly uniform eligibility code, restricted benefit status, dual status, recipient indicator by type of service, and premium payment indicator by type of managed care |
| Will the MAXEM research files contain unduplicated records? | The yearly MAXEM research files contain unduplicated records within states but may contain more than one record for an individual with the same MAXEM ID across states |
| How will two records for the same person be unduplicated? | Linked records with different identifiers or demographic information were made consistent by assigning the first applicable value: <ul style="list-style-type: none"> • Nonmissing value if value on one record was missing • EDB dual record value if other record is not for an EDB dual (when applicable) • Value on record with most recent enrollment |
| Validation and Public-Use Tables | |
| What validation tables will be produced? | Tables showing linkage quality statistics <ul style="list-style-type: none"> • Within a year • Across years • Across states |
| What public-use tables will be produced? | Tables showing number of persons enrolled in two, three, four or more states Table showing enrollment statistics before and after unduplication and the number of duplicated records by eligibility group, managed care premium payment, and service use Tables showing the number of records before and after unduplication and the number of duplicates by state and nationally, by <ul style="list-style-type: none"> • CHIP enrollment • Eligibility group (with and without restricted benefit enrollees) • Managed care premium payments, by managed care type • Use of fee-for-service (FFS) care, by service type Table showing the Medicaid turnover rate between 2005 and 2006 |

Prototype Design. A principal feature of the development of MAXEM was the testing and analysis of various designs using three prototype states—Arizona, California, and Nevada. As described in Chapter III, these states were carefully selected to reflect national variation in the quality of MAX identifier data, migration flows, and a range of analytic file sizes. The design of MAXEM incorporated lessons learned from the three states analyzed in the prototype design. The initial testing of the prototype design and the assessment of various linking algorithms were particularly important because a comparison of the effectiveness of existing algorithms had never before been assessed on MAX data.

Three Linkage Approaches. In the past, linkages of MAX data have typically utilized deterministic linking methods that rely on common identifiers—usually MSIS ID, SSN, DOB, and sex—to determine when two records are for the same individual. Due to data entry errors and missing data, such methods may fail to identify many cases in which duplicate records exist. Also, the choice of identifiers is sometimes arbitrary. To identify the optimal linkage strategy for MAXEM, we compared the effectiveness of three linkage methods on the data from the three states. The three methods included a probabilistic approach and two deterministic methods—one used by Medicare for linking Medicare Part D with the Medicare Master Beneficiary Database (MBD) and another developed for linking MAX with the EDB. Probabilistic linking is an evidence-based approach that links record pairs based on the likelihood that the characteristics reported on two records are for the same person. Although probabilistic linking is considered to be the gold standard for linking records, it requires substantial data processing, and its benefits for MAX data linking were unknown.

Link Quality Review. To help assess the quality of record pairs within and between states for any two records identified as potential links via MSIS ID, SSN, date of birth, sex, or EDB-HIC, we estimated agreement and disagreement on six additional variables—race/ethnicity,

eligibility group, months of enrollment, any service use, use of prescription drugs, and use of institutional care.

3. Design of MAXEM Cross-Reference and Research Files

When two or more records matched by SSN or other variables are identified as being for the same person, we refer to them as “linked records” and assign them a unique MAXEM ID. The cross-reference file contains a Medicaid enrollee’s unique MAXEM ID as well as three variables from MAX files—MSIS ID, state, and year—that can be used to link any MAX records that are for the same person. This cross-reference file contains one record for each record in the MAX 2005 and 2006 files and therefore may contain multiple records per MAXEM ID.

The 2005 and 2006 MAXEM research files were designed for national and cross-state research requiring unduplicated counts of enrollment by various characteristics. Each yearly file contains a subset of the demographic, eligibility, and service use variables included in MAX. Unlike the cross-reference file, which contains as many records as are included in the MAX Person Summary files, MAX records that have been identified as being for the same person within a state and year have been combined, or “unduplicated”, into one record in MAXEM. Our general approach to unduplicating records included first replacing missing data with data available in other records, then resolving inconsistencies by replacing invalid data with verified data using information from the most recent month of enrollment for which the items in question are not missing. This approach is based on the assumption that information is corrected over time.

Records were not combined across states; nor were missing or inconsistent data replaced across states. Unduplication to produce a national count of Medicaid enrollees was limited to the assignment of a common MAXEM ID to records that were linked across states.

4. Evaluation of Linkages

This project has produced the best estimates available to date on the number of unique Medicaid enrollees nationwide. To ensure that the statistics produced were of the highest quality, we generated an extensive series of tables to support a rigorous review of the linkage results within states and years, and across states and years. The tables and our evaluation are presented in Chapter IV.

5. Findings and Public-Use Tables

Selected findings from our unduplication of Medicaid records are presented in Chapter V. To provide additional empirical results for CMS and for dissemination to prospective users of the MAXEM research files and cross-reference files, we produced extensive public-use tables showing the estimated number of Medicaid enrollees nationally and in each state before and after the unduplication process, overall and by enrollee demographic, eligibility, and service-use characteristics. Because of their size, the public-use tables are presented in the appendix.

C. Organization of This Report

This report describes in detail Mathematica's design and development of MAXEM and its associated cross-reference file. The chapters are organized into four key stages of the design development process. Chapter II describes the variables that we used to link MAX data across files, and assesses their quality. Chapter III details the selection of the linking algorithm based on analysis of prototype states. Most of the content of the first three chapters was drawn from the earlier design report and a memorandum (Wenzlow and Sykes 2009, 2010). Chapter IV describes the implementation of the linking and unduplication algorithms on the 50 states and the District of Columbia, including our assessment of the quality of the record linkages. The chapter also lists the contents of the cross-reference and MAXEM files. Chapter V summarizes key results and findings from the unduplication of two years of MAX data. Chapter VI looks ahead

to future MAXEM development and presents a number of recommendations based on our experience in creating MAXEM 2005 and 2006. The appendix contains the public-use tables with an overview of their content and organization.

II. LINKAGE VARIABLES AND DATA QUALITY

Data from various sources are often linked via national identifiers such as SSNs. The MAX data, however, are based on Medicaid data reported by each state to MSIS with unique identifiers—MSIS IDs—specified within states. Also, the quality of linkage data in MSIS can vary from one state to the next and from one year to the next. In this chapter, we review the potential linkage variables that we considered for the development of MAXEM and assess their quality, which influenced the design of the linking and unduplication algorithms.

A. Linkage Variables

The MAX Person Summary (PS) file contains a small set of identifiers that we could use in the linkage and unduplication algorithms. They are:

- MSIS ID: Unique 20-character ID assigned by a state but unique only within that state
- STATE: Two-character state abbreviation
- SSN: Nine-digit number that by law should be unique to each person in the nation
- HIC: 11-character Medicare health insurance claim number; the first nine characters are the claim account number (CAN), which is equal to the primary claimant's SSN, and the last two characters are the beneficiary's identification code (BIC), which identifies, for example, whether the beneficiary is the primary claimant, aged wife, or divorced wife
- EDB-SSN: a nine-digit SSN, which is extracted from the EDB
- EDB-HIC: an 11-character Medicare health insurance claim number, which is extracted from the EDB

The MAX system is structured so that there is one and only one record in each state's annual PS file per MSIS ID. However, more than one record per SSN, HIC, EDB-SSN, or EDB-HIC is possible within and across states.

There are three limitations to the MSIS ID as a potential linkage variable. First, because each state is responsible for assigning its own MSIS ID values, an individual who is enrolled in Medicaid in more than one state is likely to have a different MSIS ID in each state; therefore the

MSIS ID cannot be used to link people across states. Second, in theory, the MSIS ID should be unique to a person within a state and never change. In practice, however, it does change, albeit rarely. States are supposed to provide cross-reference files in such instances and 12 states did so in 2005.² When a cross-reference file is provided, it is usually applied during that particular MAX year and all subsequent years until a replacement is provided or until the file is no longer able to identify linked records. It is not applied to the previous years of MAX data. Consequently, there can be more than one MSIS ID for a given person over time within a state. Also, due to limitations in their data systems, some states are unable to submit cross-reference files; therefore more than one MSIS ID can be present in MAX for the same person within the same year. The third limitation of the MSIS ID is that states may opt to report SSNs as MSIS IDs. For example, eight states—California, Kentucky, Louisiana, Minnesota, Nevada, New Jersey, New Mexico, and Vermont—opted to be “SSN states” in 2005. In these states, the MSIS ID provides no additional linkage information than what is already available in other identifiers.

The SSN assigned by the Social Security Administration (SSA) is unique to each person. However, CMS encourages but does not require states to submit records that contain an SSN for each Medicaid enrollee, and states are not mandated to validate the SSNs reported in MSIS. Consequently, some records in the PS file will have missing or incorrect SSNs. Sometimes the SSN reported for a person will change over time, perhaps due to a clerical error, which can produce incorrect or transposed digits. In addition, some states have admitted to assigning a pseudo (or temporary) value to the SSN and later updating it with the true (or permanent) SSN. Other errors may originate with the enrollees themselves. For example, the use of a single SSN

² The 12 states are Arizona, California, Kentucky, Louisiana, Minnesota, Nevada, New Jersey, New Mexico, North Dakota, Tennessee, Vermont, and Wyoming.

by multiple enrollees could be the result of fraud, in which friends and family or even strangers are knowingly sharing the same SSN; or it could derive from an honest mistake, as when one family member unintentionally reports another family member's SSN as his or her own. Because of these and other potential inaccuracies, the SSN by itself cannot be used to uniquely identify a Medicaid enrollee.

As an identifier, the HIC or MAX HIC, which comes from MSIS, has four drawbacks. First, it is collected only for persons who are dually enrolled in Medicare and Medicaid. In most states, this "dual" population is a small proportion of the state's entire Medicaid population. Second, like the SSN, there is no mandate for the state to verify the accuracy of the HIC reported in MSIS. Third, HICs can change over time. Fourth, most states do not have the means to update HICs in a timely fashion. Consequently, a HIC in the state's MSIS data can be out of sync with the one listed in the EDB. For example, the BIC portion of a woman's HIC might equal "married wife" in the state's MSIS but "divorced wife" in the more up-to-date EDB system. Consequently, the HIC is not as reliable as other variables available in MAX and will not play a significant role in the development of MAXEM.

The EDB-SSN and EDB-HIC were merged onto the MAX PS file via the MAX processing system. Specifically, we merged MAX person records to the EDB using a three-pass match-merge process.³ When there was a match, the SSN, the HIC, and other variables were copied from the EDB record onto the PS file. The EDB-SSN and EDB-HIC on the PS file are reliable,

³ During the first pass, records with MAX SSN = EDB-SSN, MAX SEX = EDB SEX, and two or more parts of the MAX DOB = two or more parts of the EDB DOB, were assumed to belong to the same person and classified as a link. Records that did not match were compared again. During the second pass, records with MAX SSN = EDB CAN, MAX SEX = EDB SEX, and two or more parts of the MAX DOB = two or more parts of the EDB DOB were assumed to belong to the same person and classified as a link. Records that did not match during the first and second pass were also compared again. During the third pass, records with MAX HIC = EDB-HIC, MAX SEX = EDB SEX, and two or more parts of the MAX DOB = two or more parts of the EDB DOB, were assumed to belong to the same person and classified as a match.

as the EDB system verifies the SSN and HIC regularly with the SSA. However, like the HIC, the EDB-SSN and the EDB-HIC are only collected for people who are dually enrolled in Medicare and Medicaid.

The PS file also contains demographic, enrollment, and service-use variables that could be helpful in identifying a person.

- **DOB:** Eight-digit DOB in YYYYMMDD format
- **Sex:** One character indicating gender
- **Race/Ethnicity:** One character indicating race/ethnicity
- **Uniform Eligibility Group (UEG):** Two-character monthly uniform eligibility group created by the MAX system by concatenating the maintenance assistance status (MAS) with the basis of eligibility (BOE)
- **Type of Service (TOS):** Annual TOS recipient indicator for each of the 31 MAX TOS values created by the MAX system by determining whether expenditures by TOS (for example, inpatient hospital services, physician services, and home health services) for an individual were greater than zero

These demographic, enrollment, and service use variables cannot be used as the sole means to uniquely identify a person. For example, more than one person could have the same DOB, sex, race/ethnicity, UEG, and TOS. Moreover, these variables can and do contain missing values. Even so, these variables could be used in conjunction with one or more of the identifying variables to further identify or confirm that two records belong to the same person. Because the statuses they describe can change over time, the UEG and TOS codes are likely to be more useful in this regard for records paired within the same year rather than across years.

In summary, other than the MSIS ID, there is no other variable in the PS file that can be used on its own to uniquely identify a person within a state and year. However, MSIS IDs cannot be used to link records across states and MSIS IDs can change over time. Consequently, our matching algorithm, detailed in Chapter III, will use a combination of these variables to identify whether a person has more than one PS record in a year, across years, and across states.

B. Linkage Variable Quality Assessment

Beyond the limitations described above, the quality and completeness of the MAX linkage variables will also affect their utility in the linking and unduplication algorithms. For example, if a key linkage variable is often missing or unreliable, we may refrain from using that variable in the linkage process. The percentage of records with missing or invalid linkage variables also indicates the potential number of records that cannot be linked. Tables II.1 through II.5 present statistics on variable quality in MAX 2005, by state. Tabulations from MAX 2006 differ little; therefore we have not presented them here.

1. Quality of SSN

The SSN in the PS file comes from the MSIS eligibility record. If a person has Medicaid claims but no eligibility record, the SSN in the PS file will be missing. Here we examine the quality of SSNs only for those people who have an eligibility record in MSIS.⁴

Table II.1 shows the total number of records in the 2005 base PS file and the percent with more than one MSIS ID per SSN, with a missing SSN, with a nonmissing SSN that failed the SSA's high-group test, and with MSIS ID equal to the SSN. The table suggests that four data quality issues will limit our ability to merge data using SSNs.

First, in four states—Illinois, New York, North Dakota, and South Dakota—over three percent of records had SSNs that were linked to more than one MSIS ID. Duplicate SSNs suggest that a review of whether any records can be unduplicated is warranted.

⁴ The source of these estimates is the base PS file, which consists of records from the MSIS eligibility file before they are merged with summary claims information to produce the MAX PS file. Eligibility records with no Medicaid or S-CHIP enrollment and no claims are excluded from the MAX PS file. At the same time, claims records for which there are no corresponding eligibility records in the base PS file are added to the MAX PS file.

Table II.1 Quality of SSNs Among Persons in the Base Person Summary File in MAX 2005

| State | Total Number of Records | Percent with More than One MSIS ID per SSN | Percent with Missing SSN | Percent of Nonmissing SSNs Failing the HGT ^a | Percent with MSIS ID = SSN ^b |
|----------------------|-------------------------|--|--------------------------|---|---|
| Alabama | 955,603 | 0.3 | 0.8 | 1.6 | 0.0 |
| Alaska | 132,850 | 0.1 | 2.8 | 0.2 | 0.0 |
| Arizona | 1,476,861 | 0.3 | 2.2 | 8.9 | 8.6 |
| Arkansas | 746,543 | 0.1 | 7.2 | 4.4 | 0.0 |
| California (SSN) | 10,593,532 | 0.0 | 35.7 | 0.3 | 64.3 |
| Colorado | 604,012 | 0.2 | 6.2 | 0.4 | 0.0 |
| Connecticut | 529,295 | 0.5 | 3.8 | 0.2 | 0.0 |
| Delaware | 179,935 | 0.0 | 8.9 | 0.3 | 0.0 |
| District of Columbia | 166,514 | 0.1 | 2.7 | 0.1 | 0.0 |
| Florida | 3,020,105 | 0.0 | 2.2 | 0.4 | 1.5 |
| Georgia | 2,102,131 | 0.3 | 6.6 | 2.1 | 0.0 |
| Hawaii | 231,826 | 0.2 | 0.0 | 1.5 | 0.0 |
| Idaho | 233,352 | 0.0 | 2.8 | 0.1 | 0.0 |
| Illinois | 2,611,141 | 3.6 | 2.7 | 0.5 | 0.0 |
| Indiana | 1,045,174 | 0.0 | 2.8 | 0.1 | 0.0 |
| Iowa | 428,814 | 0.3 | 1.2 | 0.1 | 0.0 |
| Kansas | 356,738 | 0.0 | 1.5 | 0.0 | 0.0 |
| Kentucky (SSN) | 886,961 | 0.0 | 2.5 | 1.2 | 97.5 |
| Louisiana (SSN) | 1,166,422 | 0.0 | 2.5 | 0.8 | 97.5 |
| Maine | 326,502 | 0.1 | 0.5 | 0.1 | 0.0 |
| Maryland | 869,900 | 0.0 | 2.9 | 0.2 | 0.0 |
| Massachusetts | 1,247,300 | 0.1 | 10.0 | 0.2 | 0.0 |
| Michigan | 1,857,775 | 0.0 | 6.5 | 0.1 | 0.0 |
| Minnesota (SSN) | 790,767 | 0.0 | 2.4 | 0.2 | 97.6 |
| Mississippi | 780,300 | 0.5 | 5.0 | 0.1 | 0.0 |
| Missouri | 1,222,651 | 0.1 | 1.4 | 0.1 | 0.0 |
| Montana | 128,004 | 0.0 | 0.8 | 8.0 | 62.8 |
| Nebraska | 261,952 | 0.0 | 3.4 | 0.6 | 29.1 |
| Nevada (SSN) | 267,880 | 0.0 | 11.3 | 0.3 | 88.7 |
| New Hampshire | 145,737 | 0.0 | 0.8 | 0.1 | 0.0 |
| New Jersey (SSN) | 1,131,152 | 0.0 | 5.6 | 0.6 | 94.4 |
| New Mexico (SSN) | 527,703 | 0.0 | 1.6 | 0.3 | 98.4 |
| New York | 5,087,834 | 3.3 | 6.1 | 0.6 | 0.0 |
| North Carolina | 1,728,608 | 0.1 | 2.0 | 0.2 | 7.5 |
| North Dakota | 78,969 | 4.7 | 0.5 | 0.1 | 17.3 |
| Ohio | 2,126,626 | 1.3 | 1.4 | 0.2 | 0.0 |
| Oklahoma | 729,569 | 0.8 | 2.6 | 0.3 | 0.0 |
| Oregon | 563,447 | 0.3 | 6.6 | 0.1 | 0.0 |
| Pennsylvania | 2,029,894 | 0.0 | 0.7 | 0.3 | 0.0 |
| Rhode Island | 219,784 | 0.0 | 1.0 | 0.0 | 0.0 |
| South Carolina | 1,012,781 | 0.0 | 4.5 | 0.2 | 0.0 |
| South Dakota | 131,027 | 3.2 | 2.7 | 0.1 | 0.0 |
| Tennessee | 1,594,336 | 0.0 | 0.8 | 0.2 | 18.9 |
| Texas | 4,104,526 | 0.4 | 4.8 | 0.2 | 0.0 |
| Utah | 345,451 | 0.0 | 3.5 | 0.2 | 4.1 |
| Vermont (SSN) | 163,470 | 0.0 | 0.3 | 0.1 | 99.7 |
| Virginia | 927,685 | 0.2 | 4.5 | 0.3 | 0.0 |
| Washington | 1,199,572 | 0.0 | 4.8 | 0.1 | 0.0 |
| West Virginia | 383,114 | 0.1 | 0.1 | 0.0 | 99.9 |
| Wisconsin | 1,022,203 | 1.3 | 2.5 | 0.1 | 95.8 |
| Wyoming | 81,199 | 0.2 | 3.4 | 0.3 | 0.0 |
| United States | 60,555,527 | 0.6 | 9.3 | 0.7 | 22.7 |

^a If the SSN fails the SSA high-group test (HGT), the SSN is invalid.^b Only the first 9 digits of the MSIS ID must equal the SSN; the overall length of the MSIS ID can be greater than 9.

Second, over five percent of records were missing SSNs in 12 states in 2005: Arkansas, California, Colorado, Delaware, Georgia, Massachusetts, Michigan, Mississippi, Nevada, New Jersey, New York, and Oregon. The majority of people without an SSN are children, persons who only qualified for family planning benefits, and aliens who only qualified for emergency coverage. In New York, we believe that some records with missing SSNs are for services provided to pregnant mothers but reported separately in records for the “unborn children.” The state creates eligibility records to ensure these children can receive Medicaid services immediately at birth. It is no surprise that SSNs are not available for this special subpopulation. However, the unduplication algorithm will need to accommodate missing SSNs.

Third, even when an SSN is assigned, it is not necessarily valid. One way to test the validity is to evaluate whether the SSN was issued. If the SSN was not issued, it is clearly not valid. To confirm that an SSN was issued, we perform SSA’s high-group test. The high-group test compares the SSN’s group number to the highest group number that was assigned for that SSN’s area as of that calendar month.⁵ If the SSN’s group number is higher than the highest group issued, the SSN fails the high-group test. In 2005, over five percent of records with SSNs failed the high-group test in two states, Arizona and Montana. Often the reason for the high failure rate is not known, because states are not mandated to verify the SSN. However, in our discussions with Louisiana and Nevada, we learned that their MSIS systems were assigning a temporary (pseudo) value to their SSN. For MAX 2005, we asked both states to stop assigning pseudo SSNs and instead assign a missing value to the SSN, resulting in a considerably reduced high-

⁵ The SSN is comprised of AAA-GG-SSSS, where AAA is the area, GG is the group, and SSSS is the serial number. Group numbers of 00 are never assigned by SSA and are flagged by the high-group test as well. Similarly, area codes that have never been assigned—including 000—will also cause an SSN to be identified as invalid.

group test failure rate in 2005. The unduplication algorithm can also use the high-group test to gauge the validity of each SSN.⁶

Fourth, we expect SSN states to have a large number of records in which the MSIS ID equals the SSN, but Table II.1 shows that even among the non-SSN states, the first nine characters of the MSIS ID can equal the SSN. This was true for over 25 percent of records in four non-SSN states: Montana, Nebraska, West Virginia, and Wisconsin.⁷ Consequently, the unduplication algorithm must take into account the strong correlation between the MSIS ID and the SSN in SSN states as well as in some non-SSN states.

2. Quality of HIC, EDB-SSN, EDB-HIC

As mentioned previously, we cannot use the HIC, EDB-SSN, and EDB-HIC as primary identification variables because they are only available for persons who are dually enrolled in both Medicare and Medicaid.

Table II.2 shows that on almost all records with valid EDB-SSNs and valid MAX SSNs, the former is equal to the latter in 2005 MAX PS file. This result is not surprising, because the primary method of linking the PS file to the EDB file is via the SSN. The records with valid MAX SSNs not equal to their valid EDB-SSNs are often people who are using the Medicare claimant's SSN as their own SSN. For example, a woman receiving Medicare benefits may have mistakenly told the Medicaid office that her Medicare CAN was her SSN when it was actually her husband's SSN.

⁶ Confirming that an SSN was issued does not necessarily mean that it was issued to the person who is using it. Full validation requires comparing a person's name, sex, and date of birth to the information maintained in SSA files for each SSN. This project did not have access to the SSA records needed to perform such validation. In describing an SSN as valid, we mean to imply only that the SSN was confirmed as having been issued.

⁷ Montana changed its classification from an SSN state to a non-SSN state in 2005, potentially explaining the high rate of records with the first nine characters of the MSIS ID = SSN in the state in 2005.

Table II.2 Comparison of MAX SSN with EDB-SSN in MAX 2005

| State | Records with Valid MAX SSN ^a | | | Records with Valid MAX SSN and Valid EDB-SSN ^b | | Records with Invalid MAX SSN ^a | | | |
|----------------------|---|--|---|---|---------------------------------------|---|--|--|--|
| | Total Number of Records | Number with Valid EDB-SSN ^b | Percent with Valid EDB-SSN ^b | Number with MAX SSN=EDB-SSN ^a | Percent with MAX EDB-SSN ^a | Total Number of Records | Number with Valid MAX HIC ^b | Number with Valid EDB-HIC ^b | Number with MAX HIC=EDB-HIC ^b |
| Alabama | 932,935 | 210,991 | 22.6 | 210,602 | 99.8 | 30,591 | 7 | 5 | 5 |
| Alaska | 128,880 | 14,753 | 11.4 | 14,736 | 99.9 | 4,819 | 2 | 2 | 2 |
| Arizona | 1,315,437 | 164,959 | 12.5 | 163,864 | 99.3 | 176,132 | 1,901 | 1,868 | 1,868 |
| Arkansas | 662,468 | 111,253 | 16.8 | 110,790 | 99.6 | 99,725 | 7,093 | 4,866 | 4,866 |
| California (SSN) | 6,791,498 | 1,246,456 | 18.4 | 1,245,171 | 99.9 | 4,133,270 | 83 | 95 | 69 |
| Colorado | 563,786 | 85,636 | 15.2 | 85,300 | 99.6 | 82,179 | 8 | 8 | 8 |
| Connecticut | 508,448 | 105,391 | 20.7 | 104,982 | 99.6 | 23,067 | 21 | 20 | 20 |
| Delaware | 163,551 | 26,272 | 16.1 | 26,124 | 99.4 | 17,502 | 8 | 7 | 7 |
| District of Columbia | 161,922 | 23,851 | 14.7 | 23,756 | 99.6 | 5,923 | 12 | 2 | 2 |
| Florida | 2,940,373 | 610,201 | 20.8 | 609,617 | 99.9 | 119,151 | 15 | 10 | 6 |
| Georgia | 1,917,944 | 286,691 | 14.9 | 285,716 | 99.7 | 189,882 | 566 | 531 | 529 |
| Hawaii | 228,323 | 35,902 | 15.7 | 35,854 | 99.9 | 9,413 | 0 | 0 | 0 |
| Idaho | 226,605 | 32,508 | 14.3 | 32,498 | 100.0 | 7,160 | 0 | 0 | 0 |
| Illinois | 2,528,660 | 538,341 | 21.3 | 537,782 | 99.9 | 84,049 | 9 | 3 | 2 |
| Indiana | 1,014,953 | 167,415 | 16.5 | 167,275 | 99.9 | 45,439 | 170 | 159 | 159 |
| Iowa | 423,195 | 83,296 | 19.7 | 83,120 | 99.8 | 7,790 | 10 | 9 | 9 |
| Kansas | 351,208 | 66,430 | 18.9 | 66,365 | 99.9 | 10,117 | 6 | 5 | 5 |
| Kentucky (SSN) | 854,293 | 184,579 | 21.6 | 184,412 | 99.9 | 39,989 | 130 | 31 | 31 |
| Louisiana (SSN) | 1,127,364 | 194,530 | 17.3 | 194,339 | 99.9 | 117,522 | 7 | 5 | 5 |
| Maine | 324,451 | 72,795 | 22.4 | 72,674 | 99.8 | 3,040 | 8 | 5 | 5 |
| Maryland | 839,449 | 135,938 | 16.2 | 135,629 | 99.8 | 29,237 | 118 | 50 | 49 |
| Massachusetts | 1,120,039 | 270,924 | 24.2 | 268,331 | 99.0 | 135,274 | 7 | 7 | 5 |
| Michigan | 1,736,660 | 288,983 | 16.6 | 288,467 | 99.8 | 142,152 | 22 | 13 | 13 |
| Minnesota (SSN) | 770,311 | 154,999 | 20.1 | 154,419 | 99.6 | 22,055 | 39 | 31 | 31 |
| Mississippi | 740,252 | 173,198 | 23.4 | 172,879 | 99.8 | 47,285 | 10 | 9 | 9 |
| Missouri | 1,200,499 | 214,499 | 17.9 | 214,038 | 99.8 | 19,257 | 61 | 41 | 41 |
| Montana | 116,768 | 21,527 | 18.4 | 21,493 | 99.8 | 12,284 | 96 | 96 | 96 |
| Nebraska | 251,113 | 44,197 | 17.6 | 44,170 | 99.9 | 10,728 | 1 | 1 | 1 |
| Nevada (SSN) | 236,962 | 41,483 | 17.5 | 41,439 | 99.9 | 35,777 | 0 | 0 | 0 |

Table II.2 (continued)

| State | Records with Valid MAX SSN ^a | | | Records with Valid MAX SSN and Valid EDB-SSN ^b | | Records with Invalid MAX SSN ^a | | | |
|----------------------|---|--|---|---|---|---|--|--|--|
| | Total Number of Records | Number with Valid EDB-SSN ^b | Percent with Valid EDB-SSN ^b | Number with MAX SSN=EDB-SSN ^a | Percent with MAX SSN=EDB-SSN ^a | Total Number of Records | Number with Valid MAX HIC ^b | Number with Valid EDB-HIC ^b | Number with MAX HIC=EDB-HIC ^b |
| New Hampshire | 144,386 | 29,887 | 20.7 | 29,841 | 99.8 | 1,448 | 6 | 6 | 6 |
| New Jersey (SSN) | 1,056,724 | 220,800 | 20.9 | 218,649 | 99.0 | 78,037 | 1,200 | 1,010 | 1,009 |
| New Mexico (SSN) | 517,694 | 58,851 | 11.4 | 58,745 | 99.8 | 13,039 | 0 | 0 | 0 |
| New York | 4,745,294 | 812,233 | 17.1 | 809,953 | 99.7 | 373,401 | 167 | 149 | 145 |
| North Carolina | 1,689,582 | 340,538 | 20.2 | 340,144 | 99.9 | 39,993 | 13 | 12 | 12 |
| North Dakota | 78,235 | 16,758 | 21.4 | 16,747 | 99.9 | 1,726 | 0 | 0 | 0 |
| Ohio | 2,092,731 | 329,982 | 15.8 | 329,382 | 99.8 | 34,445 | 120 | 113 | 113 |
| Oklahoma | 707,462 | 116,460 | 16.5 | 116,275 | 99.8 | 23,411 | 2 | 1 | 1 |
| Oregon | 525,522 | 93,990 | 17.9 | 93,865 | 99.9 | 39,839 | 1,851 | 2 | 1 |
| Pennsylvania | 2,008,024 | 419,658 | 20.9 | 418,766 | 99.8 | 30,152 | 93 | 75 | 75 |
| Rhode Island | 217,583 | 43,911 | 20.2 | 43,875 | 99.9 | 7,301 | 0 | 0 | 0 |
| South Carolina | 964,946 | 211,336 | 21.9 | 210,698 | 99.7 | 47,817 | 26 | 16 | 16 |
| South Dakota | 127,249 | 21,045 | 16.5 | 20,994 | 99.8 | 3,739 | 5 | 4 | 4 |
| Tennessee | 1,578,167 | 357,051 | 22.6 | 356,856 | 99.9 | 29,448 | 2 | 2 | 2 |
| Texas | 3,897,025 | 637,787 | 16.4 | 635,579 | 99.7 | 267,066 | 147 | 137 | 134 |
| Utah | 332,669 | 35,454 | 10.7 | 35,438 | 100.0 | 26,837 | 4 | 3 | 3 |
| Vermont (SSN) | 162,524 | 35,830 | 22.0 | 35,808 | 99.9 | 3,336 | 0 | 0 | 0 |
| Virginia | 882,873 | 178,332 | 20.2 | 177,820 | 99.7 | 45,769 | 22 | 16 | 15 |
| Washington | 1,140,350 | 161,904 | 14.2 | 161,497 | 99.7 | 144,740 | 16 | 9 | 9 |
| West Virginia | 382,710 | 74,905 | 19.6 | 74,765 | 99.8 | 10,906 | 25 | 24 | 24 |
| Wisconsin | 995,372 | 230,492 | 23.2 | 229,280 | 99.5 | 39,211 | 70 | 69 | 69 |
| Wyoming | 78,233 | 10,607 | 13.6 | 10,581 | 99.8 | 3,366 | 8 | 4 | 4 |
| United States | 54,503,702 | 10,045,809 | 18.4 | 10,021,400 | 99.8 | 6,925,836 | 14,187 | 9,531 | 9,485 |

^a MAX SSN is valid if it is not 8- or 9-filled and passes SSA's HGT.

^b EDB-SSN is valid if it is not eight- or nine-filled (SSA HGT is not necessary for EDB data).

Table II.3 Quality of Date of Birth, Sex and Race/Ethnicity Data Among Persons in the Base Person Summary File in MAX 2005

| State | Total Number of Records | Number with Missing Date of Birth | Number with Missing Sex | Number with Missing Date of Birth or Sex | Percent with Missing Date of Birth or Sex | Number with Missing Race/Ethnicity | Percent with Missing Race/Ethnicity |
|----------------------|-------------------------|-----------------------------------|-------------------------|--|---|------------------------------------|-------------------------------------|
| Alabama | 955,603 | 0 | 6,353 | 6,353 | 0.7 | 25,251 | 2.6 |
| Alaska | 132,850 | 0 | 3 | 3 | 0.0 | 3,994 | 3.0 |
| Arizona | 1,476,861 | 44 | 44 | 46 | 0.0 | 45,133 | 3.1 |
| Arkansas | 746,543 | 0 | 2,057 | 2,057 | 0.3 | 20,597 | 2.8 |
| California (SSN) | 10,593,532 | 17 | 11 | 28 | 0.0 | 666,097 | 6.3 |
| Colorado | 604,012 | 48 | 3 | 51 | 0.0 | 127,899 | 21.2 |
| Connecticut | 529,295 | 0 | 0 | 0 | 0.0 | 229 | 0.0 |
| Delaware | 179,935 | 0 | 0 | 0 | 0.0 | 22 | 0.0 |
| District of Columbia | 166,514 | 25 | 1 | 26 | 0.0 | 3,895 | 2.3 |
| Florida | 3,020,105 | 136 | 1,890 | 2,023 | 0.1 | 259,113 | 8.6 |
| Georgia | 2,102,131 | 2 | 77 | 79 | 0.0 | 136,614 | 6.5 |
| Hawaii | 231,826 | 0 | 0 | 0 | 0.0 | 599 | 0.3 |
| Idaho | 233,352 | 1 | 0 | 1 | 0.0 | 0 | 0.0 |
| Illinois | 2,611,141 | 57 | 1 | 58 | 0.0 | 31,141 | 1.2 |
| Indiana | 1,045,174 | 0 | 0 | 0 | 0.0 | 12,531 | 1.2 |
| Iowa | 428,814 | 1 | 0 | 1 | 0.0 | 101,503 | 23.7 |
| Kansas | 356,738 | 0 | 18 | 18 | 0.0 | 10,905 | 3.1 |
| Kentucky (SSN) | 886,961 | 0 | 2 | 2 | 0.0 | 39,561 | 4.5 |
| Louisiana (SSN) | 1,166,422 | 3 | 146 | 149 | 0.0 | 66,348 | 5.7 |
| Maine | 326,502 | 7 | 50 | 57 | 0.0 | 27,471 | 8.4 |
| Maryland | 869,900 | 20 | 0 | 20 | 0.0 | 33,264 | 3.8 |
| Massachusetts | 1,247,300 | 0 | 0 | 0 | 0.0 | 396,336 | 31.8 |
| Michigan | 1,857,775 | 134 | 0 | 134 | 0.0 | 27,572 | 1.5 |
| Minnesota (SSN) | 790,767 | 4 | 0 | 4 | 0.0 | 41,560 | 5.3 |
| Mississippi | 780,300 | 0 | 18,502 | 18,502 | 2.4 | 76,164 | 9.8 |
| Missouri | 1,222,651 | 29 | 18 | 31 | 0.0 | 28,468 | 2.3 |
| Montana | 128,004 | 0 | 0 | 0 | 0.0 | 1,613 | 1.3 |
| Nebraska | 261,952 | 11,436 | 4,437 | 11,914 | 4.5 | 7,693 | 2.9 |
| Nevada (SSN) | 267,880 | 142 | 1,792 | 1,895 | 0.7 | 0 | 0.0 |
| New Hampshire | 145,737 | 27 | 0 | 27 | 0.0 | 2,553 | 1.8 |
| New Jersey (SSN) | 1,131,152 | 2 | 0 | 2 | 0.0 | 123,177 | 10.9 |
| New Mexico (SSN) | 527,703 | 2 | 12 | 14 | 0.0 | 13,593 | 2.6 |
| New York | 5,087,834 | 90,174 | 51,577 | 90,176 | 1.8 | 360,863 | 7.1 |
| North Carolina | 1,728,608 | 11 | 0 | 11 | 0.0 | 108,507 | 6.3 |
| North Dakota | 78,969 | 0 | 2 | 2 | 0.0 | 4 | 0.0 |

Table II.3 (continued)

| State | Total Number of Records | Number with Missing Date of Birth | Number with Missing Sex | Number with Missing Date of Birth or Sex | Percent with Missing Date of Birth or Sex | Number with Missing Race/Ethnicity | Percent with Missing Race/Ethnicity |
|----------------------|-------------------------|-----------------------------------|-------------------------|--|---|------------------------------------|-------------------------------------|
| Ohio | 2,126,626 | 74 | 0 | 74 | 0.0 | 578 | 0.0 |
| Oklahoma | 729,569 | 8 | 0 | 8 | 0.0 | 0 | 0.0 |
| Oregon | 563,447 | 4 | 0 | 4 | 0.0 | 77,301 | 13.7 |
| Pennsylvania | 2,029,894 | 43 | 0 | 43 | 0.0 | 49,064 | 2.4 |
| Rhode Island | 219,784 | 1 | 0 | 1 | 0.0 | 70,692 | 32.2 |
| South Carolina | 1,012,781 | 8 | 72 | 80 | 0.0 | 69,805 | 6.9 |
| South Dakota | 131,027 | 0 | 0 | 0 | 0.0 | 0 | 0.0 |
| Tennessee | 1,594,336 | 0 | 2 | 2 | 0.0 | 58,794 | 3.7 |
| Texas | 4,104,526 | 3 | 80 | 82 | 0.0 | 65,269 | 1.6 |
| Utah | 345,451 | 1 | 461 | 461 | 0.1 | 2,178 | 0.6 |
| Vermont (SSN) | 163,470 | 0 | 0 | 0 | 0.0 | 64,750 | 39.6 |
| Virginia | 927,685 | 3 | 38 | 41 | 0.0 | 3,919 | 0.4 |
| Washington | 1,199,572 | 0 | 55 | 55 | 0.0 | 166,416 | 13.9 |
| West Virginia | 383,114 | 2 | 0 | 2 | 0.0 | 0 | 0.0 |
| Wisconsin | 1,022,203 | 68 | 0 | 68 | 0.0 | 167,795 | 16.4 |
| Wyoming | 81,199 | 1,278 | 1,802 | 1,806 | 2.2 | 515 | 0.6 |
| United States | 60,555,527 | 103,815 | 89,506 | 136,411 | 0.2 | 3,597,346 | 5.9 |

In the 2005 MAX, there were 6.9 million records with invalid MAX SSNs. Of these, fewer than 9,500, or 0.14 percent, were candidates for substituting an apparently valid SSN obtained from the MAX or EDB-HIC. Rather than doing so, however, we opted to use the HIC as an element in our linkage algorithm, as explained in the next chapter.

3. Quality of DOB, Sex, and Race/Ethnicity

Although demographic variables do not guarantee uniqueness, they can be used in conjunction with one or more of the identifying variables to provide additional evidence that two records belong to the same person. The demographic data in the PS file come from the MSIS eligibility record. If a person has Medicaid claims but no eligibility record, the DOB, sex, and race/ethnicity in the PS file will be missing. Consequently, as in the case of SSNs, we examine the quality of these variables among people with records in the base PS file.

Table II.3 shows the number and percent of records in the 2005 base PS file that do not have a DOB or sex and the number and percent with missing race/ethnicity. Although DOB and sex are available for 99.8 percent of enrollees overall, one percent or more of records have missing information for at least one of these two variables in four states: Mississippi, Nebraska, New York, and Wyoming. In New York, records with missing demographic information are for unborn children; the cause of missing data in other states is unknown. Nonetheless, for a vast majority of records, DOB and sex are available, making them good candidates for confirming that identifier variables are linking two records that belong to the same person.

Table II.3 also shows that race/ethnicity is missing for a much larger number of enrollees (5.9 percent). The problem is considerable (over 20 percent with missing race/ethnicity) in five states: Colorado, Iowa, Massachusetts, Rhode Island, and Vermont. The problem is moderately

large (between 10 and 20 percent missing) in four states: New Jersey, Oregon, Washington, and Wisconsin.⁸ The problem is somewhat large (between 5 and 10 percent of records are missing race/ethnicity) in 10 additional states. In addition, separate reporting of race and Hispanic ethnicity began in MAX 2005 and some inconsistencies between the old and new measures have been identified in several states. Due to missing data and potential reporting inconsistencies, race/ethnicity will be used as a quality assessment tool rather than a link variable. We will use the old, combined measure of race/ethnicity to assess link quality because states continued to improve their reporting of the new race/ethnicity measure, resulting in reporting differences between 2005 and 2006.

4. Quality of UEG and TOS Indicators

UEG and TOS indicators do not guarantee uniqueness of a person and can change over time. We might, however, be able to use them in conjunction with the identifier and demographic variables to confirm that two records belong to the same person. For example, we would expect the BOE grouping (aged, disabled, child, or adult) in UEG to be relatively constant over time if a person is not near ages 18-21 (the transition from the child to the adult group) or 65 (the transition from disabled or adult to aged). An aged person should rarely change to a different BOE group. Likewise, we expect the TOS to be relatively constant over time for certain subpopulations (those not enrolled in managed care plans). For example, we would expect to see aged and disabled persons receiving long-term care services but we would not expect it of children. Agreement between record pairs on service use can be used to assess the quality of a match.

⁸ For all but one of these states and the nation as a whole, race/ethnicity was even more likely to be missing in 2006.

5. Persons with Claims but No Eligibility Information

The previous data quality sections focused on issues among people who have an eligibility record. There are some records, however, that contain claims but no eligibility information. These records have no SSN, HIC, EDB-SSN, EDB-HIC, or any of the demographic or enrollment variables discussed above. The number of records with claims but no eligibility information fluctuates from year to year. In 2005, over five percent of records were missing eligibility information in Colorado, Louisiana, and Washington (Table II.4).

There are many reasons for nonlinking claims. Nonlinkage could be caused by the state retroactively removing people from the eligibility system while not removing their corresponding claims. The state could be retroactively enrolling people in the eligibility system in the state's administrative data system but not submitting retro-enrollment records to the MSIS/MAX system. Also, the state could be changing the MSIS ID in the eligibility system but not in the claims processing system, or vice versa.⁹

Our recent discussions with MSIS liaisons in states have suggested that in many cases claims with no eligibility information are caused by retroactive disenrollment more often than other factors. Therefore, we elected to exclude records with no Medicaid eligibility information from our linking and unduplication process and the final MAXEM research files, but these records are retained in the cross-reference files so that there is a record for every corresponding record in the MAX PS files.

⁹ When this happens, the state is supposed to provide an external cross-reference file that links the old MSIS ID to the new MSIS ID, but sometimes a state is unable to do so.

Table II.4 Persons with Claims but No Eligibility Information in the MAX 2005 Person Summary File

| | Total Number of Records | Number with Claims but No Eligibility Record | Percent with Claims but No Eligibility Record |
|----------------------|-------------------------|--|---|
| Alabama | 963,526 | 7,936 | 0.8 |
| Alaska | 133,699 | 849 | 0.6 |
| Arizona | 1,491,569 | 14,727 | 1.0 |
| Arkansas | 762,193 | 15,687 | 2.1 |
| California | 10,924,768 | 331,245 | 3.0 |
| Colorado | 645,965 | 42,016 | 6.5 |
| Connecticut | 531,515 | 2,396 | 0.5 |
| Delaware | 181,053 | 1,118 | 0.6 |
| District of Columbia | 167,845 | 1,331 | 0.8 |
| Florida | 3,059,524 | 39,422 | 1.3 |
| Georgia | 2,107,826 | 24,602 | 1.2 |
| Hawaii | 237,736 | 5,949 | 2.5 |
| Idaho | 233,765 | 413 | 0.2 |
| Illinois | 2,612,709 | 2,238 | 0.1 |
| Indiana | 1,060,392 | 15,503 | 1.5 |
| Iowa | 430,985 | 2,171 | 0.5 |
| Kansas | 361,325 | 4,587 | 1.3 |
| Kentucky | 894,282 | 7,322 | 0.8 |
| Louisiana | 1,244,886 | 78,733 | 6.3 |
| Maine | 327,491 | 991 | 0.3 |
| Maryland | 868,686 | 1,765 | 0.2 |
| Massachusetts | 1,255,313 | 9,418 | 0.8 |
| Michigan | 1,878,812 | 21,037 | 1.1 |
| Minnesota | 792,366 | 1,654 | 0.2 |
| Mississippi | 787,537 | 7,291 | 0.9 |
| Missouri | 1,219,756 | 1,827 | 0.1 |
| Montana | 129,052 | 1,048 | 0.8 |
| Nebraska | 261,841 | 469 | 0.2 |
| Nevada | 272,739 | 4,859 | 1.8 |
| New Hampshire | 145,834 | 97 | 0.1 |
| New Jersey | 1,134,761 | 8,991 | 0.8 |
| New Mexico | 530,733 | 3,031 | 0.6 |
| New York | 5,118,695 | 30,861 | 0.6 |
| North Carolina | 1,729,575 | 967 | 0.1 |
| North Dakota | 79,961 | 1,336 | 1.7 |
| Ohio | 2,127,176 | 550 | 0.0 |
| Oklahoma | 730,873 | 2,264 | 0.3 |
| Oregon | 565,361 | 1,916 | 0.3 |
| Pennsylvania | 2,038,176 | 8,282 | 0.4 |
| Rhode Island | 224,884 | 5,100 | 2.3 |
| South Carolina | 1,012,763 | 476 | 0.0 |
| South Dakota | 130,988 | 94 | 0.1 |
| Tennessee | 1,607,615 | 13,370 | 0.8 |
| Texas | 4,164,091 | 60,821 | 1.5 |
| Utah | 359,506 | 14,055 | 3.9 |
| Vermont | 165,860 | 3,098 | 1.9 |
| Virginia | 928,642 | 957 | 0.1 |

Table II.4 (continued)

| | Total Number of Records | Number with Claims but No Eligibility Record | Percent with Claims but No Eligibility Record |
|----------------------|-------------------------|--|---|
| Washington | 1,285,090 | 85,518 | 6.7 |
| West Virginia | 393,616 | 10,505 | 2.7 |
| Wisconsin | 1,034,583 | 12,380 | 1.2 |
| Wyoming | 81,599 | 400 | 0.5 |
| United States | 61,429,538 | 913,673 | 1.5 |

Note: Persons with claims but no eligibility record have no information recorded in their SSN, EDB-HIC, EDB-SSN, EDB-HIC, date of birth, sex, and race/ethnicity fields.

C. Conclusion

The MSIS ID, in conjunction with state, can be used to link records across years within states. For linking duplicated records within states and linking any records across states, additional linkage variables must be used. Among the other identifying variables, the SSN is the most informative, whereas the EDB-SSN and the EDB-HIC pertain only to the small segment of the Medicaid population dually enrolled in Medicare and Medicaid; except in rare cases, they simply duplicate the SSN. The HIC reported in MSIS is less reliable than the EDB-HIC. Among the demographic variables, DOB and sex are the most promising for confirming that two records belong to the same person, because they are relatively complete. Race/ethnicity is missing for a substantial portion of the Medicaid population and will be used instead to assess the quality of linkages. Similarly, UEG and TOS will be used in a secondary role to determine whether enrollment and usage information are radically inconsistent across records that are identified as potentially being for the same person.

The quality of the assessed linkage variables varies by state and sometimes by year. Across all states, 89 percent of the records in the 2005 MAX PS files have a nonmissing identifier (an SSN, EDB-SSN, or HIC), DOB, and sex (Table II.5), but individual states vary widely. Over 37 percent of records in California have missing key identifiers. Colorado, Massachusetts, Nevada, and Washington are also worrisome, as identifiers are missing for more than 10 percent of records in these states. We expect that the match rate and our ability to unduplicate records in these states will be more limited than in states with more complete data. Finally, records with missing eligibility data will not be unduplicated or included in MAXEM, as we believe many of them result from retroactive disenrollment.

Table II.5 Records with Valid Identifiers and Demographics in the 2005 MAX Person Summary File

| State | Total Number of Records | Percent with Nonmissing Identifier, ^a Date of Birth, and Sex | Percent with Nonmissing Identifier ^a and Date of Birth, Missing Sex | Percent with Nonmissing Identifier ^a Missing Date of Birth | Percent with Missing Identifier ^b |
|----------------------|-------------------------|---|--|---|--|
| Alabama | 963,526 | 97.8 | 0.7 | 0.0 | 1.6 |
| Alaska | 133,699 | 96.5 | 0.0 | 0.0 | 3.5 |
| Arizona | 1,491,569 | 97.0 | 0.0 | 0.0 | 3.0 |
| Arkansas | 762,193 | 91.7 | 0.2 | 0.0 | 8.1 |
| California (SSN) | 10,924,768 | 62.4 | 0.0 | 0.0 | 37.6 |
| Colorado | 645,965 | 87.7 | 0.0 | 0.0 | 12.3 |
| Connecticut | 531,515 | 95.8 | 0.0 | 0.0 | 4.2 |
| Delaware | 181,053 | 90.6 | 0.0 | 0.0 | 9.4 |
| District of Columbia | 167,845 | 96.6 | 0.0 | 0.0 | 3.4 |
| Florida | 3,059,524 | 96.5 | 0.0 | 0.0 | 3.5 |
| Georgia | 2,107,826 | 93.0 | 0.0 | 0.0 | 7.0 |
| Hawaii | 237,736 | 97.5 | 0.0 | 0.0 | 2.5 |
| Idaho | 233,765 | 97.0 | 0.0 | 0.0 | 3.0 |
| Illinois | 2,612,709 | 97.3 | 0.0 | 0.0 | 2.7 |
| Indiana | 1,060,392 | 95.8 | 0.0 | 0.0 | 4.2 |
| Iowa | 430,985 | 98.3 | 0.0 | 0.0 | 1.7 |
| Kansas | 361,325 | 97.2 | 0.0 | 0.0 | 2.8 |
| Kentucky (SSN) | 894,282 | 96.7 | 0.0 | 0.0 | 3.3 |
| Louisiana (SSN) | 1,244,886 | 91.3 | 0.0 | 0.0 | 8.7 |
| Maine | 327,491 | 99.2 | 0.0 | 0.0 | 0.8 |
| Maryland | 868,686 | 96.9 | 0.0 | 0.0 | 3.1 |
| Massachusetts | 1,255,313 | 89.4 | 0.0 | 0.0 | 10.6 |
| Michigan | 1,878,812 | 92.5 | 0.0 | 0.0 | 7.5 |
| Minnesota (SSN) | 792,366 | 97.4 | 0.0 | 0.0 | 2.6 |
| Mississippi | 787,537 | 94.1 | 0.0 | 0.0 | 5.9 |
| Missouri | 1,219,756 | 98.5 | 0.0 | 0.0 | 1.5 |
| Montana | 129,052 | 98.5 | 0.0 | 0.0 | 1.5 |
| Nebraska | 261,841 | 94.2 | 0.0 | 2.3 | 3.5 |
| Nevada (SSN) | 272,739 | 87.0 | 0.1 | 0.0 | 12.9 |
| New Hampshire | 145,834 | 99.1 | 0.0 | 0.0 | 0.9 |
| New Jersey (SSN) | 1,134,761 | 93.8 | 0.0 | 0.0 | 6.2 |
| New Mexico (SSN) | 530,733 | 97.8 | 0.0 | 0.0 | 2.2 |
| New York | 5,118,695 | 92.9 | 0.0 | 0.4 | 6.7 |
| North Carolina | 1,729,575 | 97.9 | 0.0 | 0.0 | 2.1 |
| North Dakota | 79,961 | 97.9 | 0.0 | 0.0 | 2.1 |
| Ohio | 2,127,176 | 98.6 | 0.0 | 0.0 | 1.4 |
| Oklahoma | 730,873 | 97.1 | 0.0 | 0.0 | 2.9 |
| Oregon | 565,361 | 93.4 | 0.0 | 0.0 | 6.6 |
| Pennsylvania | 2,038,176 | 98.9 | 0.0 | 0.0 | 1.1 |
| Rhode Island | 224,884 | 96.8 | 0.0 | 0.0 | 3.2 |
| South Carolina | 1,012,763 | 95.4 | 0.0 | 0.0 | 4.6 |
| South Dakota | 130,988 | 97.2 | 0.0 | 0.0 | 2.8 |
| Tennessee | 1,607,615 | 98.3 | 0.0 | 0.0 | 1.7 |
| Texas | 4,164,091 | 93.8 | 0.0 | 0.0 | 6.2 |
| Utah | 359,506 | 92.7 | 0.0 | 0.0 | 7.3 |
| Vermont (SSN) | 165,860 | 98.0 | 0.0 | 0.0 | 2.0 |
| Virginia | 928,642 | 95.4 | 0.0 | 0.0 | 4.6 |
| Washington | 1,285,090 | 88.8 | 0.0 | 0.0 | 11.2 |
| West Virginia | 393,616 | 97.3 | 0.0 | 0.0 | 2.7 |
| Wisconsin | 1,034,583 | 96.3 | 0.0 | 0.0 | 3.7 |
| Wyoming | 81,599 | 95.0 | 0.2 | 1.0 | 3.9 |
| United States | 61,429,538 | 89.3 | 0.0 | 0.0 | 10.6 |

^a The identifier is nonmissing if the SSN, EDB-SSN, or HIC is nonmissing.

^b The identifier is missing if the SSN, EDB-SSN, and HIC are missing.

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III. EVALUATION OF LINKAGE ALGORITHMS

A key component of this project was the identification or development of an algorithm suitable for linking records from the MAX both within and across years and within and across states. The selection of a linking algorithm—a methodology for determining whether any two records in the MAX file belong to the same individual—was one of the most important design elements of MAXEM. The algorithm will determine which MAX records belong to the same person and therefore should be unduplicated in the database. Chapter II identified six variables—the MSIS ID, the Social Security Number (MAX SSN) reported in MSIS, the SSN obtained from the Medicare Enrollment Database (EDB-SSN), the Health Insurance Claim (HIC) number obtained from the EDB (EDB-HIC), date of birth, and sex—as being of the highest quality for linking MAX data. However, linking algorithms can vary substantially with respect to the level of disagreement permissible on the linking variables across records. For example, one algorithm may require sex to be the same on two linked records while another may allow some disagreement on sex if other variables agree.

Because the effectiveness of various linking algorithms had not previously been tested on MAX data, the review and testing of commonly used algorithms was a critical step in selecting the optimal design for MAXEM. This chapter documents our evaluation of three linkage algorithms and the selection of a final approach to linking records in MAX. We describe the linkage algorithms that we chose to evaluate; explain how we selected three prototype analysis states; and present the results of our evaluation of the three algorithms and, based on this evaluation, our recommended approach.

A. Existing Linking Algorithms

Following a review of common approaches to linking records between data sets, three extant algorithms were selected for further evaluation: (1) an approach used by CMS to merge

Medicare Modernization Act (MMA) Part D data to the Medicare Master Beneficiary Database (MBD) (Northrop Grumman Corporation 2008), (2) an approach used to link MAX data with the EDB, and (3) probabilistic linking (Fellegi and Sunter 1969; Jaro 1995; Whalen et al. 2001; Blakely and Salmond 2002). Key characteristics of these methods are summarized in Table III.1 and described in more detail below. In the discussion that follows, we define two records that are brought together as potentially representing the same person as a “record pair” or “matched record pair.” Record pairs that are judged to actually represent the same person are labeled “linked records” or “links.”

Table III.1 Design Matching Algorithms and Their Characteristics

| Algorithm | Description | Challenges | Limitations |
|-----------------------|---|-----------------------------|--|
| MMA–MBD | <p>Deterministic method based on point system that identifies agreement on the following variables as links:</p> <ul style="list-style-type: none"> • SSN + three of (DOB YR, DOB, MO, DOB DD, sex) • HIC + three of (DOB YR, DOB MO, DOB DD, sex) • CAN + DOB YR + DOB MO + sex^a | None | Does not allow that the relative importance of agreement on specific variables may vary in different populations; does not take into account the amount of agreement or disagreement within a variable or allow for reporting or recording error in a variable |
| MAX–EDB | <p>Deterministic method that identifies agreement on the following variables as links:</p> <ul style="list-style-type: none"> • SSN + sex + two of (DOB YR, DOB, MO, DOB DD) • HIC + sex + two of (DOB YR, DOB MO, DOB DD) • SSN is equal to CAN plus agreement on sex + two of (DOB YR, DOB MO, DOB DD) | None | Same as MMA-MBD |
| Probabilistic linking | Score potential matches according to their likelihood of occurring, choose cutoff rate to identify links | Complex, resource intensive | Difficult to select linkage cutoff value; relatively difficult to explain to lay audiences |

^a Northrop Grumman Corporation (2008) documentation is ambiguous with respect to whether this link is allowable.

1. Medicare Modernization Act–Master Beneficiary Database (MMA–MBD) Approach

The MMA–MBD point system was developed to identify three types of matches as linked pairs when merging Medicare Part D and Medicare beneficiary data: (1) records agreeing on SSNs and three of the four link variables defined by year of birth, month of birth, day of birth, and sex; (2) records agreeing on HIC and three of four link variables defined by year of birth, month of birth, day of birth, and sex; and (3) records agreeing on CAN, year and month of birth, and sex.

The MMA–MBD approach would be simple to implement for MAXEM because its point system, illustrated in Table III.2, was designed explicitly to identify linked pairs and can easily be adapted to MAX data.

Table III.2 MMA–MBD Point System

| Matching Variables | Points |
|--------------------|--------|
| (EITHER | |
| SSN | 5.00 |
| OR | |
| CAN | 3.50 |
| BIC | 1.20 |
| AND | |
| Year of birth | 3.25 |
| Month of birth | 3.00 |
| Day of birth | 2.25 |
| Sex | 2.50 |

Total scores equal to or exceeding 12.25 identify primary links using the MMA–MBD primary match criteria (Northrop Grumman Corporation 2008). It is important to note that the point system is only an implementation tool and is designed to identify the three specific combinations of matches (see Table III.1, note a). However, the types of links identified by the MMA–MBD approach may not be as effective with Medicaid records as they are with Medicare

Part D and the Medicare beneficiary records. Prior to this evaluation the effectiveness of this approach for linking records across Medicaid MAX data was unknown.

We adapted the MMA–MBD linking approach in three ways for our test implementation. First, we allowed records to be linked by MSIS ID plus three of the four link variables defined by year of birth, month of birth, day of birth, and sex. Second, we allowed records to be linked by SSN using either the MAX SSN or the EDB-SSN. Third, we used the EDB-HIC (not the MAX HIC) as the source for CAN and BIC information, when available. Table III.3 summarizes the allowable linkages in the adapted MMA–MBD approach as well as in the two other linking algorithms that we evaluated.

Table III.3 Implemented Linking Algorithms and Their Characteristics

| Algorithm | Description |
|-----------------------|---|
| MMA–MBD (adapted) | <p>Deterministic method based on point system that identifies agreement on the following variables as links:</p> <ul style="list-style-type: none"> • MSIS ID + three of (DOB YR, DOB MO, DOB DD, sex) • MAX SSN + three of (DOB YR, DOB MO, DOB DD, sex) • EDB-SSN + three of (DOB YR, DOB MO, DOB DD, sex) • EDB-HIC + three of (DOB YR, DOB MO, DOB DD, sex) • EDB-CAN + DOB YR + DOB MO + sex^a |
| MAX–EDB (adapted) | <p>Deterministic method that identifies agreement on the following variables as links:</p> <ul style="list-style-type: none"> • MSIS ID + sex + two of (DOB YR, DOB MO, DOB DD) • MAX SSN + sex + two of (DOB YR, DOB MO, DOB DD) • EDB-SSN + sex + two of (DOB YR, DOB MO, DOB DD) • EDB-HIC + sex + two of (DOB YR, DOB MO, DOB DD) • MAX SSN or EDB-SSN is equal to EDB-CAN plus agreement on sex + two of (DOB YR, DOB MO, DOB DD) |
| Probabilistic linking | Score potential matches according to their likelihood of occurring; choose cutoff rate to identify links |

^a The CAN is the first nine digits of the HIC. Northrop Grumman Corporation (2008) documentation is ambiguous with respect to whether this link is allowable under the MMA–MBD algorithm. We include the CAN link in the algorithm but separately evaluate the linkages produced by this combination of variables.

2. Medicaid Analytic Extract–Medicare Enrollment Database (MAX–EDB) Approach

The second linking algorithm that we evaluated is used currently by CMS to link MAX records to the Medicare EDB to identify dual enrollment in Medicare and Medicaid. The algorithm links record pairs agreeing on (1) SSN, sex, and at least two of three link variables defined by year of birth, month of birth, and day of birth; (2) HIC, sex, and two of the variables year of birth, month of birth, and day of birth; and those with (3) the SSN on one record equal to the CAN on the other record and agreeing on sex and two of the variables year of birth, month of birth, and day of birth.

The MAX–EDB approach differs from the MMA–MBD approach in three ways. First, it includes record pairs in which the SSN on one record agrees with the CAN on another record. Second, it has more stringent variable agreement requirements, in that the sex of any linked records must agree. Only the date of birth variable is allowed to differ somewhat in record pairs. Third, the MAX–EDB approach does not use a point system. If a point system were deemed helpful, however, one could be developed for the algorithm.

For the MAXEM application we adapted the MAX–EDB approach just as we did the MMA–MBD approach. First, we allowed records to be linked by MSIS ID in addition to SSN. Such record pairs also had to agree on sex and two of the variables defined by year of birth, month of birth, and day of birth. Second, we allowed agreement on SSN to occur with either the MAX SSN or EDB-SSN. Third, we substituted the EDB-HIC for the MAX HIC as the source of CAN and BIC information.

3. Probabilistic Linking

Both the MMA–MBD and the MAX–EDB approaches fall into a class of linking algorithms called “deterministic linking” because they define the full set of criteria that determine whether a record pair is to be linked or not. For this reason, deterministic approaches are very easy to

implement. But they also have two primary limitations. First, the linkage criteria do not allow that the relative importance of agreement on specific variables may vary in different populations. For example, sex usually provides less information with which to identify an individual than year of birth, but this might not be the case in a database with substantial missing data on year of birth. Second, deterministic methods typically do not take into account the amount of agreement or disagreement within a variable, or allow for error in the reporting or recording of a variable. For example, two SSNs that differ only by two transposed digits are treated the same as two SSNs that have no digits in common. While such differential agreement could potentially be incorporated into a deterministic linking algorithm, probabilistic linking is designed to accommodate such cases easily, based on a formal statistical model.

Unlike deterministic methods, probabilistic linking provides a single meaningful metric for ranking record pairs—a score based on the probability that the agreement between variables on the two records would occur by chance. The approach takes into account that agreement on some variables—for example, sex—provides less information with which to identify an individual than other variables, such as date of birth. Specifically, the score assigned to each record pair is a function of the probability of finding such agreement (or disagreement) on each of the link variables among true pairs, and the probability of finding such agreement (or disagreement) on each of the link variables among records that represent two different individuals.

For each link variable, we define:

- *Agreement Weight* = $\log_2(\text{probability of variable agreement in true pairs} / \text{probability of variable agreement in nonpairs})$
- *Disagreement Weight* = $\log_2(\text{probability of variable disagreement in true pairs} / \text{probability of variable disagreement in nonpairs})$

Reflecting an assumption that the linking variables are independent, the total score for a record pair is equal to the sum of the agreement and disagreement weights over all applicable link

variables. For example, if our linkage variables are SSN and sex, and a specific record pair agrees on SSN but disagrees on sex, we sum the agreement weight for SSN and the disagreement weight for sex to obtain the score for this record pair. If another pair agrees on both SSN and sex, then the score for this record pair will equal the sum of the two variable agreement weights, and so on.¹⁰ Higher scores are given to record pairs that agree on linking variables that are rarely the same on records for two distinct individuals.

Further refinements can be made to scale agreement and disagreement weights to allow for the possibility that some variable values provide more information than others. For example, disagreement on date of birth when one value is missing provides less information than when two distinct, complete dates are reported. Similarly, two SSNs with a single pair of transposed digits are in closer agreement than two completely distinct SSNs, and two dates of birth with a transposed day and month are in closer agreement than two distinct dates of birth.

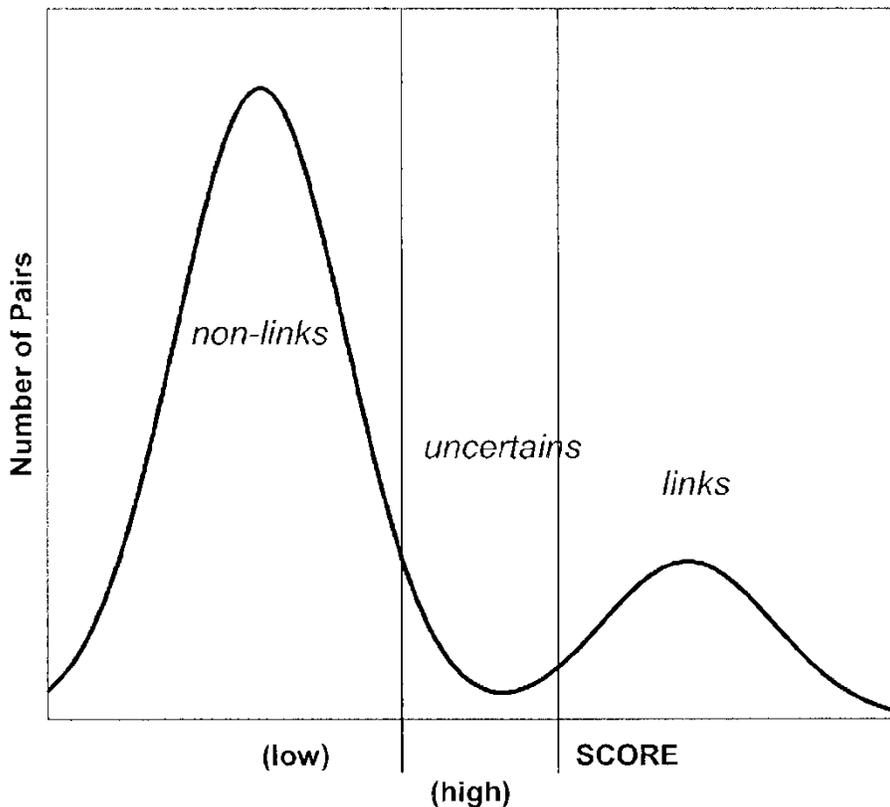
Ordinarily, the probabilities that are used to calculate the agreement and disagreement weights must be estimated anew for each application.¹¹ Typically, this is a two-stage process, which is often iterative. In the first stage, a subset of all possible record pairs within the data set is divided into true pairs and nonpairs based on a prespecified set of criteria; initial probabilities of agreement and disagreement are then estimated for all of the linkage variables for these two subpopulations. In the second stage, these probabilities are used to compute scores for a larger set of record pairs.

¹⁰ The probability that a variable agrees in true pairs is sometimes referred to as the m probability. The probability that a variable agrees in true nonpairs is sometimes referred to as the u probability. Thus, the agreement weight for each variable is equal to $\log_2(m/u)$ and the disagreement weight is equal to $\log_2(1-m/1-u)$. The total score for a record pair is simply the sum of applicable disagreement and agreement weights over all link variables.

¹¹ With repeated applications to similar problems, it may be possible to develop a consensus set of probabilities that can be applied to later, related applications.

Ideally, the distribution of scores is bimodal, with obvious links having high scores and obvious nonlinks having low scores (Figure III.1). Record pairs with scores falling above a cutoff are selected to be linked. Pairs with scores falling below a second, lower cutoff are defined as nonlinks. Matched pairs falling between the two cutoffs are defined as uncertain links. Ultimately, these need to be grouped with either the linked records or the nonlinked records. Often this requires a manual review—which may not be practical if the number of uncertain pairs is large. Simply moving the higher cutoff down is likely to increase the number of false positives (records for two different people that are identified as linked) by more than it reduces the number of false negatives (records for the same person that are not linked). Conversely, raising the lower cutoff is likely to increase the number of false negatives by more than it reduces the false positives.

Figure III.1 Expected Distribution of Probability Scores for Linked, Nonlinked, and Uncertain Records



Source: Whalen et al. (2001).

One solution, as we noted, is to iterate—that is, to use the linked pairs and nonlinked pairs identified in the second stage (those pairs above the higher cutoff or below the lower cutoff) to re-estimate the probabilities of agreement and disagreement on the link variables, repeating stage one. With the new probabilities, the scores for the record pairs in the full data set are then re-estimated and a new distribution is generated, ideally having a sharper bimodal distribution with fewer pairs in the uncertain middle. With a few iterations, it may be possible to reduce the uncertain records pairs to a number that can be manually reviewed or simply converted to links and nonlinks with an intermediate cutoff that will yield few false positives and false negatives.

Ideally, the second stage analysis will compare all record pairs in a file (a match merge). However, probabilistic record linkage is heavily computer-intensive, and the computing time required to assess all record pairs in a large file may be prohibitive. For this reason, in probabilistic linking, blocking is often used to limit the types of pairs that are assessed. Blocking means restricting the record pairs to those that agree on one or more of the link variables. For example, in their algorithm to merge Medicaid and other data file records, Whalen et al. (2001) limited the reviewed records to those that agreed on SSN, date of birth, and name, or sex and name. When blocking is used, it must be applied in stage one as well as stage two so that the estimated agreement and disagreement probabilities are conditional on the blocking. Blocking reduces processing time, however when it is too restrictive it severely limits the pool of records from which the disagreement probabilities can be estimated, which can make the agreement and disagreement probabilities too similar, thereby reducing the effectiveness of the linking algorithm in differentiating between true pairs and nonpairs.

B. Prototype Sample States

A prototype design of MAXEM—including combining files across years and states, implementing linking algorithms, and performing a link quality review to assess whether the

linked records were correctly identified as being for the same person—was first implemented on a set of three sample states. These states enabled us to address the wide range of programming, linkage variable quality, and data processing challenges to be encountered when we implement the algorithm on all states' data. The states of Arizona, California, and Nevada¹² were carefully selected to (1) reflect national variation in the quality of MAX identifier data, (2) include states with migration flows among them, and (3) reflect a range of analytic file sizes.

We chose these states because they included two SSN states (California and Nevada), which would ensure that the prototype algorithm functions for states that use SSNs as their MSIS IDs and thus have fewer identifiers. The sample group also included states with linkage variable data quality issues. Both California and Nevada have over 10 percent of records with missing or invalid SSNs. Including states with such problems would ensure that the programs developed to implement the linking and unduplication strategy can adequately address these limitations. The states also had substantial migration flows (Perry 2003), allowing us to adequately test cross-state linking. Finally, the combination of two relatively small states and one very large state enabled us to develop the algorithm on the two smaller states and then apply it to California in order to identify challenges associated with processing large quantities of data.

We were well aware that the results from the linking implementation would not be representative of the nation as a whole. Because the prototype included states with a great deal of migration, we expected to identify proportionately more links across our sample states than we would later find across other states. At the same time, however, we expected to identify a smaller percentage of true pairs within our sample states than across other states because of the relatively

¹² We also considered the following groups of states: (1) Alabama, Florida, and Georgia, (2) Arizona, California, and Washington, (3) District of Columbia, Maryland, and Virginia, and (4) New Jersey, New York, and Pennsylvania.

lower quality of the linkage variables in the sample states. Nevertheless, we expected that testing the algorithms on Arizona, California, and Nevada would allow us to assess the benefits and limitations of the alternative linking strategies. It would also allow us to develop a prototype that could address most of the challenges we would face in implementing MAXEM on all 50 states and DC.

C. Evaluation of the Three Algorithms

In evaluating the linkages produced by the three algorithms, we would have liked to have a way to determine whether each linked pair was indeed a true pair and whether each nonlinked pair was indeed a nonpair—even if only for a sample of record pairs. Such was not the case, however. Lacking a means to determine true agreement, we assessed the quality of any two linked record pairs by their agreement on six measures—race/ethnicity, basis of eligibility (BOE), non-overlapping months of enrollment (within a year and state only), use of any services, use of institutional care, and use of prescription drugs. We excluded people ages 18-22 and 64-66 from the assessment of agreement on BOE because these are transition years between different BOE statuses. In addition to examining the quality of the linkages, we also compared the algorithms with respect to their processing time and computational efficiency. We present our findings for processing time first, because the results had a major impact on how we structured the rest of the evaluation.

1. Algorithm Processing Time and Efficiency

Run time is an important consideration in selecting a linking algorithm because linking data for all states for the 2005 and 2006 MAX files (about 120 million records) could require days, weeks, or even months to process. CPU processing time—the time required by the processor to implement the program—remains relatively stable across runs. However, total perceived

processing time—referred to as “wall clock time”—varies substantially from run to run, depending on the demands of the CMS mainframe, and reflects the actual time resources needed to implement an algorithm.

Table III.4 summarizes the CPU and wall clock time for the three tested algorithms, by state. Generally, file size was linearly associated with run time such that Arizona, which has about six times as many enrollees as Nevada, required five to six times as long to process. California required 25 to 40 times as long to process as Nevada. Nationally, we estimate that processing an algorithm on all states will take about 200 times as long as processing the same algorithm on Nevada.

The MMA–MBD and MAX–EDB linking algorithms required only a minute or two of wall clock time for Nevada and were successfully run on California in under an hour. The cross-state runs that implemented both deterministic algorithms ran in under four hours. These processing times suggest that either algorithm could be implemented in a relatively short time frame and, assuming some reruns will be necessary, would require no more than a week to process all 50 states and the District of Columbia.

Probabilistic linking, however, required substantially more processing time. We made several attempts to implement the algorithm on Nevada without blocking (for the full Cartesian product of 273 billion record pairs). However, even aborted runs suggested that implementing such an algorithm would be challenging and time-consuming. Processing of records for Nevada, which is in the lowest 25th percentile of states with respect to the size of its Medicaid population, was aborted after more than eight hours. This run time suggests that, without blocking, processing California records alone would require several weeks, and several months of processing would be required to implement the approach nationally. Because the algorithm also

Table III.4 Processing Times (in Minutes) for the MMA–MBD, MAX–EDB, and Probabilistic Linking Algorithms, MAX 2005–2006

| Procedure | Nevada N=522,627 | | Arizona N=2,988,696 | | California N=21,205,442 | | Cross-State | |
|---|---------------------|---------------------|------------------------|--------|----------------------------|-------|-------------|--------|
| | CPU | Wall | CPU | Wall | CPU | Wall | CPU | Wall |
| Deterministic Linking | | | | | | | | |
| MMA–MBD ^a | 0.21 | 0.88 | 1.17 | 5.83 | 6.62 | 31.92 | NA | NA |
| MAX–EDB ^a | 0.29 | 1.58 | 1.52 | 8.74 | 8.48 | 48.51 | NA | NA |
| Cross-state linkages for MMA- MBD and MAX-EDB algorithms | NA | NA | NA | NA | NA | NA | 26.3 | 222.69 |
| Probabilistic Linking | | | | | | | | |
| No blocking | 120.00 (aborted) | 504.00 (aborted) | NA | NA | NA | NA | NA | NA |
| Blocking level 1 ^b | 21.63 | 45.08 | 545.51 | 761.29 | NA | NA | NA | NA |
| Blocking level 2 ^b | 6.22 | 176.88 | NA | NA | NA | NA | NA | NA |

Note: CPU and wall clock times vary substantially depending on the demands on the CMS mainframe. Programs were typically run on multiple occasions with different specifications.

^a MMA–MBD and MAX–EDB linking algorithms were implemented using traditional match merging as well as SQL views. Processing times for SQL views were three to five times longer than traditional match merging. For example, an SQL view processing both algorithms for California took 25.49 minutes of CPU time and 150.13 minutes of wall time. Traditional match-merging processing times for MMA–MBD and MAX–EDB are reported in the table.

^b Blocking level 1 requires agreement on one of the following: MSIS ID, MAX SSN or EDB-SSN, HIC, CAN, or year of birth and month of birth. Blocking level 2 requires agreement on one of the following: MSIS ID, MAX SSN or EDB-SSN, HIC, CAN, date of birth and last four digits of the SSN, or date of birth and first five digits of SSN.

requires substantial data reviews, annual implementation of probabilistic linking without blocking would be impractical unless there were notable benefits associated with the approach in terms of its ability to link MAX records.

Probabilistic linking with blocking on MSIS ID, MAX SSN or EDB-SSN, HIC, CAN, and year of birth and month of birth ran within an hour on Nevada but required 13 hours for Arizona. This blocking approach would also be quite resource-intensive, potentially requiring up to a week to process California and a month of processing time alone to implement the approach nationally. Nevertheless, we viewed implementation of this blocking approach to be feasible if it resulted in a substantial decrease in false positive or false negative matches.

The final probabilistic linking blocking approach that we tested (on Nevada alone) restricted the blocking on date of birth to records that also agreed on parts of the SSN. Specifically, we blocked on MSIS ID, MAX SSN or EDB-SSN, HIC, CAN, date of birth and first four digits of the SSN, and date of birth and first five digits of the SSN. This blocking approach required three hours to run on Nevada.

2. Quality of Linkages

We reviewed the quality of record pairs in two stages. In the first stage, we reviewed the summary quality measures for record pairs in the two smaller states—Arizona (a non-SSN state) and Nevada (an SSN state)—to estimate the expected level of agreement on each quality indicator, determine whether agreement on these variables is generally consistent across states, and make a general assessment of the quality of specific linkage types. This review was also used to determine whether quality measure thresholds could be used to distinguish good links from bad ones. In the second stage of our evaluation we implemented the three linking algorithms on Nevada, the smallest state, to ensure that each was feasible and well specified. We reviewed the percentage of record pairs matching on our quality indicators, overall and for each

combination of variable and agreement. We also examined whether the algorithms linked record pair types that we identified as potentially good matches during the first stage of our quality review. We then applied optimal specifications to all three prototype states for within- and across-year record pairs and for records that linked across states, and similarly reviewed the results of each run.

a. Assessment of the Quality Indicators

To gauge the sensitivity of the quality indicators, we first examined their distribution across record pairs in Arizona and Nevada for MAX 2005 and 2006. (The quality indicator reflecting non-overlapping months of enrollment was excluded because it is not applicable for across-calendar year matches.) Overall, about half of record pairs in Arizona and Nevada with the same MSIS IDs and the same MAX SSNs (good matches) agreed on all five quality indicators (Table III.5). Some disagreement was common even among good matches because service use often changes across years and some changes in BOE are also expected. In comparison, among record pairs with different MSIS IDs and different MAX SSNs (nonmatches) in our blocked sample, only 13 percent agreed on all the quality indicators. Good matches and nonmatches also were differentiated by agreement on both race and BOE. About 80 percent of good matches but only 30 percent of bad matches had the same race and BOE. Therefore, we generally focused our review on identifying variable combinations that either agreed on all quality indicators or agreed on both race and BOE, only reviewing all five quality indicators when classification of a record pair type was unclear.

A further review of subsets of record pairs indicated that among types of record pairs that we viewed a priori as good matches (for example, records with same SSN, same HIC, same sex, and same two parts of date of birth; or those with same HIC, same date of birth, and same sex, but one digit difference in SSN), over 25 percent agreed on all six quality indicators, and over 50

percent agreed on both race and BOE. Furthermore, the vast majority of nonmatches (for example, records with only date of birth and sex in common) did not meet this requirement. We adopted a 25 percent threshold for agreement on all six quality indicators and a 50 percent threshold for agreement on race and BOE as an indicator of the likelihood that a record pair was for the same person and therefore should be linked in MAXEM. We identified as uncertain and to be investigated further any variable combinations that agreed on MSIS ID but did not meet our quality thresholds, as well as those that disagreed on MSIS ID but did meet the thresholds. We also reviewed variable combinations that were inconsistently categorized in Arizona and Nevada.

Table III.5. Average Quality Indicator Values for Well-Matched and Poorly Matched Blocked-Record Pairs in Arizona and Nevada, MAX 2005–2006

| Measure | Arizona | | Nevada (SSN) | |
|--|----------------------------|--------------------------------------|----------------------------|--------------------------------------|
| | Same MSIS ID, Same MAX SSN | Different MSIS ID, Different MAX SSN | Same MSIS ID, Same MAX SSN | Different MSIS ID, Different MAX SSN |
| Number of Record Pairs | 1,057,060 | 116,349,996 | 174,644 | 4,618,698 |
| Percentage Agreeing on: | | | | |
| All quality review variables | 51.7 | 13.4 | 44.6 | 13.1 |
| Same race | 96.1 | 36.9 | 87.3 | 31.1 |
| Same BOE (excluding 18-22 & 64-66 year olds) | 86.7 | 78.9 | 89.8 | 94.0 |
| Agreement on any service use | 78.3 | 62.0 | 74.9 | 64.9 |
| Same prescription drug use | 71.2 | 52.3 | 74.8 | 65.7 |
| Same institutional care use | 99.2 | 99.6 | 99.2 | 99.9 |
| Same race, same BOE | 83.3 | 29.9 | 78.1 | 29.1 |
| Same race, different BOE | 1.0 | 2.3 | 0.7 | 1.8 |
| Different race, same BOE | 3.3 | 48.1 | 11.7 | 64.8 |
| Different race, different BOE | 0.2 | 6.4 | 0.1 | 4.0 |

Most variable agreement combinations that included agreement on MSIS ID met the 25 percent threshold set for all quality-assessment variables and the 50 percent threshold for race and BOE indicators. Overall, 7.8 percent (98,812) of record pairs with the same MSIS IDs disagreed on MAX SSN in Arizona. Almost all (99.7 percent) of these record pairs agreed on date of birth and sex. There were no such cases in Nevada, an SSN state.

The top panel of Table III.6 provides a breakdown of record pair combinations that agreed on MSIS ID but did not meet the quality thresholds. Note that some outliers are expected and therefore some combinations may have low quality scores but still include record pairs that mostly represent the same person. We view only the last four entries in the top panel of the table (items 12-15) as questionable linkages by MSIS ID, reflecting 28 record pairs in Arizona. These record pairs had different SSNs, disagreed on other identifiers, and did not agree on date of birth. In general, however, our quality review suggests that all record pairs agreeing on MSIS ID should be linked.

A somewhat more restrictive threshold, requiring 35 percent of cases to agree on all quality-assessment variables and 75 percent to agree on race and BOE, would reject about 1,757 record pairs as nonlinks. About 60 percent of these agreed on only two parts of the date of birth, and the remainder disagreed on sex. However, these cases had the same SSN and MSIS ID, suggesting that they likely reflect the same individual.

The second panel of Table III.6 lists the most common variable combinations for record pairs that did not agree on MSIS IDs but had quality indicator scores above our thresholds. Such cases indicate records that are potentially linkable by variables other than MSIS ID across years and across states. However, the list includes almost a million record pairs with missing SSNs that matched only by date of birth and sex (32 percent agreed on all quality assessment variables and 55 percent agreed on race and BOE), suggesting that the threshold levels may be insensitive to some false positives.

Nevertheless, in Arizona, 96.6 percent of record pairs in combinations disagreeing on MSIS ID but agreeing on MAX SSN had quality indicators above our threshold. (There were no such cases in Nevada because the MSIS ID is equal to the MAX SSN in that state.) Cases that did not

agree on the quality indicators typically disagreed on date of birth and sex, although this was not always true. We investigate date of birth and sex combinations in more detail below.

Table III.6 Uncertain Record-Pair Types Among Potential Matches in Arizona and Nevada, MAX 2005–2006

| Item # | Agrees on MSIS ID | Agrees on MAX SSN | Agrees on EDB-SSN | Agrees on HIC | Agrees on DOB | Agrees on Sex | Number of Record Pairs | |
|--|-------------------|-------------------|-------------------|---------------|---------------|---------------|------------------------|--------|
| | | | | | | | Arizona | Nevada |
| Record Pairs Combinations with Same MSIS ID but Below Quality Indicator Threshold | | | | | | | | |
| 1 | X | X | X | X | ≠ | X | 0 | 1 |
| 2 | X | X | X | ≠ | ≠ | X | 0 | 1 |
| 3 | X | X | | ≠ | X | X | 0 | 1 |
| 4 | X | X | | X | ≠ | X | 35 | 0 |
| 5 | X | ✓ | | | ≠ | ≠ | 1 | 0 |
| 6 | X | ≠ | | ≠ | ✓ | X | 1 | 0 |
| 7 | X | ≠ | | | ✓ | X | 1 | 0 |
| 8 | X | ≠ | X | X | ✓ | X | 9 | 0 |
| 9 | X | ≠ | | X | ✓ | X | 3 | 0 |
| 10 | X | | | X | ✓ | X | 1 | 0 |
| 11 | X | | | | | X | 1 | 0 |
| 12 | X | ≠ | ≠ | ≠ | ≠ | X | 5 | 0 |
| 13 | X | ≠ | | | | X | 16 | 0 |
| 14 | X | ≠ | | | ≠ | X | 1 | 0 |
| 15 | X | ≠ | ≠ | ≠ | ≠ | ≠ | 6 | 0 |
| Record Pair Combinations Disagreeing on MSIS ID but Above Quality Indicator Threshold | | | | | | | | |
| 16 | ≠ | | | | X | X | 897,676 | 0 |
| 17 | ≠ | X | X | X | X | X | 4,189 | 0 |
| 18 | ≠ | X | X | X | Two parts | X | 73 | |
| 19 | ≠ | X | | | X | X | 1,053 | 0 |
| 20 | ≠ | | | | X | X | 109 | 0 |

Note: Empty cells reflect missing values on the variable on one for both record pairs. Combinations above the quality indicator thresholds are cases in which 25 percent of the record pairs agree on all quality indicators and 50 percent agree on race and BOE.

To examine the quality of linkages for close but not complete agreement—for example, inconsistencies due to typos—we examined the quality of record pairs with these characteristics that agreed on MSIS ID (verified linkable records) and those disagreeing on MSIS ID. Specifically, we examined whether record pairs with a one-digit difference in SSN, two transposed digits in the SSN, or a transposed month and day of birth have quality scores that

exceeded the 25 percent agreement thresholds for all quality indicators and 50 percent agreement thresholds for race and BOE (Table III.7). The 61 record pairs in Arizona with the same MSIS IDs and a one-digit difference in SSN exceeded the quality threshold; this was not the case among similar records whose MSIS IDs did not agree. Transposed SSN values, whether or not they agreed on MSIS IDs, did not meet our quality thresholds. As a result of this review, we recommend that close but imperfect agreement on SSNs not be pursued further for linking MAX records.

Table III.7 Quality of Record Pairs for Select Record Pair Types in Arizona and Nevada, MAX 2005–2006

| Agreement combination | Arizona | | | Nevada (SSN) | | | Linkage Recommendation |
|--|-------------------|-------------------------------------|------------------------|-------------------|-------------------------------------|------------------------|------------------------|
| | Number of Records | Agreement on All Quality Indicators | Agreement on Race, BOE | Number of Records | Agreement on All Quality Indicators | Agreement on Race, BOE | |
| Same MSIS ID, Same MAX SSN | 1,057,060 | 51.7 | 83.3 | 174,644 | 44.6 | 78.1 | Potential link |
| One digit difference in SSN | | | | | | | |
| Same MSIS ID | 61 | 59.0 | 60.7 | 0 | N/A | N/A | Potential link |
| Different MSIS ID | 546,362 | 24.0 | 46.4 | 40,564 | 13.1 | 29.1 | Nonlink |
| Transposed SSN values | | | | | | | |
| Same MSIS ID | 10 | 20.0 | 20.0 | 0 | N/A | N/A | Nonlink |
| Different MSIS ID | 17,010 | 20.4 | 38.6 | 794 | 13.0 | 32.9 | Nonlink |
| Transposed day and month of birth | | | | | | | |
| Same MSIS ID | 63 | 49.2 | 74.6 | 20 | 30.0 | 50.0 | Potential link |
| Different MSIS ID | 12 | 25.0 | 100.0 | 0 | N/A | N/A | Potential link |
| Two of three date of birth, sex | | | | | | | |
| Same MSIS ID | 1,204 | 41.6 | 67.1 | 599 | 33.2 | 68.4 | Potential link |
| Different MSIS ID | 387 | 31.5 | 62.0 | 5 | 0.0 | 0.0 | Potential link |
| Same date of birth, different sex | | | | | | | |
| Same MSIS ID | 340 | 30.9 | 55.9 | 175 | 36.0 | 65.7 | Potential link |
| Different MSIS ID | 111 | 26.1 | 56.8 | 0 | N/A | N/A | Potential link |

Table III.7 also shows the percentage of record pairs with transposed day and month of birth that met the two quality thresholds. We also compared outcomes for these record pairs with those of others with incomplete agreement on demographic variables—record pairs agreeing on sex and two of three parts of the date of birth (allowable in both the MMA–MBD and MAX–EDB

algorithms), and record pairs agreeing on date of birth but not sex (allowable in the MMA–MBD algorithm only). In Arizona, the quality outcomes for the 75 pairs with transposed month and day of birth were comparable to those for the nearly 1,600 pairs that agreed on sex and two of three common elements in the date of birth. Quality scores for record pairs with the same date of birth but different sex were lowest. In both states, however, all three types of incomplete agreement consistently passed both of our thresholds regardless of agreement on MSIS ID, with the exception of five record pairs in Nevada with agreement on sex but only two of three date elements. We recommended that record pairs with these combinations of agreement on sex and date of birth be further reviewed for potential linkage in MAXEM and associated summary statistics included in state validation tables.

In summary, our review of link quality indicators on a large number of linking variable combinations in Arizona and Nevada suggested that:

1. With the exception of a small subset of records that disagree on multiple indicator variables, records agreeing on MSIS IDs should be linked, regardless of whether date of birth and month of birth agree.
2. Records disagreeing on MSIS ID and with close but not complete agreement on SSN (or other identifier variables) should not be linked in MAXEM.
3. Records disagreeing on MSIS ID and with transposed month and day of birth should be considered for potential linkage in MAXEM. Quality indicators for these cases were similar to those of record pairs with allowable date of birth and sex combinations in the MMA–MBD and MAX–EDB algorithms.

b. Assessment of the Three Linking Algorithms

Probabilistic Linking. The record pair quality review and the implementation of three blocking strategies in Nevada identified two major limitations to implementing probabilistic linking on MAX data. First, running probabilistic linking without blocking would require a minimum of four months of processing time. The specification was not pursued further pending our assessment of the utility of the approach more generally. Second, due to the limited number

of linking variables (SSN, date of birth, and sex) available for linking records across states, as well as within states for SSN states, the tested blocking strategies substantially biased our disagreement probability estimates. Disagreement probabilities measure the likelihood that two records agree on a variable by chance among record pairs that do not belong to the same person (for example, two distinct people who were born on the same day). Because most “nonpairs” identified during the first stage of analysis were blocked (merged) by year of birth and date of birth, disagreement probabilities for these variables were overestimated, which resulted in a large number of false positive and false negative links. For example, thousands of records agreeing only on date of birth and sex were linked across years in our initial implementation.

Because other useful blocking variables are not available for linking MAX data, we were left with two options for implementing probabilistic linking: (1) a nonblocked strategy that would require substantial processing resources, or (2) specifying (hard coding) the disagreement weights for date of birth and sex nationally. The second option restricts the benefit of using probabilistic linking primarily to linkages made by MSIS ID and SSN. However, our assessment of link quality suggested that there would be no benefit from such an approach. As discussed above, record pairs that differed by one digit or by two transposed digits in the SSN scored poorly on our quality indicators. To avoid false positives, we recommend that such cases not be linked, even though some of the discrepant SSNs may indeed be due to typos and represent the same individual.

Our quality review of other types of close matches indicated that, given the small number of matching variables, a comprehensive review of all variable combinations was possible and would indicate the relative merits of allowing close matches—for example, including slightly varying SSNs and transposed month and day of birth in linked records. Similarly, a detailed review of alternative options for date of birth and gender agreement could identify the relative

merits of using the MMA-MBD, MAX-EDB, or an alternative date of birth and gender requirement in each state. Furthermore, such review could be conducted on a state-by-state basis with much greater efficiency than probabilistic linking, which includes a manual review as well as lengthy processing.

In summary, our evaluation of several specifications of probabilistic linking suggested that using this linking algorithm was not advisable for MAXEM, primarily due to the high costs and low benefit of its implementation relative to an evidence-based deterministic approach. In the event that additional linking variables (for example, enrollee names) become available, we would recommend a re-evaluation of probabilistic linking for MAXEM.

MMA-MBD and MAX-EDB Algorithms. Table III.8 summarizes the linkage statistics and link quality measures for within-year and cross-year linking for the MMA-MBD and MAX-EDB linkage algorithms in Arizona, California, and Nevada. It also presents the same information for records that were linked by the MMA-MBD algorithm but not by MAX-EDB. We did not include a column for record pairs linked by the MAX-EDB but not MMA-MBD. There were only 47 such cases in California and two in Nevada, where the SSN on one record agreed with the CAN on the other record. These record pairs had quality scores below our threshold; therefore we do not recommend such linkages for MAXEM.

The MMA-MBD algorithm linked three types of records not linked by the MAX-EDB algorithm, those agreeing on (1) MAX SSN and date of birth but not sex, (2) MAX SSN and date of birth but missing sex on one or both records, and (3) CAN, date of birth, and sex but disagreeing on other identifying variables. The third group of individuals could potentially be

Table III.8 Comparison of the MMA–MBD and MAX–EDB Linkage Algorithms in Arizona, California, and Nevada, MAX 2005–2006

| Measure | Arizona | | | California (SSN) | | | Nevada (SSN) | | |
|--|-------------|-------------|---|------------------|-------------|---|--------------|-------------|---|
| | MMA– MBD | MAX– EDB | Links Identified in MMA–MBD but not MAX–EBD | MMA– MBD | MAX– EDB | Links Identified in MMA–MBD but not MAX–EBD | MMA– MBD | MAX– EDB | Links Identified in MMA–MBD but not MAX–EBD |
| All Linked Record Pairs | | | | | | | | | |
| Number of links identified | 1,178,392 | 1,177,898 | 494 | 8,379,237 | 8,365,929 | 13,364 | 182,314 | 181,598 | 717 |
| Percent of links within year | 0.3 | 0.2 | 14.4 | 0.0 | 0.0 | 2.5 | 0.0 | 0.0 | 1.4 |
| Percent of links across years | 99.7 | 99.8 | 85.6 | 100.0 | 100.0 | 97.5 | 100.0 | 100.0 | 98.6 |
| Agreement on all quality review variables | 53.2 | 53.2 | 27.1 | 53.2 | 53.2 | 27.1 | 53.2 | 53.2 | 27.1 |
| Same race | 96.2 | 96.2 | 78.1 | 96.2 | 96.2 | 78.1 | 96.2 | 96.2 | 78.1 |
| Same BOE (excluding those age 18-22 & 64-66) | 88.4 | 88.4 | 73.1 | 88.4 | 88.4 | 73.1 | 88.4 | 88.4 | 73.1 |
| Agreement on any service use | 77.7 | 77.7 | 66.4 | 77.7 | 77.7 | 66.4 | 77.7 | 77.7 | 66.4 |
| Same prescription drug use | 73.0 | 73.0 | 65.0 | 73.0 | 73.0 | 65.0 | 73.0 | 73.0 | 65.0 |
| Same institutional care use | 99.2 | 99.2 | 99.0 | 99.2 | 99.2 | 99.0 | 99.2 | 99.2 | 99.0 |
| Same race, same BOE | 85.1 | 85.1 | 57.7 | 85.1 | 85.1 | 57.7 | 85.1 | 85.1 | 57.7 |
| Same race, different BOE | 2.5 | 2.5 | 15.2 | 2.5 | 2.5 | 15.2 | 2.5 | 2.5 | 15.2 |
| Different race, same BOE | 3.3 | 3.3 | 15.4 | 3.3 | 3.3 | 15.4 | 3.3 | 3.3 | 15.4 |
| Different race, different BOE | 0.3 | 0.3 | 4.3 | 0.3 | 0.3 | 4.3 | 0.3 | 0.3 | 4.3 |
| Linked Record Pairs Within State and Year | | | | | | | | | |
| Total number of record pairs | 2,948 | 2,877 | 71 | 728 | 415 | 340 | 61 | 51 | 10 |
| Agreement on all quality review variables | 60.14 | 61.49 | 5.63 | 60.14 | 61.49 | 5.63 | 60.14 | 61.49 | 5.63 |
| Same race | 87.75 | 87.94 | 80.28 | 87.75 | 87.94 | 80.28 | 87.75 | 87.94 | 80.28 |
| Same BOE (excluding those age 18-22 & 64-66) | 90.26 | 90.79 | 69.01 | 90.26 | 90.79 | 69.01 | 90.26 | 90.79 | 69.01 |
| Non-overlapping months of enrollment | 80.26 | 81.37 | 35.21 | 80.26 | 81.37 | 35.21 | 80.26 | 81.37 | 35.21 |
| Agreement on any service use | 80.39 | 80.71 | 67.61 | 80.39 | 80.71 | 67.61 | 80.39 | 80.71 | 67.61 |
| Same prescription drug use | 83.72 | 84.01 | 71.83 | 83.72 | 84.01 | 71.83 | 83.72 | 84.01 | 71.83 |
| Same institutional care use | 97.86 | 97.81 | 100.00 | 97.86 | 97.81 | 100.00 | 97.86 | 97.81 | 100.00 |
| Same race, same BOE | 80.29 | 80.81 | 59.15 | 80.29 | 80.81 | 59.15 | 80.29 | 80.81 | 59.15 |
| Same race, different BOE | 3.43 | 3.27 | 9.86 | 3.43 | 3.27 | 9.86 | 3.43 | 3.27 | 9.86 |
| Different race, same BOE | 9.97 | 9.98 | 9.86 | 9.97 | 9.98 | 9.86 | 9.97 | 9.98 | 9.86 |
| Different race, different BOE | 1.56 | 1.46 | 5.63 | 1.56 | 1.46 | 5.63 | 1.56 | 1.46 | 5.63 |
| Linked Record Pairs Across Year | | | | | | | | | |
| Total number of record pairs | 1,175,444 | 1,175,021 | 423 | 8,378,509 | 8,365,514 | 13,024 | 182,253 | 181,547 | 707 |
| Agreement on all quality review variables | 53.17 | 53.18 | 30.73 | 53.17 | 53.18 | 30.73 | 53.17 | 53.18 | 30.73 |

| Measure | Arizona | | | California (SSN) | | | Nevada (SSN) | | |
|--|---------|---------|---|------------------|---------|---|--------------|---------|---|
| | MMA-MBD | MAX-EDB | Links Identified in MMA-MBD but not MAX-EBD | MMA-MBD | MAX-EDB | Links Identified in MMA-MBD but not MAX-EBD | MMA-MBD | MAX-EDB | Links Identified in MMA-MBD but not MAX-EBD |
| Same race | 96.22 | 96.23 | 77.78 | 96.22 | 96.23 | 77.78 | 96.22 | 96.23 | 77.78 |
| Same BOE (excluding those age 18-22 & 64-66) | 88.37 | 88.37 | 73.76 | 88.37 | 88.37 | 73.76 | 88.37 | 88.37 | 73.76 |
| Agreement on any service use | 77.70 | 77.70 | 66.19 | 77.70 | 77.70 | 66.19 | 77.70 | 77.70 | 66.19 |
| Same prescription drug use | 72.93 | 72.93 | 63.83 | 72.93 | 72.93 | 63.83 | 72.93 | 72.93 | 63.83 |
| Same institutional care use | 99.25 | 99.25 | 98.82 | 99.25 | 99.25 | 98.82 | 99.25 | 99.25 | 98.82 |
| Same race, same BOE | 85.11 | 85.12 | 57.45 | 85.11 | 85.12 | 57.45 | 85.11 | 85.12 | 57.45 |
| Same race, different BOE | 2.52 | 2.52 | 16.08 | 2.52 | 2.52 | 16.08 | 2.52 | 2.52 | 16.08 |
| Different race, same BOE | 3.25 | 3.25 | 16.31 | 3.25 | 3.25 | 16.31 | 3.25 | 3.25 | 16.31 |
| Different race, different BOE | 0.28 | 0.28 | 4.02 | 0.28 | 0.28 | 4.02 | 0.28 | 0.28 | 4.02 |

twins; therefore we recommend not linking these records in MAXEM. There were only 494 record pairs linked by MMA–MBD but not MAX–EDB in Arizona, 13,364 in California, and 717 in Nevada. A vast majority of these were for linkages across years. Overall, all three types of linkages passed our link quality test using the 50 percent race and BOE agreement threshold.

Overall, the difference between the MMA–MBD and MAX–EDB linkages was negligible. Linkage rates between MMA–MBD and MAX–EDB differed by only 0.04 percent in Arizona, 0.16 percent in California, and 0.4 percent in Nevada. The slightly higher match rate for the two SSN states suggests that the MMA-MBD approach might result in higher linkage rates across states. Table III.9 presents linkage statistics for cross-state linkages confirming this hypothesis. The MMA–MBD resulted in a one percent higher match rate over MAX–EDB. Furthermore, the quality of the additional links produced by MMA–MBD compared well to those of both algorithms.

Table III.9 Comparison of the MMA–MBD and MAX–EDB Linkage Algorithms for Linking Across States, MAX 2005–2006

| Measure | MMA–MBD | MAX–EDB | Links Identified in MMA–MBD but Not in MAX–EDB |
|--|---------|---------|--|
| All Linked Record Pairs | | | |
| Total number of record pairs | 166,370 | 164,632 | 1,740 |
| Agreement on all quality review variables | 49.1 | 49.1 | 49.4 |
| Same race | 50.9 | 50.9 | 50.6 |
| Same BOE (excluding 18-22 & 64-66 year olds) | 17.3 | 17.3 | 16.6 |
| Agreement on any service use | 76.2 | 76.2 | 73.1 |
| Same prescription drug use | 88.2 | 88.1 | 93.2 |
| Same institutional care use | 53.1 | 53.1 | 51.3 |
| Same race, same BOE | 56.1 | 56.1 | 56.2 |
| Same race, different BOE | 99.2 | 99.2 | 99.3 |
| Different race, same BOE | 67.1 | 67.1 | 67.9 |
| Different race, different BOE | 2.3 | 2.3 | 2.5 |

3. Recommended Approach

Based on the findings presented in this chapter, which were communicated to CMS in a design report (Wenzlow and Sykes 2009) and a subsequent memorandum (Wenzlow and Sykes 2010), we recommended that MAXEM implement a deterministic approach with relaxed assumptions to allow for some close but imperfect agreement between the MAX linkage variables—MSIS ID, MAX SSN, EDB-SSN, EDB-HIC, date of birth, and sex. Specifically, we recommended implementing the MMA–MBD algorithm described in this chapter, with three alterations: (1) Linkages within states and years by MSIS ID would be allowable, although several states would be selected to investigate records that disagree on multiple identifiers (for example, MAX SSN and EDB-SSN); (2) record pairs agreeing only on the EDB-CAN identifier would not be allowable; and (3) the quality of record pairs with matching identifiers and transposed day and month of birth, or agreement on three of four link variables defined by year of birth, month of birth, day of birth, and sex, would undergo additional link quality review for potential inclusion in MAXEM.

The approach would link record pairs agreeing on the following linking variables:

- MSIS ID
- MAX SSN + combination of (DOB YR, DOB, MO, DOB DD, sex) to be determined
- EDB-SSN + combination of (DOB YR, DOB, MO, DOB DD, sex) to be determined
- EDB-HIC + combination of (DOB YR, DOB MO, DOB DD, sex) to be determined

We recommended further investigation into the quality of linkages produced by date of birth and gender agreement combinations across all states before selecting a final link algorithm. Our findings suggest that there is some ambiguity with respect to which elements of date of birth and sex (including transpositions of month and day of birth) should be allowable to minimize false positive and false negative rates.

Due to the resource requirements and limited benefit of probabilistic linking with few linking variables, we did not recommend implementing this approach for MAXEM unless additional identifiers such as names became available. Our analysis also suggested that data entry errors in SSNs, resulting in two transposed digits or disagreement on one digit, cannot be differentiated from records for distinct individuals, and should not be included in the MAXEM linking algorithm.¹³

Overall, the MMA-MBD and MAX-EDB linkage algorithms produced similar linkage rates, with the MMA-MBD increasing the number of links by less than 0.2 percent for within-state linkages and by 1 percent for cross-state linkages over MAX-EDB. We anticipate that the choice between these two algorithms will have relatively small implications for the overall count of Medicaid enrollees estimated nationwide. Nevertheless, high-quality linkages can have a substantial impact on studies of smaller populations—for example, of Medicaid enrollees who move from one state to another. The analyses summarized in this chapter describe several strategies for ensuring an evidence-based linking approach is used for MAXEM.

In a follow-up meeting with CMS after the delivery of our recommendations, CMS accepted the proposed adaptation of the MMA-MBD algorithm but recommended resolution of the outstanding issue regarding agreement on sex and date of birth. After further discussion it was decided that sex must agree on pairs linked by SSN or HIC but agreement on at least two of the three parts of the date of birth would be sufficient for these cases. This is consistent with CMS convention.

¹³ Again, if names become available, then strategies for accounting for data entry errors in SSNs should be reconsidered.

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IV. IMPLEMENTATION OF LINKAGE AND UNDUPLICATION ALGORITHMS

In the development of MAXEM, the ultimate purpose of record linkage and unduplication is twofold: (1) to enable the creation of annual MAXEM research files in which no individual has more than one record in the same calendar year and the same state and (2) to make certain that any records representing the same individual in two or more states in the same year or in different years are associated through a common MAXEM ID. If the first objective is achieved, then the records contained in the MAXEM research file for a given year will provide an unduplicated count of Medicaid beneficiaries in each state during that year. In other words, within each state, every record in MAXEM will correspond to a unique individual. If the second objective is achieved as well, then researchers working with the MAXEM data will be able to generate an unduplicated count of Medicaid beneficiaries for the nation as a whole in a given calendar year by counting the number of unique MAXEM IDs on the research file for that year. Furthermore, using the separate cross-reference file, which provides the MAXEM ID for every record on the MAX PS file for that year, researchers will be able to assign these same MAXEM IDs to previously released MAX data.

The record-linkage algorithm that was selected following the evaluation reported in the last chapter provides the technical means to achieve these ends. In addition, however, we also need a plan for applying this algorithm that tells us, among other things, which records to link and in what sequence, and which records to combine (and which to leave as separate records). This chapter documents our use of record linkage and unduplication strategies in the development of MAXEM. The documentation includes diagnostic tabulations that were used to assess the record linkage and unduplication as they were being implemented. Section A of this chapter provides an overview of the production of MAXEM, including empirical outcomes from the major components of the work. Section B presents an assessment of the quality of the record linkage

that underlies the unduplication. Section C discusses the MAXEM outputs—specifically, the annual research files and the cross-reference files.

A. OVERVIEW OF MAXEM PRODUCTION

The approach to unduplication that we developed first used the linkage algorithm to determine which records in each state over the two years refer to the same individual. For each individual with multiple records (most individuals), we then filled in any missing identifiers and demographic information on the separate records and assigned each record a common MAXEM ID. For any individual with more than one record within a state and year, we combined the records into a single one—which means that the records on the research file for a given year now constitute an unduplicated count of Medicaid beneficiaries for each state. Lastly, we applied our linkage algorithm to the unduplicated files of 2005 and 2006 records in order to identify links across states—first within each year and then between years. All records that appeared to represent the same individual were assigned the same MAXEM ID. More detailed descriptions of selected steps are presented below, along with empirical results. These include our use of state cross-reference files, the creation of linked pairs within states, the unduplication of records within state and year, and the creation of linkages across states.

1. State Cross-reference Files

In the eight states that use the SSN as an MSIS ID, an SSN may not be available when an individual is first enrolled in Medicaid. This is most commonly true of infants. In this case, the state will assign a temporary MSIS ID and replace it with the individual's SSN when the SSN is issued. These states typically submit a cross-reference file with their MSIS submission that maps the permanent MSIS IDs (SSNs) into the temporary IDs that were assigned the previous year. For example, seven of the eight states submitted updates to their 2005 MSIS records along with

their 2006 MSIS files. When the updates are applied, the new MSIS IDs may duplicate the IDs found on other records within the same calendar year.¹⁴

Table IV.1 summarizes the updates to MSIS IDs in the eight SSN states in 2005, based on cross-reference files supplied with the 2006 MSIS files. The table also includes North Dakota, which is not an SSN state but which submitted a cross-reference file to address some problems that emerged in 2005 (which apparently have not been fully resolved, as North Dakota has continued to submit cross-reference files). The table reports the number of updates received from these nine states for 2005 in comparison to their total PS records for the year and reports the number of new MSIS IDs that duplicated the MSIS IDs on other records. New Mexico had no updates for the year, but three states had updates approaching or exceeding one percent of their records, with New Jersey close to two percent. In most states only a small fraction of the updates created duplicate MSIS ID values that produced linked pairs, but in Kentucky this was true for nearly all of the 13,294 updates. When we updated the MSIS IDs in states that use the SSN as an identifier, we also updated the MAX SSNs, which were missing or filled with temporary values. As a result, all but five of the linked pairs in the states where this was done had matching SSNs.

2. Creation of Linked Pairs Within States

In applying the linkage algorithm to identify linked pairs within each state, we combined the two years of data for each state and made four passes through the pooled data. Each pass used different criteria for identifying linked pairs and assessed every possible pair of records—within and across years—to determine if the two should be linked or not. The linkage criteria for each pass were based on agreement on the following sets of variables in succession:

¹⁴ Prior to the application of these updates, no two records within the same state and calendar year share the same MSIS ID. This is true not just of the eight SSN states and North Dakota, but of all other states and DC.

- MSIS ID
- MAX SSN + sex + at least two of (DOB year, DOB month, DOB, day)
- EDB-SSN + sex + at least two of (DOB year, DOB month, DOB, day)
- EDB-HIC + sex + at least two of (DOB year, DOB month, DOB, day)

When we linked a pair of records, we created a third record that captured key information about the pair, including their identifying variables, MAXEM IDs, and the pass in which they were linked.

Table IV.1 Updates to MSIS ID from State Cross-Reference Files and Impact on Within-Year Links, 2005

| State | Number of PS Records for 2005 | Number of Records Updated | Percent of Records Updated | Number of Duplicate MSIS IDs Created |
|--------------|-------------------------------|---------------------------|----------------------------|--------------------------------------|
| California | 10,593,523 | 31,639 | 0.30 | 223 |
| Kentucky | 886,960 | 13,294 | 1.50 | 12,966 |
| Louisiana | 1,166,153 | 1,108 | 0.10 | 18 |
| Minnesota | 790,712 | 2,429 | 0.31 | 2 |
| Nevada | 267,880 | 2,219 | 0.83 | 47 |
| New Jersey | 1,125,770 | 19,970 | 1.77 | 3,374 |
| New Mexico | 527,702 | 0 | 0.00 | 0 |
| North Dakota | 78,625 | 424 | 0.54 | 260 |
| Vermont | 162,762 | 17 | 0.01 | 15 |

a. Links Within the Same Year

For within-state linkages, most of the pairs that link on MSIS ID also link on MAX SSN, so there is substantial duplication in the identification of linked pairs between the first two passes. In addition, while the number of linked pairs identified by EDB-SSN is only a fraction of those identified by MSIS ID or MAX SSN, most of these additional links are duplicates as well. The same is true of the links generated with the EDB-HIC. Therefore, after the final pass we eliminated duplicate linked pairs, retaining only the records generated from the earliest pass. In so doing, we could determine the net number of additional linked pairs added by linking on MAX SSN, EDB-SSN, and EDB-HIC.

While MSIS IDs are not duplicated within any state and year except through application of the cross-reference files in the SSN states and North Dakota, duplicate MAX SSNs occur in nearly every state, and they account for most of the duplication among enrollee records within state and year. Nationally, there were 326,829 record pairs that were linked within state and year in 2005 and 2006 (Table IV.2). Links by MSIS ID accounted for only 5.17 percent of the total—all of these among eight of the nine states listed in Table IV.1. Links by MAX SSN (net of MSIS ID) accounted for 93.15 percent of the two-year total, with links by EDB-SSN accounting for another 1.37 percent and links by EDB-HIC producing the final 0.31 percent. While links by MAX SSN accounted for 97 to 100 percent of the within-year links outside of the eight states, there are several states in which the linkages by EDB-SSN represented more than a third of the total. These included three states in which all or nearly all of the within-year links were attributable to this source, which means that within-year duplication was largely limited to dual eligibles. In one of these states, Arkansas, links by EDB-SSN accounted for 38 percent of the total, and net additional links by EDB-HIC accounted for 37 percent, which suggests that SSNs may have been missing from EDB records as often as they were present. In no other state did linkages by EDB-HIC account for as much as 10 percent of the within-year record pairs, and in 30 states the EDB-HIC does not appear to have produced any additional within-year links.

For the most part, each linked pair within a state and year corresponds to one duplicate record—that is, a second record for the same individual enrollee.¹⁵ To obtain a sense of the

¹⁵ The number of pairs is equal to the number of combinations of records for the same individual. With two records there is just one combination, but with three records there are three possible combinations (A with B, A with C, and B with C), and with four records there are six possible combinations. Records in excess of two for an enrollee in the same state and year were rare, however.

Table IV.2. Within-Year Linkages by State and Source of Linkage, 2005 and 2006

| State | Within-Year Linked Pairs | Distribution by Source of Linkage | | | | Two-Year Total Records | Within- Year Links as % of Total Records |
|----------------------|--------------------------------|-----------------------------------|------------|-------------|---------|------------------------------|---|
| | | MSIS-ID | MAX SSN | EDB- SSN | EDB-HIC | | |
| Alabama | 2,147 | 0.00 | 98.42 | 1.58 | 0.00 | 1,923,367 | 0.112 |
| Alaska | 56 | 0.00 | 100.00 | 0.00 | 0.00 | 263,590 | 0.021 |
| Arizona | 2,794 | 0.00 | 92.95 | 6.94 | 0.11 | 2,988,696 | 0.093 |
| Arkansas | 1,581 | 0.00 | 24.60 | 38.08 | 37.32 | 1,505,412 | 0.105 |
| California (SSN) | 541 | 41.22 | 0.00 | 54.34 | 4.44 | 21,205,442 | 0.003 |
| Colorado | 443 | 0.00 | 97.97 | 2.03 | 0.00 | 1,230,717 | 0.036 |
| Connecticut | 1,250 | 0.00 | 99.44 | 0.56 | 0.00 | 1,062,687 | 0.118 |
| Delaware | 33 | 0.00 | 96.97 | 3.03 | 0.00 | 364,477 | 0.009 |
| District of Columbia | 166 | 0.00 | 84.94 | 13.25 | 1.81 | 333,688 | 0.050 |
| Florida | 817 | 0.00 | 85.43 | 14.20 | 0.37 | 6,017,903 | 0.014 |
| Georgia | 2,921 | 0.00 | 98.39 | 1.51 | 0.10 | 4,126,873 | 0.071 |
| Hawaii | 300 | 0.00 | 99.67 | 0.33 | 0.00 | 463,429 | 0.065 |
| Idaho | 40 | 0.00 | 97.50 | 2.50 | 0.00 | 463,264 | 0.009 |
| Illinois | 68,354 | 0.00 | 99.81 | 0.17 | 0.01 | 5,211,118 | 1.312 |
| Indiana | 260 | 0.00 | 98.08 | 1.92 | 0.00 | 2,111,352 | 0.012 |
| Iowa | 976 | 0.00 | 99.69 | 0.31 | 0.00 | 896,161 | 0.109 |
| Kansas | 53 | 0.00 | 98.11 | 1.89 | 0.00 | 715,489 | 0.007 |
| Kentucky (SSN) | 13,033 | 99.49 | 0.00 | 0.46 | 0.05 | 1,777,052 | 0.733 |
| Louisiana (SSN) | 53 | 33.96 | 0.00 | 56.60 | 9.43 | 2,379,230 | 0.002 |
| Maine | 94 | 0.00 | 85.11 | 14.89 | 0.00 | 662,637 | 0.014 |
| Maryland | 30 | 0.00 | 86.67 | 10.00 | 3.33 | 1,732,898 | 0.002 |
| Massachusetts | 158 | 0.00 | 99.37 | 0.63 | 0.00 | 2,553,569 | 0.006 |
| Michigan | 125 | 0.00 | 60.00 | 37.60 | 2.40 | 3,796,174 | 0.003 |
| Minnesota (SSN) | 158 | 1.27 | 0.00 | 96.20 | 2.53 | 1,592,894 | 0.010 |
| Mississippi | 4,243 | 0.00 | 99.29 | 0.71 | 0.00 | 1,556,245 | 0.273 |
| Missouri | 449 | 0.00 | 95.10 | 4.90 | 0.00 | 2,329,327 | 0.019 |
| Montana | 0 | na | na | na | na | 254,938 | 0.000 |
| Nebraska | 14 | 0.00 | 100.00 | 0.00 | 0.00 | 523,386 | 0.003 |
| Nevada (SSN) | 55 | 85.45 | 0.00 | 14.55 | 0.00 | 522,627 | 0.011 |
| New Hampshire | 16 | 0.00 | 100.00 | 0.00 | 0.00 | 294,408 | 0.005 |
| New Jersey (SSN) | 4,983 | 67.71 | 0.04 | 27.05 | 5.20 | 2,306,447 | 0.216 |
| New Mexico (SSN) | 16 | 0.00 | 0.00 | 100.00 | 0.00 | 1,044,564 | 0.002 |
| New York | 147,841 | 0.00 | 99.54 | 0.44 | 0.02 | 10,180,771 | 1.452 |
| North Carolina | 716 | 0.00 | 99.86 | 0.14 | 0.00 | 3,509,561 | 0.020 |
| North Dakota | 4,069 | 6.39 | 93.61 | 0.00 | 0.00 | 158,435 | 2.568 |
| Ohio | 26,000 | 0.00 | 99.62 | 0.37 | 0.01 | 4,283,674 | 0.607 |
| Oklahoma | 5,185 | 0.00 | 99.94 | 0.06 | 0.00 | 1,489,677 | 0.348 |
| Oregon | 1,561 | 0.00 | 99.68 | 0.13 | 0.19 | 1,116,260 | 0.140 |
| Pennsylvania | 295 | 0.00 | 44.07 | 53.90 | 2.03 | 4,123,941 | 0.007 |
| Rhode Island | 2 | 0.00 | 0.00 | 100.00 | 0.00 | 440,834 | 0.000 |
| South Carolina | 151 | 0.00 | 53.64 | 46.36 | 0.00 | 1,961,848 | 0.008 |
| South Dakota | 4,171 | 0.00 | 99.88 | 0.12 | 0.00 | 263,428 | 1.583 |
| Tennessee | 720 | 0.00 | 99.03 | 0.97 | 0.00 | 3,073,611 | 0.023 |

Table IV.2 (continued)

| State | Within- Year Linked Pairs | Distribution by Source of Linkage | | | | Two-Year Total Records | Within- Year Links as % of Total Records |
|----------------------|------------------------------------|-----------------------------------|--------------|-------------|-------------|------------------------------|---|
| | | MSIS-ID | MAX SSN | EDB- SSN | EDB-HIC | | |
| Texas | 15,531 | 0.00 | 98.92 | 0.73 | 0.35 | 8,254,934 | 0.188 |
| Utah | 64 | 0.00 | 95.31 | 4.69 | 0.00 | 684,894 | 0.009 |
| Vermont (SSN) | 22 | 68.18 | 0.00 | 31.82 | 0.00 | 324,298 | 0.007 |
| Virginia | 1,362 | 0.00 | 99.63 | 0.37 | 0.00 | 1,882,170 | 0.072 |
| Washington | 209 | 0.00 | 97.61 | 2.39 | 0.00 | 2,391,043 | 0.009 |
| West Virginia | 281 | 0.00 | 45.91 | 51.96 | 2.14 | 775,856 | 0.036 |
| Wisconsin | 12,393 | 0.00 | 99.97 | 0.02 | 0.01 | 2,061,007 | 0.601 |
| Wyoming | 97 | 0.00 | 97.94 | 0.00 | 2.06 | 161,596 | 0.060 |
| United States | 326,829 | 5.17 | 93.15 | 1.37 | 0.31 | 121,347,899 | 0.269 |

n.a. = not applicable

relative frequency of duplication among enrollee records in each state, we can compare the two-year total within-year links to the total number of enrollee records over the two years. Dividing the former by the latter and multiplying by 100 tells us roughly what fraction of enrollee records in each state were duplicates.¹⁶ Nationally, within-year record pairs were a little over one-quarter of one percent (0.269) of the two-year total enrollment of 121.3 million. This fraction varied from a low of zero in Montana to a high of nearly 2.6 percent in neighboring North Dakota. Interestingly, South Dakota was the next highest at 1.6 percent, followed by two of the largest states, New York (1.5 percent) and Illinois (1.3 percent). At the opposite end, 35 states had within-year duplication rates below one-tenth of one percent.

Arguably, state record systems should be able to prevent or at least identify and correct multiple enrollment records for the same individual, which means that, ideally, there should be no duplication of individuals within the same year. Indeed, as Table IV.2 attests, the experience of most states is fairly consistent with this. However, in the states that fall into the upper tail of the distribution there is room for improvement. The rates of within-year duplication in these states is so far removed from the experience of most other states that there appears to be potential for these states to enhance their Medicaid record systems to prevent or correct duplication of enrollee records.

b. Links Across Year

While within-year linkages are expected to be minimal, enrollee retention should result in a substantial number of across-year linkages. Nationally, there were 50.2 million linked pairs, within state, across the two years (Table IV.3). Virtually all of these links—99.38 percent—were

¹⁶ Duplicates beyond one for an enrollee will contribute to a slight upward bias in this statistic. Eliminating the duplicate records, which we do in creating the MAXEM research file for each year, will allow a direct calculation of the duplication rate in each state for each of the two years.

Table IV.3 Across-year Linkages by State and Source of Linkage, 2005 and 2006

| State | Across-year Linked Pairs | Distribution by Source of Linkage | | | | 2005 Total Records | Across-Year Links As % of 2005 Records |
|----------------------|--------------------------|-----------------------------------|---------|---------|---------|--------------------|--|
| | | MSIS-ID | MAX SSN | EDB-SSN | EDB-HIC | | |
| Alabama | 839,281 | 99.76 | 0.23 | 0.00 | 0.00 | 955,590 | 87.83 |
| Alaska | 107,243 | 99.95 | 0.05 | 0.00 | 0.00 | 132,850 | 80.72 |
| Arizona | 1,175,626 | 99.73 | 0.26 | 0.01 | 0.00 | 1,476,842 | 79.60 |
| Arkansas | 644,774 | 99.76 | 0.07 | 0.11 | 0.07 | 746,506 | 86.37 |
| California (SSN) | 8,386,373 | 100.00 | 0.00 | 0.00 | 0.00 | 10,593,523 | 79.17 |
| Colorado | 494,513 | 99.90 | 0.10 | 0.00 | 0.00 | 603,949 | 81.88 |
| Connecticut | 450,510 | 99.70 | 0.30 | 0.00 | 0.00 | 529,119 | 85.14 |
| Delaware | 151,419 | 99.97 | 0.03 | 0.00 | 0.00 | 179,935 | 84.15 |
| District of Columbia | 146,384 | 99.89 | 0.10 | 0.01 | 0.00 | 166,514 | 87.91 |
| Florida | 2,388,676 | 99.97 | 0.03 | 0.00 | 0.00 | 3,020,102 | 79.09 |
| Georgia | 1,702,883 | 99.82 | 0.18 | 0.00 | 0.00 | 2,083,224 | 81.74 |
| Hawaii | 197,651 | 99.85 | 0.15 | 0.00 | 0.00 | 231,787 | 85.27 |
| Idaho | 187,007 | 99.97 | 0.03 | 0.00 | 0.00 | 233,352 | 80.14 |
| Illinois | 2,212,035 | 96.88 | 3.11 | 0.01 | 0.00 | 2,610,471 | 84.74 |
| Indiana | 876,518 | 99.97 | 0.03 | 0.00 | 0.00 | 1,044,889 | 83.89 |
| Iowa | 355,048 | 99.71 | 0.29 | 0.00 | 0.00 | 428,814 | 82.80 |
| Kansas | 283,989 | 99.98 | 0.02 | 0.00 | 0.00 | 356,738 | 79.61 |
| Kentucky (SSN) | 757,494 | 99.99 | 0.00 | 0.01 | 0.01 | 886,960 | 85.40 |
| Louisiana (SSN) | 1,048,082 | 100.00 | 0.00 | 0.00 | 0.00 | 1,166,153 | 89.88 |
| Maine | 283,989 | 99.96 | 0.04 | 0.00 | 0.00 | 326,500 | 86.98 |
| Maryland | 731,720 | 99.99 | 0.00 | 0.00 | 0.00 | 866,921 | 84.40 |
| Massachusetts | 1,090,116 | 99.94 | 0.06 | 0.00 | 0.00 | 1,245,895 | 87.50 |
| Michigan | 1,587,163 | 99.98 | 0.02 | 0.00 | 0.00 | 1,857,775 | 85.43 |
| Minnesota (SSN) | 643,193 | 99.98 | 0.00 | 0.02 | 0.00 | 790,712 | 81.34 |
| Mississippi | 666,671 | 99.40 | 0.60 | 0.00 | 0.00 | 780,246 | 85.44 |
| Missouri | 962,395 | 99.92 | 0.08 | 0.00 | 0.00 | 1,217,929 | 79.02 |
| Montana | 101,400 | 100.00 | 0.00 | 0.00 | 0.00 | 128,004 | 79.22 |
| Nebraska | 212,996 | 99.96 | 0.04 | 0.00 | 0.00 | 261,372 | 81.49 |
| Nevada (SSN) | 182,631 | 100.00 | 0.00 | 0.00 | 0.00 | 267,880 | 68.18 |
| New Hampshire | 121,378 | 99.99 | 0.01 | 0.00 | 0.00 | 145,737 | 83.29 |
| New Jersey (SSN) | 970,618 | 99.84 | 0.00 | 0.15 | 0.01 | 1,125,770 | 86.22 |
| New Mexico (SSN) | 437,448 | 100.00 | 0.00 | 0.00 | 0.00 | 527,702 | 82.90 |
| New York | 4,447,054 | 96.57 | 3.41 | 0.01 | 0.00 | 5,087,834 | 87.41 |
| North Carolina | 1,467,946 | 99.95 | 0.05 | 0.00 | 0.00 | 1,728,608 | 84.92 |
| North Dakota | 65,185 | 93.62 | 6.38 | 0.00 | 0.00 | 78,625 | 82.91 |
| Ohio | 1,844,864 | 98.62 | 1.38 | 0.01 | 0.00 | 2,126,626 | 86.75 |
| Oklahoma | 612,873 | 99.24 | 0.76 | 0.00 | 0.00 | 728,609 | 84.12 |
| Oregon | 445,998 | 99.69 | 0.31 | 0.00 | 0.00 | 563,445 | 79.16 |
| Pennsylvania | 1,760,920 | 99.98 | 0.01 | 0.01 | 0.00 | 2,029,894 | 86.75 |
| Rhode Island | 190,750 | 100.00 | 0.00 | 0.00 | 0.00 | 219,784 | 86.79 |
| South Carolina | 822,100 | 99.97 | 0.02 | 0.01 | 0.00 | 1,012,287 | 81.21 |
| South Dakota | 112,333 | 96.40 | 3.60 | 0.00 | 0.00 | 130,894 | 85.82 |
| Tennessee | 1,303,268 | 99.95 | 0.05 | 0.00 | 0.00 | 1,594,245 | 81.75 |
| Texas | 3,292,420 | 99.55 | 0.45 | 0.00 | 0.00 | 4,103,270 | 80.24 |

Table IV.3 (continued)

| State | Across- year Linked Pairs | Distribution by Source of Linkage | | | | 2005 Total Records | Across- Year Links As % of 2005 Records |
|----------------------|---------------------------------|-----------------------------------|-------------|-------------|-------------|-----------------------|---|
| | | MSIS-ID | MAX SSN | EDB- SSN | EDB- HIC | | |
| Utah | 258,625 | 99.97 | 0.03 | 0.00 | 0.00 | 345,451 | 74.87 |
| Vermont (SSN) | 137,694 | 99.99 | 0.00 | 0.01 | 0.00 | 162,762 | 84.60 |
| Virginia | 795,268 | 99.83 | 0.17 | 0.00 | 0.00 | 927,685 | 85.73 |
| Washington | 987,859 | 99.97 | 0.03 | 0.00 | 0.00 | 1,199,572 | 82.35 |
| West Virginia | 323,442 | 99.92 | 0.05 | 0.02 | 0.00 | 383,111 | 84.43 |
| Wisconsin | 870,670 | 98.86 | 1.14 | 0.00 | 0.00 | 1,022,203 | 85.18 |
| Wyoming | 63,146 | 99.84 | 0.15 | 0.00 | 0.00 | 81,199 | 77.77 |
| United States | 50,199,639 | 99.38 | 0.61 | 0.01 | 0.00 | 60,515,865 | 82.95 |

based on MSIS ID. In four states, however, 3 to 6 percent of the across-year links were based on MAX SSN. North Dakota led all states with 6.4 percent of across-year links based on MAX SSN, followed by South Dakota with 3.6 percent, New York with 3.4 percent, and Illinois with 3.1 percent. We note that these four states—in the same order—had the highest within-year duplication rates reported in Table IV.2 and that most of these linkages were based on MAX SSN. This suggests that, in these states, one member of a duplicate within-year pair may be linking to a record in the next year based on MSIS ID while the other member is linking based on MAX SSN.

Net additional links by EDB-SSN or EDB-HIC were rare. In only two states, Arkansas and New Jersey, did the fraction of across-year links due to EDB-SSN reach as high as 0.1 percent, and in only 11 other states did the fraction rise as high as 0.01 percent. In only one state, Arkansas, did the fraction due to EDB-HIC even approach 0.1 percent, and in only two other states did this fraction reach 0.01 percent.

To estimate an enrollee retention rate, we can express the number of linked pairs across years as a fraction of the number of 2005 enrollee records. As a measure of enrollee retention, this estimate is upwardly biased by a slight amount because some 2005 enrollees link to multiple records in 2006 and therefore are counted multiple times, and some enrollees, as we have seen, have multiple records in 2005. Nevertheless, this provides a useful way to compare states with respect to their retention of enrollees. Nationally, this rate was just under 83 percent, but it was close to 90 percent in Louisiana and between 87 and 88 percent in four other states (Alabama, the District of Columbia, Massachusetts, and New York). Nevada was the lowest by far at 68.2 percent. Utah was next lowest at 74.9 percent followed by Wyoming at 77.8 percent. All of the remaining states fell between 79 percent and 87 percent. The fairly tight distribution of across-year linkage rates across states implies considerable similarity in caseload turnover across states.

An overall decline in enrollment would affect a state's linkage rate across years; this might reflect improving economic conditions or, quite the opposite, state cutbacks due to budgetary pressures. Nationally, Medicaid enrollment (including S-CHIP only enrollment in states that report S-CHIP enrollment into MSIS), based on counts of enrollment records in the MAX PS files, grew by half a percentage point between 2005 and 2006, but enrollment changes at the state level ranged from a reduction of 8.75 percentage points in Missouri to an increase of 8.99 percentage points in neighboring Iowa (Table IV.4). Enrollment declined in 19 states and rose in 32 others. A correlation of .511 between the change in Medicaid enrollment and the retention rate (not shown) indicates that there is a moderately strong positive association between the two. Nevertheless, while Medicaid enrollment in Nevada declined by 4.9 percentage points, this is hardly enough to explain why our estimate of Medicaid retention there was 15 percentage points below the national average. Furthermore, while Nevada's reduction in Medicaid enrollment was among the largest, the three states with more substantial declines (Missouri, Tennessee, and South Carolina) had retention rates 11 to 14 percentage points higher than Nevada. Nevada's low retention rate must be due to other factors.

In part, the state's low retention rate may arise from an apparent problem with the assignment of MSIS IDs to new enrollees in 2005. As an SSN state, Nevada assigns each new enrollee's SSN as the MSIS ID. If an SSN is not yet available, Nevada assigns a temporary MSIS ID. These temporary MSIS IDs are intended to be replaced as soon as the SSNs become available, but we speculate that in 2005 this replacement did not occur for about 15,000 enrollees. Instead, new records were created with permanent MSIS IDs while the old records with temporary IDs remained. When we measure retention in Nevada, thousands of 2005 records cannot be linked to records in 2006, even though most of the individuals in question were very

Table IV.4 Change in Medicaid Enrollment by State, 2005 to 2006

| State | Medicaid Enrollment 2005 | Medicaid Enrollment 2006 | Percent Change |
|----------------------|-----------------------------|-----------------------------|----------------|
| Alabama | 955,590 | 967,777 | 1.28 |
| Alaska | 132,850 | 130,740 | -1.59 |
| Arizona | 1,476,842 | 1,511,854 | 2.37 |
| Arkansas | 746,506 | 758,906 | 1.66 |
| California (SSN) | 10,593,523 | 10,611,919 | 0.17 |
| Colorado | 603,949 | 626,768 | 3.78 |
| Connecticut | 529,119 | 533,568 | 0.84 |
| Delaware | 179,935 | 184,542 | 2.56 |
| District of Columbia | 166,514 | 167,174 | 0.40 |
| Florida | 3,020,102 | 2,997,801 | -0.74 |
| Georgia | 2,083,224 | 2,043,649 | -1.90 |
| Hawaii | 231,787 | 231,642 | -0.06 |
| Idaho | 233,352 | 229,912 | -1.47 |
| Illinois | 2,610,471 | 2,600,647 | -0.38 |
| Indiana | 1,044,889 | 1,066,463 | 2.06 |
| Iowa | 428,814 | 467,347 | 8.99 |
| Kansas | 356,738 | 358,751 | 0.56 |
| Kentucky (SSN) | 886,960 | 890,092 | 0.35 |
| Louisiana (SSN) | 1,166,153 | 1,213,077 | 4.02 |
| Maine | 326,500 | 336,137 | 2.95 |
| Maryland | 866,921 | 865,977 | -0.11 |
| Massachusetts | 1,245,895 | 1,307,674 | 4.96 |
| Michigan | 1,857,775 | 1,938,399 | 4.34 |
| Minnesota (SSN) | 790,712 | 802,182 | 1.45 |
| Mississippi | 780,246 | 775,999 | -0.54 |
| Missouri | 1,217,929 | 1,111,398 | -8.75 |
| Montana | 128,004 | 126,934 | -0.84 |
| Nebraska | 261,372 | 262,014 | 0.25 |
| Nevada (SSN) | 267,880 | 254,747 | -4.90 |
| New Hampshire | 145,737 | 148,671 | 2.01 |
| New Jersey (SSN) | 1,125,770 | 1,180,677 | 4.88 |
| New Mexico (SSN) | 527,702 | 516,862 | -2.05 |
| New York | 5,087,834 | 5,092,937 | 0.10 |
| North Carolina | 1,728,608 | 1,780,953 | 3.03 |
| North Dakota | 78,625 | 79,810 | 1.51 |
| Ohio | 2,126,626 | 2,157,048 | 1.43 |
| Oklahoma | 728,609 | 761,068 | 4.45 |
| Oregon | 563,445 | 552,815 | -1.89 |
| Pennsylvania | 2,029,894 | 2,094,047 | 3.16 |
| Rhode Island | 219,784 | 221,050 | 0.58 |
| South Carolina | 1,012,287 | 949,561 | -6.20 |
| South Dakota | 130,894 | 132,534 | 1.25 |
| Tennessee | 1,594,245 | 1,479,366 | -7.21 |
| Texas | 4,103,270 | 4,151,664 | 1.18 |
| Utah | 345,451 | 339,443 | -1.74 |
| Vermont (SSN) | 162,762 | 161,536 | -0.75 |

Table IV.4 (continued)

| State | Medicaid Enrollment 2005 | Medicaid Enrollment 2006 | Percent Change |
|----------------------|-----------------------------|-----------------------------|----------------|
| Virginia | 927,685 | 954,485 | 2.89 |
| Washington | 1,199,572 | 1,191,471 | -0.68 |
| West Virginia | 383,111 | 392,745 | 2.51 |
| Wisconsin | 1,022,203 | 1,038,804 | 1.62 |
| Wyoming | 81,199 | 80,397 | -0.99 |
| United States | 60,515,865 | 60,832,034 | 0.52 |

Note: Enrollment is defined here by the number of MAX PS records with enrollment data. These counts, which are prior to unduplication, include M-CHIP and, for states that report S-CHIP enrollment in MSIS, may include spells of enrollment with only S-CHIP.

likely enrolled in both years. Even so, the number of such records was not sufficient to depress Nevada's estimated retention rate nearly 15 percentage points below the national average. It would require 40,000 additional matches, not just 15,000, to raise Nevada's retention rate to the national average. Thus the exceedingly low retention rate in Nevada remains to be fully explained.

3. Unduplication Within State

After the within-state record linkage was complete, the process of unduplication within each state involved three steps: (1) assignment of a common MAXEM ID to all records representing the same individual, (2) reconciliation of identifiers and demographic variables across records with the same MAXEM ID, and (3) consolidation of linked records within the same year. We describe these three steps below.

a. Assignment of a Common MAXEM ID

The assignment of a common MAXEM ID to records representing the same individual was done through operations performed on the linked record pairs. For example, if there were three records representing the same individual—records A, B, and C—these three records would have produced three linked pairs (the result of three items taken two at a time without regard to order): A linked with B, A linked with C, and B linked with C. Each of the three records initially would have been assigned a different MAXEM ID.¹⁷ To assign a common MAXEM ID, we would first assign each record in a pair the lower of the two MAXEM IDs. For example, let us say that record A had the lowest MAXEM ID, followed by record B and then record C. Thus, in their

¹⁷ The initial MAXEM ID assigned to each record included three components: (1) a two-digit scrambled state identifier, (2) a two-digit year code (the year minus 2000), and (3) the observation number from the MAX PS file (up to nine digits). For two records linked within state and year, the record with the lower observation number will have the lower MAXEM ID. For two records linked within state but across year, the record from the first year will have the lower MAXEM ID. For two records linked across state, regardless of year, the record with the lower scrambled state identifier will have the lower MAXEM ID.

pairings with record A, records B and C would receive record A's MAXEM ID, but in their pairing with each other, records B and C would receive record B's MAXEM ID. Since we have two assignments of MAXEM IDs to records B and C, however, in a final step we would select the lower MAXEM ID in each case, resulting in both records ending up with record A's MAXEM ID.

It is possible to have a situation where records link differently depending upon the fields that are compared, and this can affect the final MAXEM ID assignment. One such example involved two records, A and B, in 2005 and two records, C and D, in 2006. Records A and D shared MSIS IDs and, because this was in an SSN state, shared SSNs as well. Records B and C shared a different MSIS ID and SSN than A and D, but all of the other match fields agreed on records A, B, and C, suggesting that the MSIS ID and SSN on record A were incorrect. Our algorithm ultimately assigned the same MAXEM ID to A, B, and C, which appears correct. Another example involved four records where A (from 2005) and C (from 2005) shared the same MSIS ID, and B (from 2005) and D (from 2006) shared a different MSIS ID. Records B, C, and D had the same MAX SSN, however, while the MAX SSN on record A was missing. All four records shared the same DOB and sex. In our application of the linking algorithm, we ultimately assigned the same MAXEM ID to records A and C (following their MSIS IDs) and a different MAXEM ID to B and D.

Such cases were rare. In our view we handled the first case correctly. The second case is more ambiguous, and our pair-wise algorithm yielded a result that was consistent with the MSIS IDs but not with the SSNs, DOB, and sex, but we would have achieved a different outcome with a different algorithm. For instance, the missing SSN on record A was later replaced by the MAX SSN from record C during the reconciliation step discussed in the next section. If the record linkage were then repeated, records A and C would have ended up with the same MAXEM ID as

records B and D. An alternative approach that viewed all four records together could have also resolved the four as belonging to the same person if the algorithm could override differences on MSIS ID—the primary linkage variable in our linkage algorithm.

Our hesitancy in forcing a common MAXEM ID in all cases of asymmetric linkages was based on two considerations. First, and more importantly, the asymmetry itself suggests that the records may not all belong to the same individual. The state that issued the MSIS IDs did not assign a common ID to all four records in either example. In the one case, our algorithm overrode this discrepancy for one of the records, based on other information, but in the second case it did not. Ultimately, the algorithm has to be based on rules regarding what types of agreement override other types of agreement or disagreement, and our base of information is too limited to address all of the situations that may arise. The second consideration is that the incidence of asymmetric linkages is exceedingly low, representing just a small fraction of a percent of all linked pairs.¹⁸ How we chose to handle them would have no material impact on analyses using the research files or the cross-reference file. We will revisit this decision, however, when we add a third year of records (2007) to MAXEM (see Chapter VI).

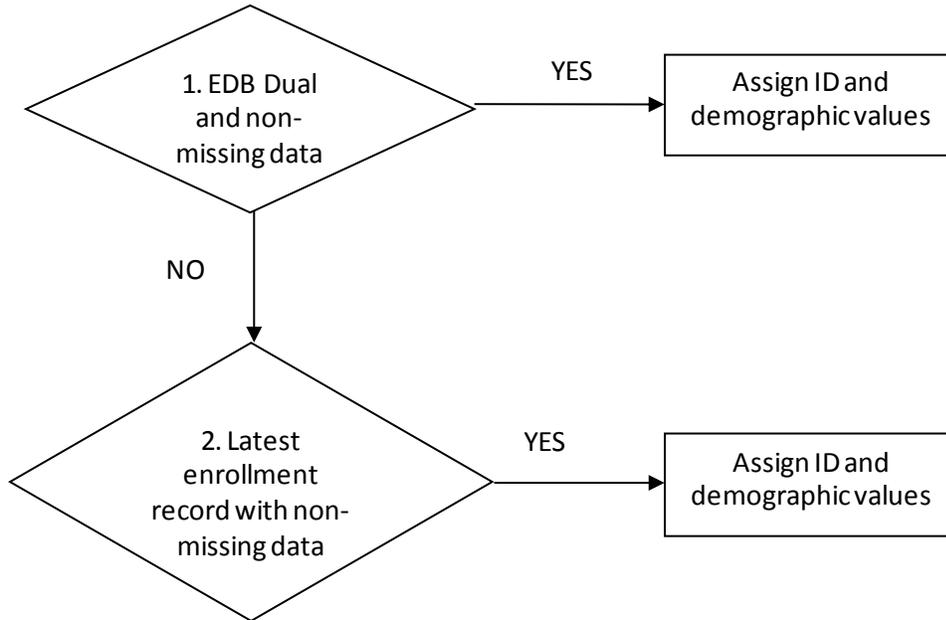
b. Reconciliation of Identifiers and Demographic Variables

Records assigned a common MAXEM ID may nevertheless differ with respect to SSNs, HICs, or demographic variables when these were not used as linking variables. For example, an SSN, sex, DOB, or race/ethnicity may be missing on one or more records, or the values may be inconsistent across records. For the vast majority of linked records, missing or inconsistent identifiers or demographic variables presented no problem. When missing or inconsistent values occurred, Figure IV.1 shows the algorithm that was used to assign a consistent SSN, DOB, sex,

¹⁸ Estimates are presented below in Section B.

and race/ethnicity for all records associated with the same MAXEM ID within a state. For each variable, we assigned the latest nonmissing value, where “latest” is defined as coming from the record with the latest month of enrollment. In doing so, we assumed that errors are corrected over time. If, however, one of the records with nonmissing information for a given variable was an EDB dual record, we assigned the value from that record (or the latest such record), even if there was a later enrollment record. This is because data in the EDB are verified with data collected by SSA.

Figure IV.1 Decision Flow Chart for Unduplicating Identifiers and Demographic Variables



The MSIS ID was not subject to replacement under any circumstances. While MSIS IDs are never missing, two records with the same final MAXEM ID could have different MSIS IDs. This is exceedingly rare, however.¹⁹

Table IV.5 reports the number and percent of records that were subject to reconciliation in 2005 and 2006. Nationally, 82.7 percent of the MAX PS records with enrollment data in 2005 and 82.2 percent of those with enrollment data in 2006 (see Table IV.4) were subject to reconciliation, meaning that they had MAXEM IDs that occurred at least twice within the state during the two-year period. With few exceptions, the state fractions of records subject to reconciliation fell within a range of 79 to 87 percent, and in most states the fraction subject to reconciliation for 2005 and 2006 fell within two percentage points of each other. The percentage of records subject to reconciliation in each year is largely a function of the within-state match rate between the two years (see Table IV.3). Not surprisingly, then, we find that Nevada had the lowest fraction of records subject to reconciliation, at 68.2 and 71.7 percent, respectively, for the two years. Utah was next lowest at 74.8 and 76.2 percent. Louisiana was highest at 89.9 and 86.4 percent, followed by DC (87.8 and 87.5) and Alabama (87.8 and 86.6). These three states had the highest cross-year match rates in Table IV.3. Lastly, while most states had very similar fractions subject to reconciliation between the two years, three states were notable for large differences: Iowa, where the fraction declined from 82.7 to 75.9 percent; Missouri, where the fraction rose from 79.0 to 86.6 percent; and Tennessee, where the fraction rose from 81.7 to 88.1 percent. These differences are explained by unusually large enrollment changes in these states—a large increase in Iowa and large reductions in Missouri and Tennessee (see Table IV.4).

¹⁹ The MSIS ID is not included on the research files. This further reduced the need to resolve any discrepancies.

Table IV.5 Records Subject to Reconciliation of Identifiers and Demographic Variables, 2005 and 2006

| State | Number of Records Subject to Reconciliation | | Percent of Records Subject to Reconciliation | |
|----------------------|---|-----------|--|------|
| | 2005 | 2006 | 2005 | 2006 |
| Alabama | 838,551 | 838,181 | 87.8 | 86.6 |
| Alaska | 107,243 | 107,195 | 80.7 | 82.0 |
| Arizona | 1,176,465 | 1,173,620 | 79.7 | 77.6 |
| Arkansas | 643,952 | 643,874 | 86.3 | 84.8 |
| California (SSN) | 8,386,273 | 8,385,986 | 79.2 | 79.0 |
| Colorado | 494,121 | 494,165 | 81.8 | 78.8 |
| Connecticut | 449,807 | 449,765 | 85.0 | 84.3 |
| Delaware | 151,401 | 151,395 | 84.1 | 82.0 |
| District of Columbia | 146,278 | 146,304 | 87.8 | 87.5 |
| Florida | 2,388,377 | 2,388,316 | 79.1 | 79.7 |
| Georgia | 1,702,869 | 1,699,967 | 81.7 | 83.2 |
| Hawaii | 197,539 | 197,525 | 85.2 | 85.3 |
| Idaho | 186,981 | 186,982 | 80.1 | 81.3 |
| Illinois | 2,192,261 | 2,179,623 | 84.0 | 83.8 |
| Indiana | 876,332 | 876,358 | 83.9 | 82.2 |
| Iowa | 354,594 | 354,495 | 82.7 | 75.9 |
| Kansas | 283,972 | 283,965 | 79.6 | 79.2 |
| Kentucky (SSN) | 757,462 | 744,438 | 85.4 | 83.6 |
| Louisiana (SSN) | 1,048,051 | 1,048,037 | 89.9 | 86.4 |
| Maine | 283,997 | 283,905 | 87.0 | 84.5 |
| Maryland | 731,700 | 731,689 | 84.4 | 84.5 |
| Massachusetts | 1,089,795 | 1,089,851 | 87.5 | 83.3 |
| Michigan | 1,586,844 | 1,586,919 | 85.4 | 81.9 |
| Minnesota (SSN) | 643,180 | 643,152 | 81.3 | 80.2 |
| Mississippi | 663,144 | 664,154 | 85.0 | 85.6 |
| Missouri | 962,451 | 962,010 | 79.0 | 86.6 |
| Montana | 101,400 | 101,400 | 79.2 | 79.9 |
| Nebraska | 212,919 | 212,992 | 81.5 | 81.3 |
| Nevada (SSN) | 182,628 | 182,590 | 68.2 | 71.7 |
| New Hampshire | 121,372 | 121,370 | 83.3 | 81.6 |
| New Jersey (SSN) | 970,178 | 966,902 | 86.2 | 81.9 |
| New Mexico (SSN) | 437,440 | 437,441 | 82.9 | 84.6 |
| New York | 4,349,492 | 4,346,086 | 85.5 | 85.3 |
| North Carolina | 1,468,009 | 1,467,298 | 84.9 | 82.4 |
| North Dakota | 62,745 | 63,940 | 79.8 | 80.1 |
| Ohio | 1,826,340 | 1,826,017 | 85.9 | 84.7 |
| Oklahoma | 611,169 | 611,109 | 83.9 | 80.3 |
| Oregon | 445,375 | 445,204 | 79.0 | 80.5 |
| Pennsylvania | 1,760,742 | 1,760,734 | 86.7 | 84.1 |
| Rhode Island | 190,748 | 190,748 | 86.8 | 86.3 |
| South Carolina | 821,946 | 821,901 | 81.2 | 86.6 |
| South Dakota | 109,758 | 109,800 | 83.9 | 82.8 |
| Tennessee | 1,302,882 | 1,302,836 | 81.7 | 88.1 |

| State | Number of Records Subject to Reconciliation | | Percent of Records Subject to Reconciliation | |
|----------------------|---|-------------------|--|-------------|
| | 2005 | 2006 | 2005 | 2006 |
| Texas | 3,284,869 | 3,286,552 | 80.1 | 79.2 |
| Utah | 258,556 | 258,598 | 74.8 | 76.2 |
| Vermont (SSN) | 137,693 | 137,675 | 84.6 | 85.2 |
| Virginia | 794,580 | 794,340 | 85.7 | 83.2 |
| Washington | 987,708 | 987,670 | 82.3 | 82.9 |
| West Virginia | 323,351 | 323,474 | 84.4 | 82.4 |
| Wisconsin | 871,225 | 868,608 | 85.2 | 83.6 |
| Wyoming | 63,123 | 63,082 | 77.7 | 78.5 |
| United States | 50,039,888 | 50,000,238 | 82.7 | 82.2 |

Note: To be subject to reconciliation, a record had to have a MAXEM ID that occurred at least twice in the state from 2005 to 2006. The denominators used to determine the percent of records subject to reconciliation are the enrollment counts reported in Table IV.4.

Tables IV.6 and IV.7 report the frequency of edits to SSNs and HICs in 2005 and 2006, respectively. Frequencies are expressed as percentages of the records that were subject to reconciliation, as reported in Table IV.5. Most of the edits involved the replacement of missing SSNs and HICs; much less often we replaced a nonmissing value with an alternative value.

In 2005, missing MAX SSNs were replaced on 0.379 percent of the records nationally, while missing EDB-SSNs were replaced on 0.464 percent of the records, and missing EDB-HICs were replaced on 0.879 percent of the records. The frequency with which missing values were replaced varied widely across the states. In most of the SSN states there were no missing MAX SSNs to be replaced (Kentucky and New Jersey had small rates of missing values), but all of the SSN states had rates of missing EDB-SSN and EDB-HIC replacement that compared to many of the other states. Kentucky, in fact, had the highest rate of missing EDB-HIC replacement among all states, at more than eight percent. Among the non-SSN states, missing MAX SSNs were replaced in more than two percent of the records in Arkansas, South Carolina, and Washington

Table IV.6 Edits to Assign Consistent SSNs and HICs as a Percentage of Records Subject to Reconciliation, 2005

| State | Percent of Records with Missing Value Replaced | | | Percent of Records with Nonmissing Value Replaced | | |
|----------------------|--|---------|---------|---|---------|---------|
| | MAX SSN | EDB SSN | EDB HIC | MAX SSN | EDB SSN | EDB HIC |
| Alabama | 0.113 | 0.409 | 0.396 | 0.879 | 0.002 | 0.044 |
| Alaska | 0.668 | 0.294 | 0.290 | 0.139 | 0.000 | 0.017 |
| Arizona | 0.868 | 0.506 | 0.490 | 0.014 | 0.001 | 0.023 |
| Arkansas | 2.123 | 0.393 | 0.456 | 0.123 | 0.001 | 0.100 |
| California (SSN) | 0.000 | 0.361 | 0.346 | 0.003 | 0.000 | 0.025 |
| Colorado | 1.269 | 0.344 | 0.345 | 0.543 | 0.001 | 0.034 |
| Connecticut | 0.878 | 0.404 | 0.398 | 0.098 | 0.002 | 0.042 |
| Delaware | 1.364 | 0.577 | 0.567 | 0.070 | 0.000 | 0.034 |
| District of Columbia | 0.049 | 0.565 | 0.425 | 0.022 | 0.002 | 0.058 |
| Florida | 0.025 | 0.413 | 0.412 | 0.009 | 0.002 | 0.035 |
| Georgia | 0.064 | 0.272 | 0.271 | 0.024 | 0.001 | 0.027 |
| Hawaii | 0.000 | 0.503 | 0.506 | 0.001 | 0.001 | 0.028 |
| Idaho | 0.364 | 0.311 | 0.310 | 0.021 | 0.000 | 0.027 |
| Illinois | 0.236 | 0.554 | 0.541 | 0.124 | 0.001 | 0.031 |
| Indiana | 0.030 | 0.450 | 0.451 | 0.005 | 0.000 | 0.028 |
| Iowa | 0.501 | 0.513 | 0.508 | 0.143 | 0.001 | 0.051 |
| Kansas | 0.061 | 0.382 | 0.380 | 0.012 | 0.000 | 0.033 |
| Kentucky (SSN) | 0.035 | 0.502 | 8.094 | 0.007 | 0.000 | 0.049 |
| Louisiana (SSN) | 0.000 | 0.331 | 0.331 | 0.002 | 0.000 | 0.048 |
| Maine | 0.046 | 0.761 | 0.762 | 0.018 | 0.001 | 0.049 |
| Maryland | 0.115 | 0.524 | 0.715 | 0.028 | 0.001 | 0.059 |
| Massachusetts | 1.829 | 0.737 | 0.781 | 0.089 | 0.001 | 0.042 |
| Michigan | 1.936 | 0.646 | 0.637 | 0.071 | 0.001 | 0.033 |
| Minnesota (SSN) | 0.000 | 0.458 | 0.448 | 0.025 | 0.001 | 0.034 |
| Mississippi | 0.101 | 0.393 | 0.392 | 0.026 | 0.001 | 0.045 |
| Missouri | 0.001 | 0.517 | 0.517 | 0.002 | 0.000 | 0.031 |
| Montana | 0.005 | 0.390 | 0.388 | 1.114 | 0.003 | 0.038 |
| Nebraska | 1.678 | 0.311 | 0.302 | 0.045 | 0.000 | 0.030 |
| Nevada (SSN) | 0.000 | 0.376 | 0.372 | 0.002 | 0.001 | 0.041 |
| New Hampshire | 0.001 | 0.492 | 0.491 | 0.005 | 0.000 | 0.029 |
| New Jersey (SSN) | 0.032 | 0.426 | 0.404 | 0.068 | 0.003 | 0.052 |
| New Mexico (SSN) | 0.000 | 0.325 | 0.319 | 0.003 | 0.001 | 0.016 |
| New York | 0.015 | 0.709 | 0.707 | 0.012 | 0.001 | 0.035 |
| North Carolina | 0.016 | 0.457 | 0.456 | 0.004 | 0.001 | 0.042 |
| North Dakota | 0.030 | 0.359 | 0.357 | 0.019 | 0.002 | 0.040 |
| Ohio | 0.054 | 0.510 | 0.500 | 0.053 | 0.001 | 0.029 |
| Oklahoma | 0.019 | 0.323 | 0.323 | 0.008 | 0.000 | 0.033 |
| Oregon | 0.046 | 0.510 | 0.515 | 0.013 | 0.000 | 0.031 |
| Pennsylvania | 0.027 | 0.600 | 0.598 | 0.030 | 0.001 | 0.040 |
| Rhode Island | 0.033 | 0.477 | 0.474 | 0.010 | 0.001 | 0.035 |
| South Carolina | 2.366 | 0.463 | 0.372 | 0.191 | 0.004 | 0.034 |

| State | Percent of Records with Missing Value Replaced | | | Percent of Records with Nonmissing Value Replaced | | |
|----------------------|--|--------------|--------------|---|--------------|--------------|
| | MAX SSN | EDB SSN | EDB HIC | MAX SSN | EDB SSN | EDB HIC |
| South Dakota | 1.599 | 0.324 | 0.316 | 0.138 | 0.000 | 0.037 |
| Tennessee | 0.024 | 0.510 | 0.507 | 0.016 | 0.000 | 0.035 |
| Texas | 0.793 | 0.329 | 4.957 | 0.160 | 0.001 | 0.037 |
| Utah | 0.309 | 0.489 | 0.549 | 0.073 | 0.002 | 0.032 |
| Vermont (SSN) | 0.000 | 0.734 | 0.732 | 0.004 | 0.001 | 0.044 |
| Virginia | 0.928 | 0.387 | 0.376 | 0.152 | 0.001 | 0.038 |
| Washington | 2.187 | 0.409 | 0.374 | 0.243 | 0.000 | 0.038 |
| West Virginia | 0.004 | 0.619 | 0.616 | 0.010 | 0.003 | 0.038 |
| Wisconsin | 0.584 | 0.378 | 0.373 | 0.015 | 0.001 | 0.038 |
| Wyoming | 0.382 | 0.312 | 0.209 | 0.314 | 0.000 | 0.090 |
| United States | 0.379 | 0.464 | 0.879 | 0.068 | 0.001 | 0.035 |

Table IV.7 Edits to Assign Consistent SSNs and HICs as a Percentage of Records Subject to Reconciliation, 2006

| State | Percent of Records with Missing Value Replaced | | | Percent of Records with Nonmissing Value Replaced | | |
|----------------------|--|---------|---------|---|---------|---------|
| | MAX SSN | EDB SSN | EDB HIC | MAX SSN | EDB SSN | EDB HIC |
| Alabama | 0.021 | 0.010 | 0.007 | 0.006 | 0.001 | 0.001 |
| Alaska | 0.010 | 0.003 | 0.007 | 0.001 | 0.000 | 0.000 |
| Arizona | 0.010 | 0.027 | 0.027 | 0.001 | 0.000 | 0.000 |
| Arkansas | 0.083 | 0.042 | 0.011 | 0.012 | 0.000 | 0.001 |
| California (SSN) | 0.000 | 0.015 | 0.007 | 0.001 | 0.000 | 0.000 |
| Colorado | 0.119 | 0.022 | 0.013 | 0.008 | 0.000 | 0.002 |
| Connecticut | 0.001 | 0.011 | 0.028 | 0.003 | 0.000 | 0.000 |
| Delaware | 0.001 | 0.007 | 0.011 | 0.002 | 0.000 | 0.000 |
| District of Columbia | 0.001 | 0.005 | 0.055 | 0.009 | 0.000 | 0.000 |
| Florida | 0.001 | 0.003 | 0.001 | 0.002 | 0.000 | 0.000 |
| Georgia | 0.018 | 0.002 | 0.001 | 0.001 | 0.000 | 0.000 |
| Hawaii | 0.000 | 0.003 | 0.020 | 0.000 | 0.000 | 0.000 |
| Idaho | 0.001 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Illinois | 0.005 | 0.088 | 0.037 | 0.006 | 0.000 | 0.001 |
| Indiana | 0.012 | 0.003 | 0.003 | 0.000 | 0.000 | 0.000 |
| Iowa | 0.001 | 0.002 | 0.007 | 0.001 | 0.000 | 0.000 |
| Kansas | 0.003 | 0.014 | 0.014 | 0.000 | 0.000 | 0.000 |
| Kentucky (SSN) | 0.001 | 0.008 | 0.017 | 0.000 | 0.000 | 0.000 |
| Louisiana (SSN) | 0.000 | 0.002 | 0.000 | 0.002 | 0.000 | 0.000 |
| Maine | 0.001 | 0.002 | 0.003 | 0.001 | 0.000 | 0.000 |
| Maryland | 0.010 | 0.002 | 0.152 | 0.000 | 0.000 | 0.000 |
| Massachusetts | 0.717 | 0.023 | 0.007 | 0.004 | 0.000 | 0.002 |
| Michigan | 0.025 | 0.007 | 0.017 | 0.002 | 0.000 | 0.000 |
| Minnesota (SSN) | 0.000 | 0.003 | 0.007 | 0.009 | 0.000 | 0.000 |
| Mississippi | 0.000 | 0.034 | 0.032 | 0.003 | 0.000 | 0.000 |
| Missouri | 0.003 | 0.003 | 0.003 | 0.000 | 0.000 | 0.000 |
| Montana | 0.000 | 0.002 | 0.003 | 0.001 | 0.000 | 0.000 |
| Nebraska | 0.167 | 0.005 | 0.003 | 0.002 | 0.000 | 0.000 |
| Nevada (SSN) | 0.000 | 0.006 | 0.009 | 0.005 | 0.001 | 0.001 |
| New Hampshire | 0.001 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| New Jersey (SSN) | 0.070 | 0.031 | 0.005 | 0.046 | 0.002 | 0.003 |
| New Mexico (SSN) | 0.000 | 0.011 | 0.002 | 0.002 | 0.000 | 0.000 |
| New York | 0.000 | 0.051 | 0.040 | 0.008 | 0.000 | 0.003 |
| North Carolina | 0.001 | 0.001 | 0.001 | 0.000 | 0.000 | 0.000 |
| North Dakota | 0.014 | 0.022 | 0.017 | 0.000 | 0.000 | 0.002 |
| Ohio | 0.080 | 0.070 | 0.070 | 0.004 | 0.000 | 0.001 |
| Oklahoma | 0.003 | 0.009 | 0.009 | 0.001 | 0.000 | 0.000 |
| Oregon | 0.001 | 0.002 | 0.007 | 0.000 | 0.000 | 0.000 |
| Pennsylvania | 0.023 | 0.005 | 0.020 | 0.003 | 0.000 | 0.000 |
| Rhode Island | 0.059 | 0.001 | 0.001 | 0.001 | 0.000 | 0.000 |
| South Carolina | 0.022 | 0.009 | 0.003 | 0.004 | 0.000 | 0.000 |
| South Dakota | 0.002 | 0.015 | 0.019 | 0.004 | 0.000 | 0.000 |
| Tennessee | 0.000 | 0.007 | 0.011 | 0.001 | 0.000 | 0.000 |
| Texas | 0.354 | 0.016 | 0.013 | 0.005 | 0.000 | 0.002 |

| State | Percent of Records with Missing Value Replaced | | | Percent of Records with Nonmissing Value Replaced | | |
|----------------------|--|--------------|--------------|---|--------------|--------------|
| | MAX SSN | EDB SSN | EDB HIC | MAX SSN | EDB SSN | EDB HIC |
| Utah | 0.165 | 0.001 | 0.003 | 0.000 | 0.000 | 0.000 |
| Vermont (SSN) | 0.000 | 0.004 | 0.002 | 0.002 | 0.000 | 0.000 |
| Virginia | 0.011 | 0.004 | 0.002 | 0.002 | 0.000 | 0.000 |
| Washington | 0.055 | 0.003 | 0.018 | 0.002 | 0.000 | 0.000 |
| West Virginia | 0.000 | 0.004 | 0.004 | 0.038 | 0.000 | 0.000 |
| Wisconsin | 0.042 | 0.009 | 0.002 | 0.000 | 0.000 | 0.000 |
| Wyoming | 0.016 | 0.000 | 0.000 | 0.003 | 0.000 | 0.000 |
| United States | 0.053 | 0.020 | 0.017 | 0.004 | 0.000 | 0.001 |

and between one and two percent in six other states. While the rate of replacement of missing EDB-SSNs was somewhat higher overall than that of missing MAX SSNs, there was much less variability among the states, with the highest replacement rate being only 0.761 percent (in Maine) and the lowest being 0.272 percent (in Georgia). The situation was similar for missing EDB-HICs except for two outliers—Kentucky, as mentioned previously, and Texas, with nearly five percent of the records having missing values replaced. Among the remaining states, however, the replacement rate varied between 0.209 percent (Wyoming) and 0.781 percent (Massachusetts).

Nonmissing values were replaced only a fraction as often as missing values: 0.068 percent, nationally, for the MAX SSN, 0.001 percent for the EDB-SSN, and 0.035 percent for the EDB-HIC. In only one state, Montana, did the rate of replacement of nonmissing MAX SSNs exceed one percent (at 1.114 percent), and in a substantial majority of states the replacement rate was below 0.1 percent. Rates of replacement of nonmissing EDB-SSNs ranged from 0.000 percent to 0.004 percent while rates of replacement of nonmissing EDB-HICs ranged from 0.016 percent to 0.100 percent.

All of the rates of replacement were substantially lower in 2006 than in 2005, reflecting the fact that most of the replacement values for missing or inconsistent 2005 values came from 2006. This implies that the addition of 2007 data to MAXEM will yield corrections to the 2006 data; we need to allow for this in plans for future development of MAXEM. Missing MAX SSNs were replaced on only 0.053 percent of the 2006 records nationally, while missing EDB-SSNs were replaced on only 0.02 percent of all 2006 records and missing EDB-HICs were replaced on only 0.017 percent of all records. The highest rate of replacement of missing MAX SSNs in any state was 0.717 percent in Massachusetts; the next highest rate (in Texas) was less than half that level. No state had a replacement rate as high as 0.1 percent for either the EDB-SSN or the EDB-HIC.

Replacement rates for nonmissing values, which can be replaced only with later values, were much lower, with only two states (New Jersey and West Virginia) having rates in excess of 0.01 percent for the MAX SSN, and no state exceeding 0.002 percent for the EDB-SSN or 0.003 percent for the EDB-HIC.

Edits to demographic variables in 2005 more often involved the replacement of a nonmissing value than a missing value, but there were a few states in which the replacement of missing values was more common than the replacement of nonmissing values. Nebraska at 3.242 percent, Wyoming at 1.909 percent, and New York at 0.884 percent were outliers with respect to the frequency of replacement of missing dates of birth; the next highest replacement rate was 0.062 percent in Nevada, which was followed by 0.008 percent in two states (Table IV.8).

Race/ethnicity had higher rates of replacement of missing values than either date of birth or sex. Nationally, such edits were found on 0.446 percent of all records in 2005 compared to 0.095 percent for date of birth and 0.014 percent for sex. Massachusetts led all states with replacement of missing race/ethnicity on 3.403 percent of records, followed by Vermont (1.797 percent), Colorado (1.737), and Iowa (1.472). No other state exceeded one percent, but six states fell between 0.5 and 1.0 percent, and 13 more fell between 0.1 and 0.5 percent.

As we noted, replacement of nonmissing values of date of birth, sex, and race/ethnicity was more common than replacement of missing values in 2005. Most notable were the high replacement rates for nonmissing race/ethnicity in two states: Connecticut, at 25.529 percent, and Nevada, at 12.777 percent. Changes in race/ethnicity coding between the two years explain the high replacement rate in Connecticut; certain subpopulations were assigned different codes in 2006 than 2005. For a fuller discussion of changes in race/ethnicity coding, see Section B.

Table IV.8 Edits to Assign Consistent Demographic Information as a Percentage of Records Subject to Reconciliation, 2005

| State | Percent of Records with Missing Value Replaced | | | Percent of Records with Nonmissing Value Replaced | | |
|----------------------|--|-------|----------------|---|-------|----------------|
| | Date of Birth | Sex | Race/Ethnicity | Date of Birth | Sex | Race/Ethnicity |
| Alabama | 0.000 | 0.310 | 0.131 | 0.509 | 0.055 | 0.068 |
| Alaska | 0.000 | 0.000 | 0.275 | 0.176 | 0.031 | 0.386 |
| Arizona | 0.002 | 0.002 | 0.165 | 0.139 | 0.029 | 0.331 |
| Arkansas | 0.000 | 0.156 | 0.198 | 0.238 | 0.091 | 0.290 |
| California (SSN) | 0.000 | 0.000 | 0.972 | 0.438 | 0.146 | 1.431 |
| Colorado | 0.006 | 0.000 | 1.737 | 0.925 | 0.225 | 0.619 |
| Connecticut | 0.000 | 0.000 | 0.031 | 0.154 | 0.030 | 25.549 |
| Delaware | 0.000 | 0.000 | 0.003 | 0.157 | 0.013 | 0.264 |
| District of Columbia | 0.010 | 0.000 | 0.018 | 0.033 | 0.003 | 0.010 |
| Florida | 0.006 | 0.000 | 0.095 | 0.036 | 0.004 | 0.062 |
| Georgia | 0.000 | 0.000 | 0.063 | 0.045 | 0.009 | 0.086 |
| Hawaii | 0.000 | 0.000 | 0.001 | 0.009 | 0.000 | 0.035 |
| Idaho | 0.001 | 0.000 | 0.000 | 0.075 | 0.005 | 0.272 |
| Illinois | 0.003 | 0.000 | 0.421 | 0.493 | 0.327 | 5.874 |
| Indiana | 0.000 | 0.000 | 0.013 | 0.024 | 0.005 | 0.030 |
| Iowa | 0.000 | 0.000 | 1.472 | 0.162 | 0.041 | 0.892 |
| Kansas | 0.000 | 0.000 | 0.050 | 0.034 | 0.005 | 0.145 |
| Kentucky (SSN) | 0.000 | 0.000 | 0.119 | 0.210 | 0.117 | 0.286 |
| Louisiana (SSN) | 0.000 | 0.000 | 0.025 | 0.053 | 0.031 | 0.037 |
| Maine | 0.001 | 0.001 | 0.048 | 0.059 | 0.006 | 0.026 |
| Maryland | 0.002 | 0.000 | 0.077 | 0.055 | 0.013 | 0.036 |
| Massachusetts | 0.000 | 0.000 | 3.403 | 0.507 | 0.167 | 0.940 |
| Michigan | 0.008 | 0.000 | 0.269 | 0.194 | 0.033 | 0.376 |
| Minnesota (SSN) | 0.000 | 0.000 | 0.633 | 0.254 | 0.058 | 0.329 |
| Mississippi | 0.000 | 0.001 | 0.279 | 0.099 | 0.011 | 0.027 |
| Missouri | 0.001 | 0.000 | 0.026 | 0.010 | 0.001 | 0.027 |
| Montana | 0.000 | 0.000 | 0.015 | 0.036 | 0.002 | 0.036 |
| Nebraska | 3.242 | 0.876 | 0.037 | 0.178 | 0.051 | 0.118 |
| Nevada (SSN) | 0.062 | 0.195 | 0.000 | 0.473 | 0.104 | 12.777 |
| New Hampshire | 0.022 | 0.000 | 0.007 | 0.006 | 0.001 | 0.001 |
| New Jersey (SSN) | 0.000 | 0.000 | 0.683 | 0.750 | 0.354 | 2.462 |
| New Mexico (SSN) | 0.000 | 0.000 | 0.306 | 0.161 | 0.031 | 0.434 |
| New York | 0.884 | 0.000 | 0.478 | 0.313 | 0.004 | 0.664 |
| North Carolina | 0.001 | 0.000 | 0.040 | 0.007 | 0.001 | 0.006 |
| North Dakota | 0.000 | 0.000 | 0.000 | 0.091 | 0.062 | 0.540 |
| Ohio | 0.004 | 0.000 | 0.011 | 0.094 | 0.007 | 0.278 |
| Oklahoma | 0.000 | 0.000 | 0.000 | 0.108 | 0.006 | 0.209 |
| Oregon | 0.001 | 0.000 | 0.065 | 0.029 | 0.004 | 0.059 |
| Pennsylvania | 0.002 | 0.000 | 0.014 | 0.079 | 0.007 | 0.097 |
| Rhode Island | 0.001 | 0.000 | 0.580 | 0.053 | 0.022 | 0.083 |

| State | Percent of Records with Missing Value Replaced | | | Percent of Records with Nonmissing Value Replaced | | |
|----------------------|--|--------------|----------------|---|--------------|----------------|
| | Date of Birth | Sex | Race/Ethnicity | Date of Birth | Sex | Race/Ethnicity |
| South Carolina | 0.001 | 0.004 | 0.316 | 0.826 | 0.068 | 0.091 |
| South Dakota | 0.000 | 0.000 | 0.000 | 0.248 | 0.062 | 2.434 |
| Tennessee | 0.000 | 0.000 | 0.092 | 0.096 | 0.005 | 0.029 |
| Texas | 0.000 | 0.001 | 0.251 | 0.327 | 0.103 | 0.745 |
| Utah | 0.000 | 0.000 | 0.058 | 0.299 | 0.069 | 1.757 |
| Vermont (SSN) | 0.000 | 0.000 | 1.797 | 0.088 | 0.068 | 0.054 |
| Virginia | 0.000 | 0.003 | 0.012 | 0.177 | 0.040 | 0.122 |
| Washington | 0.000 | 0.001 | 0.698 | 0.233 | 0.068 | 1.545 |
| West Virginia | 0.000 | 0.000 | 0.000 | 0.095 | 0.009 | 0.116 |
| Wisconsin | 0.008 | 0.000 | 0.897 | 0.163 | 0.022 | 0.189 |
| Wyoming | 1.909 | 1.941 | 0.168 | 0.597 | 0.068 | 0.325 |
| United States | 0.095 | 0.014 | 0.446 | 0.260 | 0.073 | 1.082 |

As with SSNs and HICs, there were far fewer edits to records in 2006 than in 2005 because most of the edits involve the replacement of earlier values with later values. Race/ethnicity provided the lone exception, where the replacement of missing values was nearly twice as common in 2006 as in 2005. Missing value replacement does not require that the replacement values come from later records, although missing values for most fields tend to be more common on earlier records for the same individual. The highest rate occurred in Washington state, where missing values of race/ethnicity were replaced on 9.685 percent of the 2006 records. The replacement of nonmissing values for race/ethnicity was substantially lower than the replacement of missing values, as we would expect (Table IV.9).

c. Consolidation of Linked Records Within the Same Year

Following the reconciliation process, all records bearing the same MAXEM ID within the same state and year were combined into a single record. Because of reconciliation, the identifiers and demographic variables were identical across the records being combined, but each of the records had its own set of enrollment and service utilization data. This information had to be consolidated. We did this in a manner that would limit the loss of information, as explained below.

Table IV.10 documents the reduction in the total record count, by state, due to the consolidation of records in 2005 within state. Table IV.11 provides comparable documentation for 2006. In the first column of each table we report the count of MAX PS records with enrollment data, from Table IV.4. The second column reports the number of records remaining after consolidation, and the third column reports the reduction in the record count due to consolidation (the difference between the first two columns). The fourth column reports the number of consolidated or combined records. If every instance of duplication involved only two

Table IV.9 Edits to Assign Consistent Demographic Information as a Percentage of Records Subject to Reconciliation, 2006

| State | Percent of Records with Missing Value Replaced | | | Percent of Records with Nonmissing Value Replaced | | |
|----------------------|--|-------|----------------|---|-------|----------------|
| | Date of Birth | Sex | Race/Ethnicity | Date of Birth | Sex | Race/Ethnicity |
| Alabama | 0.000 | 0.001 | 0.029 | 0.010 | 0.003 | 0.002 |
| Alaska | 0.000 | 0.000 | 0.077 | 0.002 | 0.000 | 0.001 |
| Arizona | 0.000 | 0.000 | 0.225 | 0.007 | 0.003 | 0.002 |
| Arkansas | 0.000 | 0.001 | 0.271 | 0.008 | 0.002 | 0.003 |
| California (SSN) | 0.000 | 0.000 | 1.301 | 0.002 | 0.012 | 0.002 |
| Colorado | 0.000 | 0.000 | 3.014 | 0.017 | 0.008 | 0.008 |
| Connecticut | 0.000 | 0.000 | 0.000 | 0.023 | 0.000 | 0.044 |
| Delaware | 0.000 | 0.000 | 0.000 | 0.003 | 0.000 | 0.003 |
| District of Columbia | 0.000 | 0.000 | 0.025 | 0.004 | 0.000 | 0.000 |
| Florida | 0.000 | 0.000 | 0.060 | 0.001 | 0.000 | 0.001 |
| Georgia | 0.000 | 0.000 | 0.047 | 0.001 | 0.000 | 0.001 |
| Hawaii | 0.000 | 0.000 | 0.000 | 0.004 | 0.000 | 0.018 |
| Idaho | 0.000 | 0.000 | 0.000 | 0.001 | 0.000 | 0.002 |
| Illinois | 0.001 | 0.000 | 3.239 | 0.115 | 0.021 | 0.164 |
| Indiana | 0.000 | 0.000 | 0.011 | 0.000 | 0.000 | 0.001 |
| Iowa | 0.000 | 0.000 | 1.336 | 0.002 | 0.001 | 0.005 |
| Kansas | 0.000 | 0.000 | 0.005 | 0.001 | 0.000 | 0.001 |
| Kentucky (SSN) | 0.000 | 0.000 | 0.125 | 0.002 | 0.004 | 0.000 |
| Louisiana (SSN) | 0.000 | 0.000 | 0.009 | 0.001 | 0.000 | 0.000 |
| Maine | 0.000 | 0.000 | 0.125 | 0.000 | 0.000 | 0.000 |
| Maryland | 0.000 | 0.000 | 0.033 | 0.003 | 0.000 | 0.000 |
| Massachusetts | 0.000 | 0.000 | 3.881 | 0.008 | 0.011 | 0.003 |
| Michigan | 0.000 | 0.000 | 0.006 | 0.005 | 0.000 | 0.001 |
| Minnesota (SSN) | 0.000 | 0.000 | 0.247 | 0.002 | 0.000 | 0.000 |
| Mississippi | 0.000 | 0.000 | 0.223 | 0.036 | 0.000 | 0.013 |
| Missouri | 0.000 | 0.000 | 0.016 | 0.000 | 0.000 | 0.000 |
| Montana | 0.000 | 0.000 | 0.000 | 0.001 | 0.001 | 0.000 |
| Nebraska | 0.003 | 0.001 | 0.024 | 0.001 | 0.001 | 0.001 |
| Nevada (SSN) | 0.000 | 0.000 | 0.000 | 0.004 | 0.001 | 0.003 |
| New Hampshire | 0.000 | 0.000 | 0.002 | 0.000 | 0.000 | 0.000 |
| New Jersey (SSN) | 0.000 | 0.000 | 0.269 | 0.016 | 0.008 | 0.006 |
| New Mexico (SSN) | 0.000 | 0.000 | 0.090 | 0.006 | 0.004 | 0.002 |
| New York | 0.000 | 0.000 | 0.490 | 0.170 | 0.000 | 0.326 |
| North Carolina | 0.000 | 0.000 | 0.000 | 0.001 | 0.000 | 0.000 |
| North Dakota | 0.000 | 0.000 | 0.002 | 0.011 | 0.000 | 0.277 |
| Ohio | 0.000 | 0.000 | 0.012 | 0.015 | 0.000 | 0.065 |
| Oklahoma | 0.000 | 0.000 | 0.000 | 0.037 | 0.000 | 0.043 |
| Oregon | 0.000 | 0.000 | 1.103 | 0.005 | 0.000 | 0.008 |
| Pennsylvania | 0.000 | 0.000 | 0.011 | 0.002 | 0.000 | 0.001 |
| Rhode Island | 0.001 | 0.000 | 0.250 | 0.001 | 0.001 | 0.001 |
| South Carolina | 0.000 | 0.000 | 0.220 | 0.008 | 0.002 | 0.002 |
| South Dakota | 0.000 | 0.000 | 0.000 | 0.027 | 0.000 | 0.324 |
| Tennessee | 0.000 | 0.000 | 0.103 | 0.002 | 0.001 | 0.001 |

| State | Percent of Records with Missing Value Replaced | | | Percent of Records with Nonmissing Value Replaced | | |
|----------------------|--|--------------|----------------|---|--------------|----------------|
| | Date of Birth | Sex | Race/Ethnicity | Date of Birth | Sex | Race/Ethnicity |
| Texas | 0.000 | 0.000 | 0.482 | 0.073 | 0.004 | 0.019 |
| Utah | 0.000 | 0.000 | 0.018 | 0.001 | 0.000 | 0.006 |
| Vermont (SSN) | 0.000 | 0.000 | 0.089 | 0.001 | 0.003 | 0.000 |
| Virginia | 0.000 | 0.000 | 0.004 | 0.008 | 0.000 | 0.006 |
| Washington | 0.000 | 0.000 | 9.685 | 0.004 | 0.001 | 0.001 |
| West Virginia | 0.000 | 0.000 | 0.021 | 0.015 | 0.000 | 0.000 |
| Wisconsin | 0.000 | 0.000 | 0.581 | 0.008 | 0.001 | 0.001 |
| Wyoming | 0.003 | 0.000 | 0.128 | 0.005 | 0.000 | 0.003 |
| United States | 0.000 | 0.000 | 0.808 | 0.029 | 0.004 | 0.043 |

Table IV.10 Reduction in Record Count Due to Consolidation of Records Within State and Year, 2005

| State | MAX PS Records with Enrollment Data | Records Remaining After Consolidation | Reduction in Record Count | Duplicates | | Reduction as Percent of Initial Records |
|----------------------|--|--|---------------------------------|----------------------------------|-------------------------------------|--|
| | | | | Number of Combined Records | In Excess of Two per MAXEM ID | |
| Alabama | 955,590 | 954,389 | 1,201 | 1,201 | 0 | 0.126 |
| Alaska | 132,850 | 132,802 | 48 | 48 | 0 | 0.036 |
| Arizona | 1,476,842 | 1,474,288 | 2,554 | 2,538 | 16 | 0.173 |
| Arkansas | 746,506 | 745,700 | 806 | 793 | 13 | 0.108 |
| California (SSN) | 10,593,523 | 10,593,119 | 404 | 402 | 2 | 0.004 |
| Colorado | 603,949 | 603,707 | 242 | 241 | 1 | 0.040 |
| Connecticut | 529,119 | 528,469 | 650 | 647 | 3 | 0.123 |
| Delaware | 179,935 | 179,913 | 22 | 22 | 0 | 0.012 |
| District of Columbia | 166,514 | 166,440 | 74 | 74 | 0 | 0.044 |
| Florida | 3,020,102 | 3,019,634 | 468 | 468 | 0 | 0.015 |
| Georgia | 2,083,224 | 2,080,322 | 2,902 | 2,902 | 0 | 0.139 |
| Hawaii | 231,787 | 231,620 | 167 | 167 | 0 | 0.072 |
| Idaho | 233,352 | 233,333 | 19 | 19 | 0 | 0.008 |
| Illinois | 2,610,471 | 2,570,481 | 39,990 | 39,313 | 677 | 1.532 |
| Indiana | 1,044,889 | 1,044,764 | 125 | 125 | 0 | 0.012 |
| Iowa | 428,814 | 428,279 | 535 | 535 | 0 | 0.125 |
| Kansas | 356,738 | 356,706 | 32 | 32 | 0 | 0.009 |
| Kentucky (SSN) | 886,960 | 873,932 | 13,028 | 13,026 | 2 | 1.469 |
| Louisiana (SSN) | 1,166,153 | 1,166,119 | 34 | 34 | 0 | 0.003 |
| Maine | 326,500 | 326,409 | 91 | 91 | 0 | 0.028 |
| Maryland | 866,921 | 866,900 | 21 | 21 | 0 | 0.002 |
| Massachusetts | 1,245,895 | 1,245,843 | 52 | 52 | 0 | 0.004 |
| Michigan | 1,857,775 | 1,857,701 | 74 | 74 | 0 | 0.004 |
| Minnesota (SSN) | 790,712 | 790,615 | 97 | 95 | 2 | 0.012 |
| Mississippi | 780,246 | 778,522 | 1,724 | 1,700 | 24 | 0.221 |
| Missouri | 1,217,929 | 1,217,500 | 429 | 428 | 1 | 0.035 |
| Montana | 128,004 | 128,004 | 0 | 0 | 0 | 0.000 |
| Nebraska | 261,372 | 261,371 | 1 | 1 | 0 | 0.000 |
| Nevada (SSN) | 267,880 | 267,833 | 47 | 47 | 0 | 0.018 |
| New Hampshire | 145,737 | 145,728 | 9 | 9 | 0 | 0.006 |
| New Jersey (SSN) | 1,125,770 | 1,121,762 | 4,008 | 3,981 | 27 | 0.356 |
| New Mexico (SSN) | 527,702 | 527,694 | 8 | 8 | 0 | 0.002 |
| New York | 5,087,834 | 5,013,122 | 74,712 | 73,552 | 1,160 | 1.468 |
| North Carolina | 1,728,608 | 1,727,918 | 690 | 690 | 0 | 0.040 |
| North Dakota | 78,625 | 77,112 | 1,513 | 1,513 | 0 | 1.924 |
| Ohio | 2,126,626 | 2,113,448 | 13,178 | 13,069 | 109 | 0.620 |
| Oklahoma | 728,609 | 725,837 | 2,772 | 2,750 | 22 | 0.380 |
| Oregon | 563,445 | 562,565 | 880 | 879 | 1 | 0.156 |
| Pennsylvania | 2,029,894 | 2,029,732 | 162 | 160 | 2 | 0.008 |
| Rhode Island | 219,784 | 219,783 | 1 | 1 | 0 | 0.000 |
| South Carolina | 1,012,287 | 1,012,171 | 116 | 115 | 1 | 0.011 |
| South Dakota | 130,894 | 128,838 | 2,056 | 2,049 | 7 | 1.571 |
| Tennessee | 1,594,245 | 1,593,869 | 376 | 370 | 6 | 0.024 |
| Texas | 4,103,270 | 4,096,175 | 7,095 | 7,023 | 72 | 0.173 |

| State | MAX PS Records with Enrollment Data | Records Remaining After Consolidation | Reduction in Record Count | Duplicates | | Reduction as Percent of Initial Records |
|----------------------|--|--|---------------------------------|----------------------------------|-------------------------------------|--|
| | | | | Number of Combined Records | In Excess of Two per MAXEM ID | |
| Utah | 345,451 | 345,438 | 13 | 13 | 0 | 0.004 |
| Vermont (SSN) | 162,762 | 162,743 | 19 | 19 | 0 | 0.012 |
| Virginia | 927,685 | 926,884 | 801 | 800 | 1 | 0.086 |
| Washington | 1,199,572 | 1,199,441 | 131 | 131 | 0 | 0.011 |
| West Virginia | 383,111 | 382,999 | 112 | 112 | 0 | 0.029 |
| Wisconsin | 1,022,203 | 1,015,762 | 6,441 | 6,441 | 0 | 0.630 |
| Wyoming | 81,199 | 81,129 | 70 | 70 | 0 | 0.086 |
| United States | 60,515,865 | 60,334,865 | 181,000 | 178,851 | 2,149 | 0.299 |

Table IV.11 Reduction in Record Count Due to Consolidation of Records Within State and Year, 2006

| State | MAX PS Records with Enrollment Data | Records Remaining After Consolidation | Reduction in Record Count | Duplicates | | Reduction as Percent of Initial Records |
|-------------------------|---|--|---------------------------------|----------------------------------|-------------------------------------|--|
| | | | | Number of Combined Records | In Excess of Two per MAXEM ID | |
| Alabama | 967,777 | 966,987 | 790 | 790 | 0 | 0.082 |
| Alaska | 130,740 | 130,735 | 5 | 5 | 0 | 0.004 |
| Arizona | 1,511,854 | 1,511,638 | 216 | 216 | 0 | 0.014 |
| Arkansas | 758,906 | 758,188 | 718 | 703 | 15 | 0.095 |
| California (SSN) | 10,611,919 | 10,611,796 | 123 | 121 | 2 | 0.001 |
| Colorado | 626,768 | 626,484 | 284 | 284 | 0 | 0.045 |
| Connecticut | 533,568 | 532,975 | 593 | 592 | 1 | 0.111 |
| Delaware | 184,542 | 184,528 | 14 | 14 | 0 | 0.008 |
| District of Columbia | 167,174 | 167,082 | 92 | 92 | 0 | 0.055 |
| Florida | 2,997,801 | 2,997,454 | 347 | 347 | 0 | 0.012 |
| Georgia | 2,043,649 | 2,043,588 | 61 | 61 | 0 | 0.003 |
| Hawaii | 231,642 | 231,509 | 133 | 133 | 0 | 0.057 |
| Idaho | 229,912 | 229,893 | 19 | 19 | 0 | 0.008 |
| Illinois | 2,600,647 | 2,573,624 | 27,023 | 26,324 | 699 | 1.039 |
| Indiana | 1,066,463 | 1,066,328 | 135 | 135 | 0 | 0.013 |
| Iowa | 467,347 | 466,910 | 437 | 436 | 1 | 0.094 |
| Kansas | 358,751 | 358,731 | 20 | 19 | 1 | 0.006 |
| Kentucky (SSN) | 890,092 | 890,088 | 4 | 4 | 0 | 0.000 |
| Louisiana (SSN) | 1,213,077 | 1,213,058 | 19 | 19 | 0 | 0.002 |
| Maine | 336,137 | 336,134 | 3 | 3 | 0 | 0.001 |
| Maryland | 865,977 | 865,965 | 12 | 12 | 0 | 0.001 |
| Massachusetts | 1,307,674 | 1,307,569 | 105 | 105 | 0 | 0.008 |
| Michigan | 1,938,399 | 1,938,251 | 148 | 148 | 0 | 0.008 |
| Minnesota (SSN) | 802,182 | 802,125 | 57 | 57 | 0 | 0.007 |
| Mississippi | 775,999 | 773,546 | 2,453 | 2,420 | 33 | 0.316 |
| Missouri | 1,111,398 | 1,111,379 | 19 | 19 | 0 | 0.002 |
| Montana | 126,934 | 126,934 | 0 | 0 | 0 | 0.000 |
| Nebraska | 262,014 | 261,942 | 72 | 71 | 1 | 0.027 |
| Nevada (SSN) | 254,747 | 254,738 | 9 | 9 | 0 | 0.004 |
| New Hampshire | 148,671 | 148,664 | 7 | 7 | 0 | 0.005 |
| New Jersey (SSN) | 1,180,677 | 1,179,737 | 940 | 929 | 11 | 0.080 |
| New Mexico (SSN) | 516,862 | 516,854 | 8 | 8 | 0 | 0.002 |
| New York | 5,092,937 | 5,022,223 | 70,714 | 69,810 | 904 | 1.388 |
| North Carolina | 1,780,953 | 1,780,928 | 25 | 25 | 0 | 0.001 |
| North Dakota | 79,810 | 77,256 | 2,554 | 2,554 | 0 | 3.200 |
| Ohio | 2,157,048 | 2,144,188 | 12,860 | 12,728 | 132 | 0.596 |
| Oklahoma | 761,068 | 758,700 | 2,368 | 2,346 | 22 | 0.311 |
| Oregon | 552,815 | 552,140 | 675 | 675 | 0 | 0.122 |
| Pennsylvania | 2,094,047 | 2,093,899 | 148 | 147 | 1 | 0.007 |
| Rhode Island | 221,050 | 221,049 | 1 | 1 | 0 | 0.000 |
| South Carolina | 949,561 | 949,470 | 91 | 91 | 0 | 0.010 |
| South Dakota | 132,534 | 130,477 | 2,057 | 2,047 | 10 | 1.552 |

| State | MAX PS Records with Enrollment Data | Records Remaining After Consolidation | Reduction in Record Count | Duplicates | | Reduction as Percent of Initial Records |
|----------------------|---|--|---------------------------------|----------------------------------|-------------------------------------|--|
| | | | | Number of Combined Records | In Excess of Two per MAXEM ID | |
| Tennessee | 1,479,366 | 1,479,054 | 312 | 308 | 4 | 0.021 |
| Texas | 4,151,664 | 4,143,622 | 8,042 | 7,922 | 120 | 0.194 |
| Utah | 339,443 | 339,394 | 49 | 49 | 0 | 0.014 |
| Vermont (SSN) | 161,536 | 161,533 | 3 | 3 | 0 | 0.002 |
| Virginia | 954,485 | 953,950 | 535 | 534 | 1 | 0.056 |
| Washington | 1,191,471 | 1,191,393 | 78 | 78 | 0 | 0.007 |
| West Virginia | 392,745 | 392,578 | 167 | 167 | 0 | 0.043 |
| Wisconsin | 1,038,804 | 1,036,667 | 2,137 | 2,137 | 0 | 0.206 |
| Wyoming | 80,397 | 80,374 | 23 | 23 | 0 | 0.029 |
| United States | 60,832,034 | 60,694,329 | 137,705 | 135,747 | 1,958 | 0.226 |

records, the numbers in the third and fourth columns would be identical—that is, there would be a reduction of one record for each combined record created. When there are three duplicate records, however, there is a reduction of two duplicates for each combined record created. Differences between the reduction in the record count and the number of combined records created are reported in the fifth column, and we see that in both years in most states the differences are zero—that is, there were no instances of duplicates in excess of two for any MAXEM ID. The final column expresses the reduction in each state’s record count as a percentage of the total records prior to unduplication (that is, the third column as a percentage of the first column).

The incidence of within-state, within-year duplication varied widely across the states and declined between 2005 and 2006. In five states in 2005 (Illinois, Kentucky, New York, North Dakota, and South Dakota), unduplication removed between 1.4 and 2.0 percent of the records. In 2006, Kentucky had virtually no duplicates, and Illinois had about one-third fewer, but the incidence of duplication in North Dakota rose from 1.9 percent to 3.2 percent while holding steady at 1.6 percent in South Dakota and declining only slightly in New York, from 1.5 percent to 1.4 percent. In most of the remaining states, unduplication produced reductions of less than 0.1 percent in both years.

For each of the combined records we created the following consolidated codes:

- 34 type-of-service (TOS) indicators
- 12 monthly uniform eligibility group (UEG) codes
- One annual UEG code
- 12 monthly CHIP codes
- One annual S-CHIP-only code
- One annual RBF code
- One annual dual-eligibility code

Creation of the consolidated codes is described below.

TOS Indicators. The 34 TOS indicators on each MAX record indicate whether or not a particular type of service was used during the calendar year. To create the consolidated codes, we summed each of the 34 codes across the records being combined; any values in excess of 1 were then recoded to 1. The interpretation of the new codes is unchanged, but they reflect the service utilization reported on two or more records.

UEG Codes. The monthly UEG code on the MAX records indicates both eligibility basis and maintenance assistance status in a single, two-digit code. To consolidate codes across records, we established a precedence order.²⁰ If two or more distinct code values were reported for a given month on the records being combined, we selected the code with the highest precedence order and assigned that code to the combined record in that month. We also created an annual UEG code by assigning the latest nonzero value, working backwards from month 12.

CHIP Codes. The monthly CHIP code indicates whether an individual was enrolled in Medicaid, M-CHIP, S-CHIP, or not enrolled in a given month (a value indicating unknown enrollment is also reported). In consolidating the codes across records we created four new code values to indicate enrollment in the possible combinations of two or all three programs. Codes are 4, Medicaid and M-CHIP; 5, Medicaid and S-CHIP; 6, M-CHIP and S-CHIP; and 7, all three. We also created an annual S-CHIP-only code to indicate whether or not the individual was only enrolled in S-CHIP during the year. This code will allow analysts to easily exclude individuals with no Medicaid enrollment during the year.

²⁰ The precedence order, from highest to lowest, was 11, 21, 31, 41, 51, 12, 22, 32, 3A, 42, 52, 15, 17, 25, 35, 45, 55, 14, 16, 24, 34, 44, 48, and 54.

RBF Code. The MAX records contain monthly codes that indicate the type of benefits for which an individual was eligible. We created a simplified, annual RBF code for each of the records before we combined them. This code had three values, indicating (1) restricted benefits in all months of eligibility, (2) restricted benefits in some months of eligibility, and (3) eligibility for a broader set of benefits in all months of eligibility. In consolidating these codes across records, we assigned a code of 2 if the component records had codes of 1 and 2, 1 and 3, or 2 and 3, as each of these combinations implied eligibility for restricted benefits in some months and broader benefits in other months.

Dual Code. The MAX records also contain monthly codes that indicate dual versus nondual eligibility in each month of eligibility. For each individual record we combined the monthly codes to create an annual code indicating dual eligibility in all months, some months, or no months of eligibility. When we combined records, we assigned the value of the annual code if the same code was present on all records. If one record indicated dual eligibility in all months and another record indicated dual eligibility in just some months, we assigned a combined code indicating dual eligibility in some months. If one record showed no dual eligibility during the year while the other record indicated dual eligibility in some or all months, we assigned the code value indicating dual eligibility in some months.

Loss of Information. Our method of consolidating the monthly TOS indicators and CHIP codes and the annual RBF and dual codes entails no loss of information; all statuses reported on the records that were consolidated are preserved in these codes. This is not true of the consolidated monthly UEG codes. To assess the loss of information, we tabulated how often each basis of eligibility or maintenance assistance status was ever reported on a component record over the 12 months but never reported on the combined record. We compiled these results at the national level because most states had few combined records.

Because of the way the precedence order was defined, the consolidated monthly UEG codes lost no information identifying aged beneficiaries in any month in either year, but information identifying child beneficiaries was lost from 2.295 percent of combined records in 2005 and 2.985 percent in 2006 (Tables IV.12 and IV.13). Loss of information identifying disabled and adult beneficiaries was less common, with 0.612 percent of combined records failing to identify a disabled basis of eligibility in 2005 and 0.764 percent in 2006, and 0.934 percent of combined record failing to identify an adult basis of eligibility in 2005 and 1.154 percent in 2006.

Again, because of the precedence order in assigning the consolidated monthly UEG codes, only 0.100 percent of combined records in 2005 and 0.083 percent in 2006 failed to identify a cash beneficiary. For other maintenance assistance statuses, however, the loss of information ranged from 0.987 percent to 6.027 percent of combined records in 2005 and from 0.908 to 8.224 percent of combined records in 2006. Foster child status was the most likely to be unidentified in both years. Unidentification of Section 1115 status was comparable to that of foster child status in 2005 but it was much less likely to be unidentified in 2006.

While the level of information loss may seem high for some statuses, combined records are a very small fraction of the total. If we express the lost information as a percentage of all records after unduplication within state and year, the rates fall dramatically. The highest rate of information loss for any status is less than 0.02 percent (foster child status in both years).

4. Linkages Across States

As we have seen, unduplication within each state and year yields a single MAXEM record for each unique individual ever enrolled in Medicaid (and, in some states, S-CHIP) in a given state during a given year. To produce an unduplicated count of Medicaid eligibles for the nation as a whole, however, it is necessary to link Medicaid records *across* states. This is more

Table IV.12 Information Loss for UEG Status Due to Unduplication Within State and Year, 2005

| Measure of Information Loss | Number of Combined Records with Information Loss | Percent of All Combined Records | Percent of All Records After Unduplication |
|--|---|------------------------------------|--|
| Basis of Eligibility Reported on a Component Record But Not the Combined Record | | | |
| Aged | 0 | 0.000 | 0.000 |
| Disabled | 1,095 | 0.612 | 0.002 |
| Child | 4,104 | 2.295 | 0.007 |
| Adult | 1,670 | 0.934 | 0.003 |
| Maintenance Assistance Status Reported on a Component Record But Not the Combined Record | | | |
| Cash | 178 | 0.100 | 0.000 |
| Section 1931 | 1,765 | 0.987 | 0.003 |
| Means tested | 4,799 | 2.683 | 0.008 |
| Poverty | 4,504 | 2.518 | 0.007 |
| Other | 3,157 | 1.765 | 0.005 |
| Foster child | 10,780 | 6.027 | 0.018 |
| Section 1115 | 10,543 | 5.895 | 0.017 |

Table IV.13 Information Loss for UEG Status Due to Unduplication within State and Year, 2006

| Measure of Information Loss | Number of Combined Records with Information Loss | Percent of All Combined Records | Percent of All Records After Unduplication |
|--|---|------------------------------------|--|
| Basis of Eligibility Reported on a Component Record But Not the Combined Record | | | |
| Aged | 0 | 0.000 | 0.000 |
| Disabled | 1,037 | 0.764 | 0.002 |
| Child | 4,052 | 2.985 | 0.007 |
| Adult | 1,566 | 1.154 | 0.003 |
| Maintenance Assistance Status Reported on a Component Record But Not the Combined Record | | | |
| Cash | 112 | 0.083 | 0.000 |
| Section 1931 | 1,561 | 1.150 | 0.003 |
| Means Tested | 4,317 | 3.180 | 0.007 |
| Poverty | 4,045 | 2.980 | 0.007 |
| Other | 1,233 | 0.908 | 0.002 |
| Foster Child | 11,164 | 8.224 | 0.018 |
| Section 1115 | 4,236 | 3.121 | 0.007 |

challenging, methodologically, than linking records within states, because there is no national equivalent of the MSIS ID, which each state has assigned to serve as a unique identifier among its Medicaid enrollees. In reviewing our linkages across states, we first discuss the linkage methodology. We then present estimates across-state linkages and linkage rates by state. We conclude by describing how we used the across-state linkages to produce an unduplicated count of Medicaid eligibles in the nation in each year. Estimates of national enrollment before and after unduplication are presented in Chapter V.

a. Linkage Methodology

We have seen that linkages by MSIS ID account for 99.4 percent of the within-state, across-year linkages, leaving only 0.6 percent for the three additional linkage paths. When we link records across states, however, we cannot make use of the MSIS ID at all and must rely instead on the MAX SSN (combined with agreement on sex and at least two parts of the DOB), with minimal additional help from the EDB-SSN and EDB-HIC.

The across-state linkages were carried out separately within each of the two years and then across years. For the nation as a whole and in virtually every state, 99.9 percent of the within year linkages were due to the MAX SSN, with most of the rest due to the EDB-SSN (Table IV.14). The across-year linkages were similar.

Another aspect of our linkage methodology involved how we defined and counted linkages across year. Most individuals who were enrolled in two different states between one year and the next were enrolled in both states during one of the years, and a fair number were enrolled in both states in both years. To avoid double-counting linkages across states, we restricted the across-year linkages for an individual to pairs that were not already recorded as linkages within one of the two years. Thus if an individual were enrolled in Arizona and California in 2005 and in

Table IV.14 Source of Across-State Links Within Year

| State | Source of Link, 2005 | | | Source of Link, 2006 | | |
|----------------------|----------------------|---------|---------|----------------------|---------|---------|
| | MAX SSN | EDB SSN | EDB HIC | MAX SSN | EDB SSN | EDB HIC |
| Alabama | 99.964 | 0.036 | 0.000 | 99.963 | 0.037 | 0.000 |
| Alaska | 99.961 | 0.039 | 0.000 | 99.958 | 0.042 | 0.000 |
| Arizona | 99.819 | 0.181 | 0.000 | 99.725 | 0.272 | 0.003 |
| Arkansas | 99.634 | 0.355 | 0.011 | 99.603 | 0.373 | 0.024 |
| California (SSN) | 99.948 | 0.051 | 0.001 | 99.927 | 0.071 | 0.002 |
| Colorado | 99.933 | 0.067 | 0.000 | 99.929 | 0.069 | 0.002 |
| Connecticut | 99.928 | 0.072 | 0.000 | 99.831 | 0.164 | 0.004 |
| Delaware | 99.958 | 0.042 | 0.000 | 99.947 | 0.053 | 0.000 |
| District of Columbia | 99.947 | 0.053 | 0.000 | 99.938 | 0.062 | 0.000 |
| Florida | 99.957 | 0.042 | 0.001 | 99.943 | 0.056 | 0.001 |
| Georgia | 99.948 | 0.050 | 0.001 | 99.933 | 0.066 | 0.001 |
| Hawaii | 99.967 | 0.033 | 0.000 | 99.921 | 0.068 | 0.011 |
| Idaho | 99.972 | 0.028 | 0.000 | 99.957 | 0.043 | 0.000 |
| Illinois | 99.957 | 0.042 | 0.001 | 99.965 | 0.035 | 0.000 |
| Indiana | 99.975 | 0.025 | 0.000 | 99.972 | 0.028 | 0.000 |
| Iowa | 99.965 | 0.035 | 0.000 | 99.958 | 0.042 | 0.000 |
| Kansas | 99.944 | 0.053 | 0.003 | 99.939 | 0.058 | 0.003 |
| Kentucky (SSN) | 99.966 | 0.032 | 0.002 | 99.974 | 0.022 | 0.004 |
| Louisiana (SSN) | 99.944 | 0.056 | 0.000 | 99.954 | 0.046 | 0.000 |
| Maine | 99.878 | 0.122 | 0.000 | 99.842 | 0.158 | 0.000 |
| Maryland | 99.959 | 0.041 | 0.000 | 99.972 | 0.028 | 0.000 |
| Massachusetts | 99.696 | 0.302 | 0.002 | 99.674 | 0.320 | 0.006 |
| Michigan | 99.963 | 0.037 | 0.000 | 99.958 | 0.042 | 0.000 |
| Minnesota (SSN) | 99.965 | 0.035 | 0.000 | 99.938 | 0.062 | 0.000 |
| Mississippi | 99.941 | 0.059 | 0.000 | 99.936 | 0.062 | 0.002 |
| Missouri | 99.910 | 0.090 | 0.000 | 99.924 | 0.076 | 0.000 |
| Montana | 99.872 | 0.120 | 0.009 | 99.790 | 0.210 | 0.000 |
| Nebraska | 99.985 | 0.015 | 0.000 | 99.968 | 0.032 | 0.000 |
| Nevada (SSN) | 99.966 | 0.032 | 0.003 | 99.950 | 0.050 | 0.000 |
| New Hampshire | 99.792 | 0.208 | 0.000 | 99.827 | 0.173 | 0.000 |
| New Jersey (SSN) | 99.846 | 0.149 | 0.006 | 99.863 | 0.135 | 0.002 |
| New Mexico (SSN) | 99.975 | 0.025 | 0.000 | 99.945 | 0.055 | 0.000 |
| New York | 99.918 | 0.082 | 0.001 | 99.865 | 0.134 | 0.001 |
| North Carolina | 99.975 | 0.025 | 0.000 | 99.975 | 0.025 | 0.000 |
| North Dakota | 99.985 | 0.015 | 0.000 | 100.000 | 0.000 | 0.000 |
| Ohio | 99.960 | 0.039 | 0.001 | 99.940 | 0.058 | 0.001 |
| Oklahoma | 99.942 | 0.056 | 0.002 | 99.927 | 0.073 | 0.000 |
| Oregon | 99.942 | 0.058 | 0.000 | 99.936 | 0.064 | 0.000 |
| Pennsylvania | 99.943 | 0.055 | 0.001 | 99.940 | 0.059 | 0.001 |
| Rhode Island | 99.873 | 0.127 | 0.000 | 99.857 | 0.134 | 0.008 |
| South Carolina | 99.959 | 0.041 | 0.000 | 99.966 | 0.034 | 0.000 |
| South Dakota | 99.991 | 0.009 | 0.000 | 99.981 | 0.019 | 0.000 |
| Tennessee | 99.954 | 0.046 | 0.000 | 99.949 | 0.050 | 0.001 |
| Texas | 99.937 | 0.061 | 0.003 | 99.789 | 0.206 | 0.005 |
| Utah | 99.991 | 0.009 | 0.000 | 99.956 | 0.044 | 0.000 |
| Vermont (SSN) | 99.909 | 0.091 | 0.000 | 99.924 | 0.076 | 0.000 |

| State | Source of Link, 2005 | | | Source of Link, 2006 | | |
|----------------------|----------------------|--------------|--------------|----------------------|--------------|--------------|
| | MAX SSN | EDB SSN | EDB HIC | MAX SSN | EDB SSN | EDB HIC |
| Virginia | 99.936 | 0.064 | 0.000 | 99.966 | 0.034 | 0.000 |
| Washington | 99.963 | 0.035 | 0.002 | 99.953 | 0.047 | 0.000 |
| West Virginia | 99.964 | 0.036 | 0.000 | 99.970 | 0.030 | 0.000 |
| Wisconsin | 99.910 | 0.087 | 0.002 | 99.910 | 0.090 | 0.000 |
| Wyoming | 99.950 | 0.050 | 0.000 | 99.957 | 0.043 | 0.000 |
| United States | 99.933 | 0.066 | 0.001 | 99.911 | 0.087 | 0.002 |

California again in 2006, we counted the Arizona-California pair as a link within 2005 but not as a link between 2005 and 2006. And if an individual were enrolled in Arizona and California in both years, we counted the two Arizona-California record pairs as within-year links in 2005 and 2006 but did not count an across-year link. If, instead, an individual were enrolled in Arizona and California in 2005 and in Nevada in 2006, we counted the Arizona-California pair as a within-year link in 2005, and we counted both the Arizona-Nevada pair and the California-Nevada pair as links between 2005 and 2006. As it turned out, 73 percent of the across-state, across-year links that we identified involved individuals enrolled in just one state in 2005 and one state in 2006.

b. Linkages and Linkage Rates by State

Table IV.15 provides counts of across-state linkages and linkage rates, by state, within each of the two years. The counts of linkages reflect the number of times that a record from one state was linked to a record from another state. If a record in Alabama was linked to records in five other states, this will count as five links for Alabama and one link for each of the five other states.²¹

With respect to aggregate numbers, we identified 2.941 million records with linkages across states in 2005 and 2.835 million records with linkages across states in 2006. California, Florida, and Texas each had around 200,000 records that linked to records in other states in 2005 and 2006, and around 150,000 that linked between the two years. Georgia, Illinois, Louisiana, and New York also had more than 100,000 linkages to other states in each of the two years, while

²¹ We could have avoided this double counting by assigning a weight of one-half to each link. Alternatively, we could divide the total links in each state by two. We did not see a clear advantage to doing so, as the number of times that a record in one state links to a record in another state has an intuitive interpretation.

Table IV.15 Number of Linkages and Linkage Rates Across States, Within Years

| State | Records Linking to Another State in the Same Year | | Percent Linking to Another State in the Same Year 2005 |
|----------------------|---|---------|--|
| | 2005 | 2006 | |
| Alabama | 50,549 | 48,718 | 5.30 |
| Alaska | 7,723 | 7,138 | 5.82 |
| Arizona | 83,020 | 75,636 | 5.63 |
| Arkansas | 55,242 | 54,464 | 7.41 |
| California (SSN) | 201,279 | 189,157 | 1.90 |
| Colorado | 46,420 | 43,623 | 7.69 |
| Connecticut | 24,993 | 23,720 | 4.73 |
| Delaware | 11,883 | 11,271 | 6.60 |
| District of Columbia | 13,225 | 12,919 | 7.95 |
| Florida | 209,284 | 191,073 | 6.93 |
| Georgia | 143,370 | 133,582 | 6.89 |
| Hawaii | 9,220 | 8,887 | 3.98 |
| Idaho | 21,104 | 18,782 | 9.04 |
| Illinois | 126,385 | 123,724 | 4.92 |
| Indiana | 68,768 | 67,279 | 6.58 |
| Iowa | 31,026 | 30,663 | 7.24 |
| Kansas | 32,243 | 29,412 | 9.04 |
| Kentucky (SSN) | 50,073 | 49,074 | 5.73 |
| Louisiana (SSN) | 128,647 | 139,592 | 11.03 |
| Maine | 13,116 | 12,680 | 4.02 |
| Maryland | 48,830 | 47,089 | 5.63 |
| Massachusetts | 46,380 | 47,514 | 3.72 |
| Michigan | 73,455 | 71,488 | 3.95 |
| Minnesota (SSN) | 42,558 | 40,559 | 5.38 |
| Mississippi | 50,597 | 51,399 | 6.50 |
| Missouri | 73,549 | 65,602 | 6.04 |
| Montana | 11,688 | 10,497 | 9.13 |
| Nebraska | 20,372 | 19,015 | 7.79 |
| Nevada (SSN) | 37,848 | 33,837 | 14.13 |
| New Hampshire | 10,091 | 9,854 | 6.92 |
| New Jersey (SSN) | 52,517 | 54,084 | 4.68 |
| New Mexico (SSN) | 32,576 | 29,214 | 6.17 |
| New York | 137,250 | 130,564 | 2.74 |
| North Carolina | 98,739 | 96,776 | 5.71 |
| North Dakota | 6,595 | 6,543 | 8.55 |
| Ohio | 87,426 | 83,836 | 4.14 |
| Oklahoma | 50,038 | 47,636 | 6.89 |
| Oregon | 41,090 | 37,255 | 7.30 |
| Pennsylvania | 79,612 | 79,854 | 3.92 |
| Rhode Island | 11,845 | 11,915 | 5.39 |
| South Carolina | 56,037 | 50,518 | 5.54 |
| South Dakota | 11,015 | 10,616 | 8.55 |
| Tennessee | 98,651 | 101,286 | 6.19 |
| Texas | 199,050 | 200,799 | 4.86 |
| Utah | 22,502 | 20,554 | 6.51 |

| State | Records Linking to Another State in the Same Year | | Percent Linking to Another State in the Same Year 2005 |
|----------------------|---|------------------|--|
| | 2005 | 2006 | |
| Vermont (SSN) | 6,609 | 6,562 | 4.06 |
| Virginia | 59,374 | 58,033 | 6.41 |
| Washington | 62,692 | 59,891 | 5.23 |
| West Virginia | 28,113 | 26,283 | 7.34 |
| Wisconsin | 46,858 | 45,721 | 4.61 |
| Wyoming | 9,969 | 9,308 | 12.29 |
| United States | 2,941,496 | 2,835,496 | 4.88 |

Note: The denominators are the record counts after consolidation from Tables IV.10 and IV.11.

Tennessee had just under 100,000 in 2005 and just over 100,000 in 2006. At the low end, Alaska, Hawaii, North Dakota, Vermont, and Wyoming had fewer than 10,000 linkages in each of the two years while New Hampshire fell just above that number in 2005 and just below it in 2006.

The within-year linkage rate for a state is the number of links between records in that state and any other state within the same year, divided by the number of records in that state and year after the within-state, within-year unduplication (see Tables IV.10 and IV.11). Over all states, we linked 4.88 percent of the 2005 records and 4.67 percent of the 2006 records to records in another state in the same year.

Linkage rates vary substantially across the states. Three states have double-digit linkage rates in 2005 and 2006, ranging from 11.03 percent to 14.13 percent: Louisiana, Nevada, and Wyoming. With 2005 being the year of Hurricane Katrina, the high across-state linkage rate for Louisiana is certainly no surprise, but we are puzzled that the across-year linkage rate is not much more than half the within-year rate, whereas both Nevada and Wyoming have double-digit linkage rates across as well as within year. The lowest across-state match rate is found in California, at less than two percent. We know that 30 percent of the California records are missing SSNs and therefore cannot be linked across state, but even if we removed these cases from the California denominator the state's linkage rate would rise no higher than second lowest after New York. The low linkage rates for the two states with the largest Medicaid enrollment suggest that size may work against a high migration rate (either in or out), but there may be other factors as well. Among the remaining states, Idaho, Montana, Kansas, North Dakota, and South Dakota have similarly high linkage rates at 8 to 9 percent while several of the New England states join Pennsylvania, Ohio, and Michigan with comparatively low linkage rates.

Table IV.16 reports counts of across-state linkages and linkage rates, by state, across 2005 and 2006. Unlike the within-year links, where we counted both records in each linked pair as

linking to a record in another state, the across-year links count one state as an origin (in the 2005 column) and the other state as a destination (in the 2006 column). The counts in the two columns must be summed for each state to produce the equivalent of the separate 2005 and 2006 counts in Table IV.15. The across-year linkage rate is the number of links between that state's 2005 records and any other state's 2006 records, divided by the number of 2005 records in that first state after unduplication. Again, the two linkage rates for each state must be summed to produce a number that compares conceptually to the linkage rates reported separately for each year in Table IV.15.

The combined linkage rate of 0.76 percent is substantially smaller than the average within-year linkage rate of 4.17 percent, reflecting the fact that most beneficiaries who move from one state to another and re-enroll in Medicaid do so within the same year. As with the within-year links, Nevada and Wyoming have the highest across-year linkage rates, but Louisiana, which also had very high within-year linkage rates, has among the lowest linkage rates across years. California and New York remain the lowest, however.

Most states are about equally likely to serve as an origin or a destination for migration across years—that is, the rates in the final two columns are roughly the same. In several states, however, out-migration or in-migration dominates. California and New York have pronounced net out-migration while Nevada, Oklahoma, Tennessee, and Wyoming have pronounced net in-migration. Other states favor one or the other but less sharply.

c. Unduplication Across States

When we linked two records across states, we replaced the higher MAXEM ID with the lower MAXEM ID. By repeating this process for all linked pairs, both within and across years, and then assigning each record the lowest of its alternative MAXEM IDs, we ended up with a

Table IV.16 Number of Linkages and Linkage Rates Across States and Years, After Unduplication Within States

| State | 2005 Records Linking to Another State in 2006 | 2006 Records Linking to Another State in 2005 | Percent of 2005 Records Linking to Another State in 2006 | Percent of 2006 Records Linking to Another State in 2005 |
|----------------------|---|---|--|--|
| Alabama | 2,831 | 4,311 | 0.30 | 0.45 |
| Alaska | 1,037 | 896 | 0.78 | 0.69 |
| Arizona | 8,248 | 9,868 | 0.56 | 0.65 |
| Arkansas | 3,070 | 4,646 | 0.41 | 0.61 |
| California (SSN) | 21,497 | 12,835 | 0.20 | 0.12 |
| Colorado | 3,922 | 4,680 | 0.65 | 0.75 |
| Connecticut | 2,236 | 2,198 | 0.42 | 0.41 |
| Delaware | 926 | 995 | 0.51 | 0.54 |
| District of Columbia | 968 | 803 | 0.58 | 0.48 |
| Florida | 17,474 | 16,233 | 0.58 | 0.54 |
| Georgia | 10,466 | 10,305 | 0.50 | 0.50 |
| Hawaii | 1,091 | 829 | 0.47 | 0.36 |
| Idaho | 1,889 | 2,181 | 0.81 | 0.95 |
| Illinois | 7,033 | 7,146 | 0.27 | 0.28 |
| Indiana | 5,465 | 5,421 | 0.52 | 0.51 |
| Iowa | 2,753 | 3,237 | 0.64 | 0.69 |
| Kansas | 2,993 | 2,943 | 0.84 | 0.82 |
| Kentucky (SSN) | 3,574 | 4,262 | 0.41 | 0.48 |
| Louisiana (SSN) | 4,200 | 3,597 | 0.36 | 0.30 |
| Maine | 1,072 | 1,182 | 0.33 | 0.35 |
| Maryland | 3,738 | 3,396 | 0.43 | 0.39 |
| Massachusetts | 2,826 | 2,788 | 0.23 | 0.21 |
| Michigan | 6,138 | 5,197 | 0.33 | 0.27 |
| Minnesota (SSN) | 3,832 | 3,846 | 0.48 | 0.48 |
| Mississippi | 2,811 | 3,037 | 0.36 | 0.39 |
| Missouri | 6,439 | 5,273 | 0.53 | 0.47 |
| Montana | 1,183 | 1,164 | 0.92 | 0.92 |
| Nebraska | 2,081 | 1,855 | 0.80 | 0.71 |
| Nevada (SSN) | 3,970 | 4,420 | 1.48 | 1.74 |
| New Hampshire | 986 | 985 | 0.68 | 0.66 |
| New Jersey (SSN) | 4,241 | 4,281 | 0.38 | 0.36 |
| New Mexico (SSN) | 3,370 | 3,249 | 0.64 | 0.63 |
| New York | 13,251 | 8,212 | 0.26 | 0.16 |
| North Carolina | 6,841 | 9,460 | 0.40 | 0.53 |
| North Dakota | 809 | 849 | 1.05 | 1.10 |
| Ohio | 7,018 | 6,621 | 0.33 | 0.31 |
| Oklahoma | 3,949 | 5,371 | 0.54 | 0.71 |
| Oregon | 4,018 | 4,206 | 0.71 | 0.76 |
| Pennsylvania | 6,052 | 7,484 | 0.30 | 0.36 |
| Rhode Island | 1,010 | 744 | 0.46 | 0.34 |
| South Carolina | 3,712 | 4,130 | 0.37 | 0.43 |
| South Dakota | 941 | 1,011 | 0.73 | 0.77 |
| Tennessee | 4,360 | 7,313 | 0.27 | 0.49 |
| Texas | 14,467 | 15,459 | 0.35 | 0.37 |

| State | 2005 Records Linking to Another State in 2006 | 2006 Records Linking to Another State in 2005 | Percent of 2005 Records Linking to Another State in 2006 | Percent of 2006 Records Linking to Another State in 2005 |
|----------------------|--|--|---|---|
| Utah | 2,649 | 2,701 | 0.77 | 0.80 |
| Vermont (SSN) | 739 | 634 | 0.45 | 0.39 |
| Virginia | 4,380 | 4,654 | 0.47 | 0.49 |
| Washington | 5,698 | 6,762 | 0.48 | 0.57 |
| West Virginia | 2,091 | 2,237 | 0.55 | 0.57 |
| Wisconsin | 3,380 | 3,568 | 0.33 | 0.34 |
| Wyoming | 886 | 1,136 | 1.09 | 1.41 |
| United States | 230,611 | 230,611 | 0.38 | 0.38 |

Note: The denominators are the record counts after consolidation from Tables IV.10 and IV.11.

single, common MAXEM ID for all records that linked to each other over the two-year period. By tabulating unique MAXEM IDs, then, we (and researchers who use the MAXEM files) can produce unduplicated counts of Medicaid enrollees nationwide in each of 2005 and 2006. By combining the two annual files we can also generate an unduplicated count of Medicaid enrollees across the two years, although such a number holds less interest than the separate calendar year numbers. Unduplicated counts of enrollees in the two years are reported in Chapter V along with other results of the unduplication.

B. LINKAGE QUALITY

Ultimately, the effectiveness of any record-linkage endeavor depends upon the quality of the underlying data. Because of missing, incomplete, or even outright incorrect identifiers, records belonging to different individuals may be linked, and records belonging to the same individual may go unlinked. Section 1 examines a variety of evidence regarding the quality of within-state linkages, while Section 2 assesses the across-state linkages.

1. Quality of Linkages Within States

To fully evaluate the quality of any record linkages, we would need independent information suitable for verifying at least a random sample of the linkages. Lacking such information, we were left to conduct a more limited evaluation, asking how often our linked records agreed on characteristics that were not used in linking them but which ought to be identical whenever a linked pair of records represents the same individual. For linkages within states, we looked at agreement on sex and DOB for the subset of records that were linked without these variables, and we examined agreement on a small number of additional characteristics for records that agree on sex and DOB. We also compared agreement on these additional characteristics between linked pairs with full versus partial agreement on DOB to determine if relaxing the required level of agreement on DOB has a discernible impact on the quality of the linkages. After presenting

our findings we close this section with some conclusions about the overall quality of linkages within states.

a. Agreement on Sex and DOB

In accordance with our linkage algorithm, when we link records by MSIS ID, we do not require agreement on sex or any portion of the DOB. Therefore, as a measure of the quality of the linkages—or the linkage variables—it is of interest to see how often the records that were linked by MSIS ID also agree on sex and at least two parts of the DOB, as would be required if we linked by either of the SSN fields or the HIC. In addition, given that we will rely on SSNs for cross-state linkages, it is of interest to see how often SSNs are present on both records in each linked pair and, when present, how often those SSNs agree. Records that we can link within state by MSIS ID but not by SSN imply potential cross-state links that will be missed.

Nationally, 99.5 percent of the within-state pairs linked by MSIS ID have full agreement on DOB and sex, which means that neither of these fields is missing and the linked records agree on all three parts of the DOB in addition to sex (Table IV.17). Another 0.17 percent differ on just one part of the DOB, leaving just 0.29 percent of all MSIS links with discrepancies in sex or at least two parts of the DOB, or with missing values for either variable in one or both years. Most states have even higher levels of agreement on DOB and sex in their linked pairs based on MSIS ID, but in three states the fraction of linked pairs with disagreement or missing data on sex or DOB exceeds one percent. These are Nebraska, at 4.35 percent, followed by Wyoming, at 2.43 percent, and New York, at 1.46 percent. In four other states—Alabama, Mississippi, Nevada, and New Jersey—between one-half and one percent of the linked pairs have discrepant or missing sex or DOB, while in Arkansas, Colorado, and Illinois such cases account for just under one-half of one percent of the total pairs linked by MSIS ID. Most of the remaining states have discrepant

Table IV.17 Agreement on DOB and Sex in Records Linked by MSIS ID Within State, 2005 and 2006

| State | Pairs Linked by MSIS ID | Full Agreement on DOB and Sex | One Part of DOB Disagrees | Sex and/or DOB Disagree or Missing |
|----------------------|-------------------------|-------------------------------|---------------------------|------------------------------------|
| Alabama | 837,306 | 99.035 | 0.266 | 0.699 |
| Alaska | 107,190 | 99.791 | 0.148 | 0.061 |
| Arizona | 1,172,414 | 99.842 | 0.103 | 0.056 |
| Arkansas | 643,198 | 99.414 | 0.187 | 0.399 |
| California (SSN) | 8,386,261 | 99.406 | 0.343 | 0.251 |
| Colorado | 493,996 | 98.846 | 0.800 | 0.354 |
| Connecticut | 449,167 | 99.840 | 0.106 | 0.054 |
| Delaware | 151,379 | 99.836 | 0.126 | 0.039 |
| District of Columbia | 146,220 | 99.953 | 0.021 | 0.026 |
| Florida | 2,387,938 | 99.917 | 0.027 | 0.056 |
| Georgia | 1,699,741 | 99.949 | 0.035 | 0.016 |
| Hawaii | 197,352 | 100.000 | 0.000 | 0.000 |
| Idaho | 186,959 | 99.921 | 0.067 | 0.012 |
| Illinois | 2,143,121 | 99.272 | 0.268 | 0.460 |
| Indiana | 876,276 | 99.971 | 0.020 | 0.008 |
| Iowa | 354,026 | 99.797 | 0.144 | 0.059 |
| Kansas | 283,940 | 99.962 | 0.028 | 0.011 |
| Kentucky (SSN) | 770,359 | 99.624 | 0.201 | 0.175 |
| Louisiana (SSN) | 1,048,066 | 99.906 | 0.042 | 0.052 |
| Maine | 283,866 | 99.933 | 0.054 | 0.013 |
| Maryland | 731,683 | 99.929 | 0.048 | 0.023 |
| Massachusetts | 1,089,438 | 99.321 | 0.440 | 0.239 |
| Michigan | 1,586,831 | 99.763 | 0.162 | 0.075 |
| Minnesota (SSN) | 643,042 | 99.698 | 0.194 | 0.108 |
| Mississippi | 662,648 | 99.352 | 0.052 | 0.596 |
| Missouri | 961,618 | 99.989 | 0.007 | 0.004 |
| Montana | 101,400 | 99.961 | 0.036 | 0.004 |
| Nebraska | 212,911 | 95.499 | 0.149 | 4.352 |
| Nevada (SSN) | 182,670 | 99.076 | 0.328 | 0.596 |
| New Hampshire | 121,363 | 99.973 | 0.003 | 0.024 |
| New Jersey (SSN) | 972,415 | 98.856 | 0.529 | 0.614 |
| New Mexico (SSN) | 437,434 | 99.800 | 0.140 | 0.060 |
| New York | 4,294,716 | 98.525 | 0.012 | 1.462 |
| North Carolina | 1,467,252 | 99.993 | 0.004 | 0.003 |
| North Dakota | 61,288 | 99.845 | 0.080 | 0.075 |
| Ohio | 1,819,354 | 99.914 | 0.063 | 0.023 |
| Oklahoma | 608,197 | 99.959 | 0.032 | 0.009 |
| Oregon | 444,624 | 99.975 | 0.017 | 0.008 |
| Pennsylvania | 1,760,620 | 99.911 | 0.069 | 0.019 |
| Rhode Island | 190,748 | 99.923 | 0.044 | 0.033 |
| South Carolina | 821,868 | 99.101 | 0.706 | 0.192 |
| South Dakota | 108,285 | 99.723 | 0.186 | 0.091 |
| Tennessee | 1,302,569 | 99.898 | 0.088 | 0.015 |
| Texas | 3,277,610 | 99.667 | 0.194 | 0.138 |
| Utah | 258,540 | 99.619 | 0.261 | 0.119 |
| Vermont (SSN) | 137,702 | 99.842 | 0.081 | 0.078 |

| State | Pairs Linked by MSIS ID | Full Agreement on DOB and Sex | One Part of DOB Disagrees | Sex and/or DOB Disagree or Missing |
|----------------------|-------------------------|-------------------------------|---------------------------|------------------------------------|
| Virginia | 793,936 | 99.788 | 0.143 | 0.070 |
| Washington | 987,555 | 99.692 | 0.203 | 0.105 |
| West Virginia | 323,196 | 99.946 | 0.046 | 0.009 |
| Wisconsin | 860,721 | 99.806 | 0.144 | 0.050 |
| Wyoming | 63,047 | 97.335 | 0.233 | 2.432 |
| United States | 49,904,056 | 99.535 | 0.174 | 0.292 |

or missing values of sex or DOB in fewer than 0.1 percent of the cases, but only Hawaii has no such cases, while Montana has just four.

The exact nature of disagreement in DOB and sex varies across the states. Nationally, 50.65 percent of the cases in the final column of Table IV.17 have a missing DOB in one or both years, while nearly as many differ on at least two parts of the DOB with or without differing on sex (Table IV.18). Only 1.60 percent agree on at least two parts of the DOB but have discrepant or missing values on sex.

What accounts for the discrepancies among the states with the highest rates of disagreement or missingness on DOB and/or sex (final column of Table IV.17)? In the top three states, missing DOBs are the principal factor. This is true of 98.1 percent of the discrepancies in Nebraska, 99.1 percent in New York, and 78.8 percent in Wyoming. Missing DOBs are somewhat reassuring in that they do not imply discrepant information on linked records. But in Wyoming 14.1 percent of the problematic pairs have discrepant DOBs, and the percentage is much worse in Alabama, Mississippi, Nevada, and New Jersey. In all, 78 percent of the problematic pairs in Alabama, 87 percent in Nevada, 96 percent in New Jersey, and nearly 100 percent in Mississippi have discrepant DOBs. Likewise, at least 95 percent of the discrepant cases in Arkansas, Colorado, and Illinois differ on DOB. In these seven states, in other words, roughly half a percent of the record pairs that linked on MSIS ID disagree on DOB.

While discrepant DOBs do not account for nearly as large a share of *all* linked record pairs in the remaining states, it is noteworthy that the vast majority of record pairs that differ on DOB or sex in these states have discrepant rather than missing DOBs. For example, in Texas, which leads the remaining states with 4,500 record pairs that differ on DOB or sex, 98.7 percent of these pairs disagree on two or more parts of the DOB (three-quarters of these disagree on sex as

Table IV.18 Source of Disagreement on DOB and Sex on Records Linked by MSIS ID Within State, 2005 and 2006

| State | Linked Pairs with Sex and/or DOB Different or Missing | Two+ Parts of DOB Differ | DOB Missing One or Both Years | DOB Agrees; Sex Different or Missing |
|----------------------|---|--------------------------|-------------------------------|--------------------------------------|
| Alabama | 5,855 | 78.12 | 0.00 | 21.88 |
| Alaska | 65 | 98.46 | 0.00 | 1.54 |
| Arizona | 653 | 94.03 | 3.68 | 2.30 |
| Arkansas | 2,565 | 99.14 | 0.00 | 0.86 |
| California (SSN) | 20,891 | 99.10 | 0.08 | 0.82 |
| Colorado | 1,751 | 96.23 | 1.88 | 1.88 |
| Connecticut | 241 | 100.00 | 0.00 | 0.00 |
| Delaware | 59 | 98.31 | 0.00 | 1.69 |
| District of Columbia | 38 | 34.21 | 65.79 | 0.00 |
| Florida | 1,328 | 89.53 | 10.32 | 0.15 |
| Georgia | 272 | 97.06 | 1.47 | 1.47 |
| Hawaii | 0 | na | na | na |
| Idaho | 22 | 95.45 | 4.55 | 0.00 |
| Illinois | 9,855 | 97.47 | 0.85 | 1.67 |
| Indiana | 74 | 100.00 | 0.00 | 0.00 |
| Iowa | 210 | 99.05 | 0.48 | 0.48 |
| Kansas | 30 | 100.00 | 0.00 | 0.00 |
| Kentucky (SSN) | 1,104 | 97.26 | 0.00 | 2.74 |
| Louisiana (SSN) | 534 | 96.69 | 0.55 | 2.76 |
| Maine | 37 | 78.38 | 18.92 | 2.70 |
| Maryland | 171 | 87.13 | 12.28 | 0.58 |
| Massachusetts | 2,605 | 98.62 | 0.00 | 1.38 |
| Michigan | 1,190 | 87.39 | 11.26 | 1.34 |
| Minnesota (SSN) | 693 | 96.83 | 0.58 | 2.59 |
| Mississippi | 3,952 | 99.95 | 0.00 | 0.05 |
| Missouri | 39 | 69.23 | 30.77 | 0.00 |
| Montana | 4 | 100.00 | 0.00 | 0.00 |
| Nebraska | 9,265 | 1.89 | 98.10 | 0.01 |
| Nevada (SSN) | 1,085 | 84.39 | 10.38 | 5.23 |
| New Hampshire | 29 | 6.90 | 93.10 | 0.00 |
| New Jersey (SSN) | 4,829 | 96.40 | 0.03 | 3.56 |
| New Mexico (SSN) | 261 | 98.08 | 0.77 | 1.15 |
| New York | 62,805 | 0.45 | 99.54 | 0.01 |
| North Carolina | 50 | 76.00 | 24.00 | 0.00 |
| North Dakota | 44 | 100.00 | 0.00 | 0.00 |
| Ohio | 424 | 81.84 | 17.69 | 0.47 |
| Oklahoma | 54 | 100.00 | 0.00 | 0.00 |
| Oregon | 36 | 83.33 | 16.67 | 0.00 |
| Pennsylvania | 342 | 86.84 | 12.57 | 0.58 |
| Rhode Island | 62 | 96.77 | 3.23 | 0.00 |
| South Carolina | 1,582 | 98.29 | 0.51 | 1.20 |
| South Dakota | 99 | 98.99 | 0.00 | 1.01 |
| Tennessee | 189 | 99.47 | 0.00 | 0.53 |
| Texas | 4,532 | 98.70 | 0.07 | 1.24 |

| State | Linked Pairs with Sex and/or DOB Different or Missing | Two+ Parts of DOB Differ | DOB Missing One or Both Years | DOB Agrees; Sex Different or Missing |
|----------------------|--|-----------------------------|----------------------------------|--|
| Utah | 308 | 98.38 | 0.32 | 1.30 |
| Vermont (SSN) | 107 | 99.07 | 0.00 | 0.93 |
| Virginia | 553 | 97.11 | 0.54 | 2.35 |
| Washington | 1,038 | 99.42 | 0.00 | 0.58 |
| West Virginia | 28 | 96.43 | 0.00 | 3.57 |
| Wisconsin | 432 | 82.64 | 15.74 | 1.62 |
| Wyoming | 1,533 | 14.16 | 78.80 | 7.05 |
| United States | 143,925 | 47.76 | 50.65 | 1.60 |

n.a. = not applicable.

well, which is not reported). In 45 states altogether, at least 69 percent of the record pairs that differ on DOB or sex have discrepant DOBs. In only 16 states does the fraction of discrepant cases with a missing DOB exceed 10 percent.

While they are not especially frequent, the cases that linked on MSIS ID but differ on DOB or sex would merit further study if names or other definitive proof of identity were available for the linked pairs. Lacking such proof, we can only speculate as to whether the discrepancies we observe are more indicative of errors in the DOB or sex fields or errors in the MSIS ID.

b. Agreement on Other Characteristics

In our assessment of three linkage algorithms, described in Chapter III, we evaluated the quality of linkages based on the level of agreement on selected characteristics that were not used as linkage variables in any of the algorithms. Given the small number of potential linkage variables provided by the MSIS data, there were very few additional variables that could be tapped to evaluate the linkages. Only five variables were selected for this purpose: (1) race/ethnicity, (2) basis of eligibility (BOE), (3) service use, (4) prescription drug use, and (5) institutional care use. Of these five, only one—race/ethnicity—represents a characteristic that is theoretically fixed over time. Not surprisingly, race/ethnicity provided the sharpest differentiation between good and bad matches. Nonetheless, race/ethnicity has important limitations as a characteristic for evaluating linked pairs of Medicaid records. First, there was a change in the measurement of race/ethnicity in Medicaid programs over the period of interest. Specifically, a combined race/ethnicity measure was split into separate race and ethnicity (Hispanic origin) measures between 2005 and 2006. While the two measures in 2006 could be combined into a single measure analogous to what existed in 2005 and earlier, the new categories did not map unambiguously into the old categories. Second, we found evidence of a lack of uniformity in the measurement of race/ethnicity across states; while this is not necessarily

relevant to evaluating linkages within states, it does raise the possibility that measurement is not entirely consistent even within a state. Third, race/ethnicity has high rates of missing data in a number of states.

The other four variables used in the evaluation reported in Chapter III involved aspects of Medicaid beneficiary status that were not even theoretically constant for an individual over time and, therefore, could vary with serial enrollment across states or even within the same state in the same year. One of these, institutional care use, showed the same level of agreement (near 100 percent) among bad matched pairs as among good matched pairs in our assessment with data from Arizona and Nevada (see Table III.3). BOE was decidedly less effective in discriminating between good and bad matched pairs than either service use or prescription drug use, yet was intuitively more appealing and appeared to function well when combined with race/ethnicity. In evaluating the linked pairs both within and across states, therefore, we used race/ethnicity (henceforth described as “race”) and BOE exclusively.

Table IV.19 presents estimates of agreement on race and BOE among linked pairs that agreed on sex and two or more parts of DOB. (This tabulation was produced before reconciliation, which would have eliminated any discrepancies in race by assigning the latest nonmissing value of race to all records with the same MAXEM ID.)

Over all states, 89.1 percent of the linked pairs agreed on both race and BOE. The highest level of agreement in any state was 98.1 percent in Wyoming. The lowest was 58.9 percent in Vermont, which was followed by neighboring Massachusetts at 60.8 percent. Between these extremes the state distribution was skewed sharply toward the high end, with 31 states in the 90s, 11 in the 80s, 5 in the 70s, and 4 in the 60s or lower. The lowest scores and some of those in the 70s were entirely due to missing race. In Vermont, for example, 38.0 percent of the pairs were

Table IV.19 Agreement on Race and BOE Among Record Pairs Linked Within State: Pairs with Same Sex and Two or More Parts of DOB

| State | Same Race; Same BOE | Same Race; Different BOE | Different Race | Missing Race | Percent of Same Race Records with Different BOE | Percent of Discrepant BOEs Not in Transition Ages |
|----------------------|---------------------|--------------------------|----------------|--------------|---|---|
| Alabama | 95.8 | 1.4 | 0.1 | 2.7 | 1.5 | 44.8 |
| Alaska | 93.5 | 3.4 | 0.4 | 2.7 | 3.5 | 64.6 |
| Arizona | 92.5 | 3.7 | 0.3 | 3.5 | 3.8 | 68.4 |
| Arkansas | 94.3 | 2.0 | 0.3 | 3.4 | 2.1 | 32.4 |
| California (SSN) | 90.9 | 2.0 | 1.0 | 6.2 | 2.1 | 60.2 |
| Colorado | 65.4 | 9.5 | 0.6 | 24.5 | 12.7 | 91.4 |
| Connecticut | 97.6 | 1.8 | 0.5 | 0.0 | 1.8 | 24.7 |
| Delaware | 96.6 | 3.1 | 0.3 | 0.0 | 3.1 | 42.1 |
| District of Columbia | 95.0 | 2.6 | 0.0 | 2.5 | 2.6 | 63.7 |
| Florida | 89.9 | 1.5 | 0.1 | 8.5 | 1.7 | 28.6 |
| Georgia | 78.5 | 15.1 | 0.1 | 6.3 | 16.2 | 93.9 |
| Hawaii | 96.5 | 3.2 | 0.1 | 0.2 | 3.2 | 44.4 |
| Idaho | 96.9 | 2.8 | 0.3 | 0.0 | 2.8 | 72.7 |
| Illinois | 83.1 | 8.5 | 4.0 | 4.4 | 9.3 | 82.1 |
| Indiana | 94.6 | 4.2 | 0.0 | 1.2 | 4.3 | 75.0 |
| Iowa | 73.9 | 1.8 | 0.1 | 24.2 | 2.3 | 50.2 |
| Kansas | 95.0 | 2.1 | 0.1 | 2.8 | 2.2 | 61.4 |
| Kentucky (SSN) | 90.9 | 4.0 | 0.1 | 5.0 | 4.2 | 83.8 |
| Louisiana (SSN) | 92.9 | 1.5 | 0.0 | 5.6 | 1.6 | 47.8 |
| Maine | 87.2 | 4.7 | 0.0 | 8.1 | 5.1 | 56.5 |
| Maryland | 92.2 | 4.1 | 0.0 | 3.7 | 4.3 | 67.6 |
| Massachusetts | 60.8 | 3.8 | 0.9 | 34.5 | 5.9 | 71.2 |
| Michigan | 95.8 | 2.5 | 0.4 | 1.4 | 2.5 | 56.6 |
| Minnesota (SSN) | 89.3 | 5.8 | 0.2 | 4.8 | 6.1 | 79.1 |
| Mississippi | 89.9 | 1.7 | 0.1 | 8.3 | 1.9 | 54.6 |
| Missouri | 96.0 | 1.8 | 0.0 | 2.1 | 1.8 | 52.2 |
| Montana | 85.8 | 13.0 | 0.0 | 1.2 | 13.1 | 87.6 |
| Nebraska | 95.7 | 1.4 | 0.1 | 2.8 | 1.4 | 50.3 |
| Nevada (SSN) | 96.0 | 1.8 | 2.3 | 0.0 | 1.8 | 41.1 |
| New Hampshire | 91.6 | 6.9 | 0.0 | 1.5 | 7.0 | 84.1 |
| New Jersey (SSN) | 76.5 | 9.8 | 2.4 | 11.3 | 11.3 | 90.2 |
| New Mexico (SSN) | 95.4 | 1.4 | 0.4 | 2.8 | 1.4 | 36.2 |
| New York | 88.3 | 2.9 | 1.2 | 7.7 | 3.2 | 41.7 |
| North Carolina | 83.3 | 10.5 | 0.0 | 6.2 | 11.2 | 83.0 |
| North Dakota | 85.0 | 14.1 | 1.0 | 0.0 | 14.2 | 89.5 |
| Ohio | 96.1 | 3.4 | 0.4 | 0.1 | 3.4 | 39.5 |
| Oklahoma | 97.1 | 2.6 | 0.3 | 0.0 | 2.6 | 45.9 |
| Oregon | 75.5 | 6.9 | 0.1 | 17.5 | 8.4 | 79.1 |
| Pennsylvania | 94.2 | 3.5 | 0.0 | 2.3 | 3.6 | 51.1 |
| Rhode Island | 67.2 | 1.1 | 0.1 | 31.7 | 1.6 | 65.6 |
| South Carolina | 93.1 | 1.8 | 0.1 | 5.0 | 1.9 | 56.2 |
| South Dakota | 94.4 | 3.8 | 1.9 | 0.0 | 3.8 | 78.0 |
| Tennessee | 92.8 | 3.0 | 0.0 | 4.2 | 3.1 | 39.9 |

| State | Same Race; Same BOE | Same Race; Different BOE | Different Race | Missing Race | Percent of Same Race Records with Different BOE | Percent of Discrepant BOEs Not in Transition Ages |
|----------------------|---------------------|--------------------------|----------------|--------------|---|---|
| Texas | 95.4 | 1.6 | 0.8 | 2.2 | 1.6 | 62.2 |
| Utah | 82.9 | 16.0 | 0.5 | 0.7 | 16.2 | 95.2 |
| Vermont (SSN) | 58.9 | 3.0 | 0.1 | 38.0 | 4.9 | 58.6 |
| Virginia | 92.4 | 7.1 | 0.1 | 0.4 | 7.1 | 87.4 |
| Washington | 75.6 | 1.9 | 0.3 | 22.2 | 2.4 | 45.2 |
| West Virginia | 97.9 | 1.9 | 0.1 | 0.0 | 1.9 | 45.6 |
| Wisconsin | 80.7 | 1.4 | 0.1 | 17.7 | 1.8 | 56.3 |
| Wyoming | 98.1 | 0.8 | 0.3 | 0.8 | 0.8 | 48.1 |
| United States | 89.1 | 3.8 | 0.7 | 6.4 | 4.1 | 70.4 |

missing race from one or both records, while only 0.1 percent had a different race and 3.0 percent had a different BOE (with the same race).²² In six states the fraction of linked pairs with missing race exceeded 20 percent, and in three more states the fraction exceeded 10 percent.

In contrast to missing race, different values of race were rare, averaging only 0.7 percent of all linked pairs nationally. The highest incidence of discrepant race occurred in Illinois, at 4.0 percent of all linked pairs, while discrepancies in Nevada and New Jersey affected 2.3 and 2.4 percent of linked pairs, respectively.

Discrepant values of BOE were much more common than discrepant values of race. Nationally, 3.8 percent of linked pairs differed on BOE while agreeing on race, and discrepant pairs exceeded 10 percent of all linked pairs in five states (Georgia, Montana, North Carolina, North Dakota, and Utah). The fraction of pairs with the same race but a different BOE exceeded the fraction with a different race in every state.

Because we did not tabulate agreement on BOE when race was missing or different, we calculated the frequency of pairs with discrepant BOE as a percentage of those with the same race. This provided an adjustment for the differential incidence of missing race. This adjustment has the biggest impact on the rate of discrepant BOE in states with a high incidence of missing race (see, for example, Colorado, where the frequency of discrepant BOEs increases from 9.5 percent to 12.7 percent). Nationally, 4.1 percent of linked pairs with the same race have discrepant BOEs. Only one state (Wyoming) is below 1 percent while seven states are above 10 percent, and another seven states are between 5 and 10 percent on this measure.

²² For this tabulation, we did not determine whether the BOE differed when race was different or missing. In our assessment of agreement among record pairs linked across states, presented below, we looked more broadly at combinations of agreement on BOE and race.

Some degree of inconsistency between the BOEs on linked records can be expected because of individuals transitioning between different eligibility groups. Most such transitions are age-related, so we estimated only the percentage of discrepant BOEs occurring outside the ages of 18 to 22 and 64 to 66. In only one state, Connecticut, was this value less than 25 percent. In general, the higher the incidence of discrepant BOEs, the higher the fraction occurring outside the transition ages. The correlation between the two was 0.79. This high correlation is consistent with our expectation that excess discrepancies are problematic. In four states more than 90 percent of the discrepant BOEs were outside the transition ages, and all four of these states had discrepant BOEs in more than 10 percent of the linked pairs that agreed on race. We return to these findings in our conclusions about linkage quality within states.

c. Agreement on BOE and Race by Level of Agreement on DOB

Our linkage algorithm allows records to be linked by MSIS ID without any additional requirements for agreement on sex and DOB, and it allows for additional records to be linked by SSN or HIC as long as sex and at least two parts of the DOB agree. Virtually all linked records within states (99.43 percent) agreed on sex and all parts of DOB while very small fractions differed on one part of DOB (0.28 percent) or else differed on sex or on at least two parts of DOB or had missing data for one or both fields (0.29 percent). While disagreement on just a single part of the DOB was inconsequential numerically, we still wondered if linked pairs with differences on one component of the DOB showed any evidence of being less correct than linked records with full agreement on DOB. Table IV.20 addresses this question and suggests that, indeed, record pairs linked with disagreement on one component of the DOB appear to contain more false positive linkages than record pairs with full agreement on DOB. Nationally, 89.1 percent of the pairs with full agreement on DOB have the same race and BOE. This compares to

Table IV.20 Agreement on Race and BOE Among Record Pairs Linked Within State by Level of Agreement on DOB

| State | Same Sex and DOB | | | | Same Sex and Two Parts of DOB | | | |
|----------------------|---------------------|--------------------------|----------------|--------------|-------------------------------|--------------------------|----------------|--------------|
| | Same Race; Same BOE | Same Race; Different BOE | Different Race | Missing Race | Same Race; Same BOE | Same Race; Different BOE | Different Race | Missing Race |
| Alabama | 95.8 | 1.4 | 0.1 | 2.7 | 88.3 | 7.3 | 1.0 | 3.4 |
| Alaska | 93.5 | 3.4 | 0.4 | 2.7 | 88.2 | 6.8 | 1.9 | 3.1 |
| Arizona | 92.6 | 3.7 | 0.3 | 3.5 | 73.2 | 14.0 | 6.0 | 6.8 |
| Arkansas | 94.3 | 2.0 | 0.3 | 3.4 | 87.5 | 6.6 | 3.0 | 2.9 |
| California (SSN) | 90.9 | 2.0 | 1.0 | 6.1 | 86.9 | 3.8 | 2.0 | 7.2 |
| Colorado | 65.4 | 9.5 | 0.6 | 24.5 | 57.2 | 10.6 | 2.8 | 29.4 |
| Connecticut | 97.7 | 1.8 | 0.5 | 0.0 | 75.6 | 3.1 | 21.2 | 0.1 |
| Delaware | 96.6 | 3.1 | 0.3 | 0.0 | 89.4 | 7.2 | 3.4 | 0.0 |
| District of Columbia | 95.0 | 2.6 | 0.0 | 2.4 | 66.1 | 8.9 | 7.1 | 17.9 |
| Florida | 89.9 | 1.5 | 0.1 | 8.5 | 72.9 | 9.2 | 4.4 | 13.5 |
| Georgia | 78.5 | 15.1 | 0.1 | 6.3 | 53.4 | 31.9 | 4.3 | 10.5 |
| Hawaii | 96.5 | 3.2 | 0.1 | 0.2 | 70.3 | 2.7 | 27.0 | 0.0 |
| Idaho | 96.9 | 2.8 | 0.3 | 0.0 | 86.3 | 10.7 | 3.1 | 0.0 |
| Illinois | 83.2 | 8.5 | 4.0 | 4.4 | 71.0 | 10.6 | 12.9 | 5.5 |
| Indiana | 94.6 | 4.2 | 0.0 | 1.2 | 91.2 | 7.8 | 0.0 | 1.0 |
| Iowa | 74.0 | 1.8 | 0.1 | 24.2 | 60.8 | 3.4 | 0.4 | 35.4 |
| Kansas | 95.0 | 2.1 | 0.1 | 2.8 | 82.2 | 2.2 | 7.8 | 7.8 |
| Kentucky (SSN) | 90.9 | 4.0 | 0.1 | 5.0 | 87.6 | 6.3 | 2.0 | 4.1 |
| Louisiana (SSN) | 92.9 | 1.5 | 0.0 | 5.6 | 90.0 | 2.4 | 1.6 | 6.0 |
| Maine | 87.2 | 4.6 | 0.0 | 8.1 | 61.3 | 20.0 | 0.0 | 18.8 |
| Maryland | 92.2 | 4.1 | 0.0 | 3.7 | 85.5 | 7.3 | 1.8 | 5.5 |
| Massachusetts | 60.8 | 3.8 | 0.9 | 34.4 | 43.3 | 3.3 | 3.6 | 49.8 |
| Michigan | 95.8 | 2.4 | 0.4 | 1.4 | 87.0 | 8.9 | 1.7 | 2.4 |
| Minnesota (SSN) | 89.3 | 5.8 | 0.2 | 4.7 | 79.7 | 9.9 | 0.6 | 9.8 |
| Mississippi | 90.0 | 1.7 | 0.1 | 8.2 | 45.2 | 12.4 | 5.2 | 37.2 |
| Missouri | 96.0 | 1.8 | 0.0 | 2.1 | 95.0 | 0.0 | 0.0 | 5.0 |
| Montana | 85.8 | 13.0 | 0.0 | 1.2 | 66.7 | 30.6 | 0.0 | 2.8 |
| Nebraska | 95.8 | 1.4 | 0.1 | 2.8 | 92.2 | 2.8 | 0.0 | 5.0 |
| Nevada (SSN) | 96.0 | 1.8 | 2.2 | 0.0 | 92.2 | 3.5 | 4.3 | 0.0 |
| New Hampshire | 91.6 | 6.9 | 0.0 | 1.5 | 85.7 | 14.3 | 0.0 | 0.0 |
| New Jersey (SSN) | 76.6 | 9.8 | 2.4 | 11.3 | 60.3 | 10.5 | 12.1 | 17.1 |
| New Mexico (SSN) | 95.4 | 1.3 | 0.4 | 2.8 | 74.9 | 2.6 | 10.7 | 11.8 |
| New York | 88.5 | 2.9 | 1.0 | 7.6 | 57.4 | 5.9 | 22.2 | 14.5 |
| North Carolina | 83.3 | 10.5 | 0.0 | 6.2 | 84.3 | 9.8 | 0.0 | 5.9 |
| North Dakota | 85.0 | 14.0 | 1.0 | 0.0 | 14.6 | 84.1 | 1.2 | 0.0 |
| Ohio | 96.1 | 3.4 | 0.4 | 0.1 | 83.1 | 12.4 | 3.8 | 0.8 |
| Oklahoma | 97.2 | 2.6 | 0.3 | 0.0 | 75.3 | 9.6 | 15.1 | 0.0 |
| Oregon | 75.5 | 6.9 | 0.1 | 17.5 | 47.0 | 9.9 | 11.0 | 32.0 |
| Pennsylvania | 94.2 | 3.5 | 0.0 | 2.3 | 85.5 | 9.7 | 0.4 | 4.5 |

| State | Same Sex and DOB | | | | Same Sex and Two Parts of DOB | | | |
|----------------------|---------------------|--------------------------|----------------|--------------|-------------------------------|--------------------------|----------------|--------------|
| | Same Race; Same BOE | Same Race; Different BOE | Different Race | Missing Race | Same Race; Same BOE | Same Race; Different BOE | Different Race | Missing Race |
| Rhode Island | 67.2 | 1.1 | 0.1 | 31.7 | 65.9 | 2.3 | 4.5 | 27.3 |
| South Carolina | 93.2 | 1.7 | 0.1 | 5.0 | 89.3 | 4.7 | 0.6 | 5.4 |
| South Dakota | 94.4 | 3.7 | 1.9 | 0.0 | 85.2 | 8.1 | 6.6 | 0.0 |
| Tennessee | 92.8 | 3.0 | 0.0 | 4.2 | 82.1 | 9.0 | 0.6 | 8.3 |
| Texas | 95.5 | 1.6 | 0.8 | 2.2 | 86.8 | 4.0 | 6.8 | 2.4 |
| Utah | 82.9 | 16.0 | 0.4 | 0.7 | 82.1 | 14.9 | 1.7 | 1.3 |
| Vermont (SSN) | 58.9 | 3.0 | 0.1 | 38.0 | 52.3 | 1.8 | 0.0 | 45.9 |
| Virginia | 92.4 | 7.1 | 0.1 | 0.4 | 82.4 | 11.4 | 5.7 | 0.4 |
| Washington | 75.6 | 1.9 | 0.3 | 22.2 | 63.5 | 3.8 | 1.0 | 31.7 |
| West Virginia | 97.9 | 1.9 | 0.1 | 0.0 | 90.2 | 5.5 | 2.0 | 2.4 |
| Wisconsin | 80.7 | 1.4 | 0.1 | 17.7 | 64.5 | 3.3 | 2.1 | 30.1 |
| Wyoming | 98.2 | 0.8 | 0.3 | 0.8 | 87.1 | 3.5 | 7.6 | 1.8 |
| United States | 89.1 | 3.8 | 0.7 | 6.4 | 73.2 | 6.6 | 9.1 | 11.1 |

73.2 percent among pairs with agreement on just two parts of the DOB. Pairs with the same race but different BOE represent 3.8 percent of the pairs with full agreement on DOB, versus 6.6 percent of the pairs with only partial agreement on DOB. Most strikingly, pairs with different race are only 0.7 percent of the pairs with full agreement on DOB but 9.1 percent of the pairs with partial agreement on DOB. Pairs with missing race are 6.4 percent of the pairs with full agreement on DOB but 11.1 percent of the pairs with partial agreement.

Our interpretation of these findings is that the lower level of agreement on race and BOE among pairs with only partial agreement on DOB is indicative of a greater incidence of false positive links, which may suggest we should exercise caution in allowing linked pairs to be formed without full agreement on DOB. On the other hand, we still find that nearly three quarters of the linked pairs with partial agreement on DOB have the same race and BOE. This suggests that if we eliminated linked pairs that differed on one component of the DOB, we would remove substantially more good links than bad links. In light of this, we do not recommend altering this element of the linkage algorithm in future linkages.

d. Conclusions About Linked Records Within States

What can we infer about the linked pairs from the observed discrepancies on BOE and race? Knowing that discrepancies can exist even when two linked records represent the same individual leads us to focus on those states with exceptionally high rates of discrepant values. With a substantial majority of states having discrepant BOEs in fewer than five percent of cases when race agrees, we have to wonder about the seven states with discrepant BOEs in 11 to 16 percent of these cases. Likewise, when a substantial majority of states have discrepant race values in no more than 0.3 percent of their linked pairs, we wonder about the seven states in which discrepant race codes occur on 1.0 percent or more of linked pairs. In all likelihood, these excess discrepancies are the result of state-specific problems with the race and BOE indicators

rather than a problem with the linkages. Supporting this conjecture, we find that the seven states with discrepant BOEs on more than 10 percent of their linked records and the seven states with discrepant race on at least 1.0 percent of their records have only two common members: New Jersey and North Dakota. Comparing these states to the seven with the highest frequency of disagreement on DOB or sex, we find New Jersey on the latter list as well. Colorado is the only other state with comparatively high rates of discrepancy on DOB or sex, and either race or BOE. In sum, then, we have the most reason to question some of the linked pairs in New Jersey, North Dakota, and Colorado. For the other states with high levels of discrepant values in BOE, race, DOB, or age, we have as much reason to question these particular variables as we do the linked pairs. In the remaining states, even if some of the discrepancies on these variables reflect linkages of records that represent different individuals, the frequencies of problematic linkages within states would have to be quite low.

2. Quality of Linkages Across States

As we have explained, linkages of records across states are potentially more problematic than linkages within states because no across-state linkages have been validated by the states through the assignment of a common Medicaid identifier. Because the across-state linkages depend almost entirely on SSNs, with DOB and sex providing some degree of confirmation once a potential link has been established, missing or incorrect SSNs will influence the linkage rates. In assessing the quality of the across-state linkages, we begin by documenting the frequency of missing SSNs. Then, we compare our linkage rates by state with independent estimates of migration by Medicaid enrollees, investigate multiple linkages, and, finally, examine agreement on race and BOE among linked pairs.

a. Missing SSNs

After reconciliation, when missing SSNs were replaced by nonmissing SSNs on records with the same MAXEM ID, most of the initially missing SSNs remained missing. In 2005, 9.18 percent of the MAX SSNs on the research file and in 2006 an even larger share, 9.82 percent, were still missing (Tables IV.21 and IV.22). While we did not replace a missing MAX SSN with an EDB-SSN, we did use the EDB-SSNs for linkage. In both 2005 and 2006, however, the additional SSNs that were present in the EDB but not in MAX amounted to only 0.01 percent of the total MAXEM records in each year.

A record lacking an SSN could not be linked to a record in another state, so the 9.17 percent of records in 2005 and 9.81 percent in 2006 with no usable SSN imply that as many as 9 to almost 10 percent of the actual across-state pairs in those years were missed. Two-thirds of the missing SSNs in 2005 (3.7 out of 5.5 million) and 64 percent in 2006 are from California, however, and we know that many of the missing SSNs in California are associated with enrollees who only qualify for limited benefits that are unique to that state. It is unlikely that many of these enrollees would qualify for Medicaid in other states, so their missing SSNs may have little impact on the across-state linkages. This would reduce the potential missed linkages to 3 to 4 percent of the actual across-state pairs. While some of the remaining states have substantially higher rates of missing SSNs than other states, no state approaches California's 35 percent missing rate, and no state to our knowledge can attribute its missing SSNs to circumstances that would limit their impact on lost linkages across states. If our assumptions about these states as

Table IV.21 Frequency of Missing SSNs Prior to Across-State Linkage, 2005

| State | MAXEM Records After Consolidation | MAX SSN Missing | Percent Missing | MAX SSN Missing but EDB SSN Present | Percent with No SSN |
|----------------------|---|--------------------|--------------------|--|------------------------|
| Alabama | 954,389 | 6,288 | 0.66 | 1 | 0.66 |
| Alaska | 132,802 | 3,053 | 2.30 | 1 | 2.30 |
| Arizona | 1,474,288 | 149,507 | 10.14 | 524 | 10.11 |
| Arkansas | 745,700 | 69,278 | 9.29 | 4,742 | 8.65 |
| California (SSN) | 10,593,119 | 3,748,215 | 35.38 | 18 | 35.38 |
| Colorado | 603,707 | 31,418 | 5.20 | 2 | 5.20 |
| Connecticut | 528,469 | 15,940 | 3.02 | 10 | 3.01 |
| Delaware | 179,913 | 13,872 | 7.71 | 0 | 7.71 |
| District of Columbia | 166,440 | 4,366 | 2.62 | 1 | 2.62 |
| Florida | 3,019,634 | 66,961 | 2.22 | 1 | 2.22 |
| Georgia | 2,080,322 | 129,695 | 6.23 | 505 | 6.21 |
| Hawaii | 231,620 | 3,261 | 1.41 | 0 | 1.41 |
| Idaho | 233,333 | 5,840 | 2.50 | 0 | 2.50 |
| Illinois | 2,570,481 | 64,463 | 2.51 | 1 | 2.51 |
| Indiana | 1,044,764 | 29,352 | 2.81 | 148 | 2.80 |
| Iowa | 428,279 | 3,549 | 0.83 | 0 | 0.83 |
| Kansas | 356,706 | 5,203 | 1.46 | 0 | 1.46 |
| Kentucky (SSN) | 873,932 | 9,720 | 1.11 | 3 | 1.11 |
| Louisiana (SSN) | 1,166,119 | 28,295 | 2.43 | 1 | 2.43 |
| Maine | 326,409 | 1,604 | 0.49 | 0 | 0.49 |
| Maryland | 866,900 | 24,628 | 2.84 | 29 | 2.84 |
| Massachusetts | 1,245,843 | 104,369 | 8.38 | 0 | 8.38 |
| Michigan | 1,857,701 | 89,416 | 4.81 | 3 | 4.81 |
| Minnesota (SSN) | 790,615 | 16,781 | 2.12 | 22 | 2.12 |
| Mississippi | 778,522 | 38,668 | 4.97 | 3 | 4.97 |
| Missouri | 1,217,500 | 16,674 | 1.37 | 32 | 1.37 |
| Montana | 128,004 | 1,017 | 0.79 | 93 | 0.72 |
| Nebraska | 261,371 | 5,391 | 2.06 | 0 | 2.06 |
| Nevada (SSN) | 267,833 | 28,382 | 10.60 | 0 | 10.60 |
| New Hampshire | 145,728 | 1,179 | 0.81 | 1 | 0.81 |
| New Jersey (SSN) | 1,121,762 | 48,941 | 4.36 | 241 | 4.34 |
| New Mexico (SSN) | 527,694 | 8,380 | 1.59 | 0 | 1.59 |
| New York | 5,013,122 | 311,373 | 6.21 | 59 | 6.21 |
| North Carolina | 1,727,918 | 34,648 | 2.01 | 10 | 2.00 |
| North Dakota | 77,112 | 400 | 0.52 | 0 | 0.52 |
| Ohio | 2,113,448 | 28,298 | 1.34 | 42 | 1.34 |
| Oklahoma | 725,837 | 18,866 | 2.60 | 0 | 2.60 |
| Oregon | 562,565 | 37,156 | 6.60 | 1 | 6.60 |
| Pennsylvania | 2,029,732 | 14,436 | 0.71 | 10 | 0.71 |
| Rhode Island | 219,783 | 2,073 | 0.94 | 0 | 0.94 |
| South Carolina | 1,012,171 | 26,607 | 2.63 | 2 | 2.63 |
| South Dakota | 128,838 | 1,775 | 1.38 | 1 | 1.38 |
| Tennessee | 1,593,869 | 13,022 | 0.82 | 0 | 0.82 |
| Texas | 4,096,175 | 171,644 | 4.19 | 110 | 4.19 |
| Utah | 345,438 | 11,273 | 3.26 | 0 | 3.26 |

| State | MAXEM Records After Consolidation | MAX SSN Missing | Percent Missing | MAX SSN Missing but EDB SSN Present | Percent with No SSN |
|----------------------|---|--------------------|--------------------|--|------------------------|
| Vermont (SSN) | 162,743 | 443 | 0.27 | 0 | 0.27 |
| Virginia | 926,884 | 34,441 | 3.72 | 3 | 3.72 |
| Washington | 1,199,441 | 36,452 | 3.04 | 5 | 3.04 |
| West Virginia | 382,999 | 235 | 0.06 | 5 | 0.06 |
| Wisconsin | 1,015,762 | 20,923 | 2.06 | 27 | 2.06 |
| Wyoming | 81,129 | 2,524 | 3.11 | 0 | 3.11 |
| United States | 60,334,865 | 5,540,295 | 9.18 | 6,657 | 9.17 |

Table IV.22 Frequency of Missing SSNs Prior to Across-State Linkage, 2006

| State | MAXEM Records After Consolidation | MAX SSN Missing | Percent Missing | MAX SSN Missing but EDB SSN Present | Percent with No SSN |
|----------------------|---|--------------------|--------------------|--|------------------------|
| Alabama | 966,987 | 7,882 | 0.82 | 0 | 0.82 |
| Alaska | 130,735 | 4,536 | 3.47 | 1 | 3.47 |
| Arizona | 1,511,638 | 158,019 | 10.45 | 892 | 10.39 |
| Arkansas | 758,188 | 79,827 | 10.53 | 4,764 | 9.90 |
| California (SSN) | 10,611,796 | 3,839,824 | 36.18 | 17 | 36.18 |
| Colorado | 626,484 | 44,209 | 7.06 | 2 | 7.06 |
| Connecticut | 532,975 | 21,006 | 3.94 | 8 | 3.94 |
| Delaware | 184,528 | 18,167 | 9.85 | 0 | 9.85 |
| District of Columbia | 167,082 | 5,570 | 3.33 | 1 | 3.33 |
| Florida | 2,997,454 | 85,422 | 2.85 | 1 | 2.85 |
| Georgia | 2,043,588 | 120,874 | 5.91 | 539 | 5.89 |
| Hawaii | 231,509 | 5,520 | 2.38 | 1 | 2.38 |
| Idaho | 229,893 | 7,300 | 3.18 | 0 | 3.18 |
| Illinois | 2,573,624 | 73,586 | 2.86 | 2 | 2.86 |
| Indiana | 1,066,328 | 31,911 | 2.99 | 107 | 2.98 |
| Iowa | 466,910 | 6,180 | 1.32 | 0 | 1.32 |
| Kansas | 358,731 | 5,455 | 1.52 | 0 | 1.52 |
| Kentucky (SSN) | 890,088 | 8,553 | 0.96 | 3 | 0.96 |
| Louisiana (SSN) | 1,213,058 | 53,432 | 4.40 | 1 | 4.40 |
| Maine | 336,134 | 1,609 | 0.48 | 0 | 0.48 |
| Maryland | 865,965 | 28,591 | 3.30 | 20 | 3.30 |
| Massachusetts | 1,307,569 | 113,201 | 8.66 | 0 | 8.66 |
| Michigan | 1,938,251 | 120,832 | 6.23 | 2 | 6.23 |
| Minnesota (SSN) | 802,125 | 22,073 | 2.75 | 26 | 2.75 |
| Mississippi | 773,546 | 42,977 | 5.56 | 3 | 5.56 |
| Missouri | 1,111,379 | 21,141 | 1.90 | 25 | 1.90 |
| Montana | 126,934 | 1,077 | 0.85 | 82 | 0.78 |
| Nebraska | 261,942 | 7,270 | 2.78 | 0 | 2.78 |
| Nevada (SSN) | 254,738 | 22,692 | 8.91 | 0 | 8.91 |
| New Hampshire | 148,664 | 1,611 | 1.08 | 1 | 1.08 |
| New Jersey (SSN) | 1,179,737 | 62,887 | 5.33 | 361 | 5.30 |
| New Mexico (SSN) | 516,854 | 10,902 | 2.11 | 0 | 2.11 |
| New York | 5,022,223 | 358,954 | 7.15 | 52 | 7.15 |
| North Carolina | 1,780,928 | 42,140 | 2.37 | 8 | 2.37 |
| North Dakota | 77,256 | 447 | 0.58 | 0 | 0.58 |
| Ohio | 2,144,188 | 29,178 | 1.36 | 46 | 1.36 |
| Oklahoma | 758,700 | 24,423 | 3.22 | 0 | 3.22 |
| Oregon | 552,140 | 42,766 | 7.75 | 1 | 7.75 |
| Pennsylvania | 2,093,899 | 15,963 | 0.76 | 16 | 0.76 |
| Rhode Island | 221,049 | 2,422 | 1.10 | 0 | 1.10 |
| South Carolina | 949,470 | 47,308 | 4.98 | 0 | 4.98 |
| South Dakota | 130,477 | 3,393 | 2.60 | 1 | 2.60 |
| Tennessee | 1,479,054 | 16,069 | 1.09 | 1 | 1.09 |
| Texas | 4,143,622 | 201,653 | 4.87 | 1,186 | 4.84 |
| Utah | 339,394 | 11,316 | 3.33 | 0 | 3.33 |

| State | MAXEM Records After Consolidation | MAX SSN Missing | Percent Missing | MAX SSN Missing but EDB SSN Present | Percent with No SSN |
|----------------------|---|--------------------|--------------------|--|------------------------|
| Vermont (SSN) | 161,533 | 468 | 0.29 | 0 | 0.29 |
| Virginia | 953,950 | 53,230 | 5.58 | 1 | 5.58 |
| Washington | 1,191,393 | 43,539 | 3.65 | 0 | 3.65 |
| West Virginia | 392,578 | 0 | 0.00 | 0 | 0.00 |
| Wisconsin | 1,036,667 | 29,526 | 2.85 | 27 | 2.85 |
| Wyoming | 80,374 | 2,668 | 3.32 | 0 | 3.32 |
| United States | 60,694,329 | 5,959,599 | 9.82 | 8,198 | 9.81 |

well as California are correct, the missing SSNs are likely to result in lost linkages representing three to four percent of the true pairs that could be identified if no SSNs were missing.²³

Another way to assess the magnitude of the problem posed by missing SSNs is to estimate the fraction of records linked by MSIS ID that could also be linked by SSN. While these linkages are all within state rather than across state and, therefore, do not shed much light on how California's missing SSNs will affect across-state matches, these linkages do speak to the issue of what we may lose by not having the equivalent of an MSIS ID for across-state matches. Furthermore, they provide a way to look at potential lost linkages across rather than within year, and they give us insight into the quality of the SSNs for across-year linkages.

Nationally, 92.4 percent of the within-state pairs linked across years by MSIS ID have the same MAX SSNs as well (Table IV.23). In 35 states, this fraction exceeds 97 percent; in only eight states—including California at 69.8 percent—is the fraction below 95 percent. Arkansas is next lowest at 89.6 percent, followed by Arizona and Massachusetts at 90 percent, Delaware at 91 percent, and then Michigan, Colorado, and Oregon at between 93 and 95 percent.

Very rarely does a linked pair have nonmissing SSNs that differ. This occurs among only 0.07 percent of the linked pairs. States differ, but in only three states does this fraction exceed half a percent: Montana (1.12 percent), Alabama (0.90 percent), and Colorado (0.55 percent). The low incidence of discrepant SSNs outside of these three states speaks to some degree to the overall quality of the reported SSNs and their potential utility for linkages across year, although

²³ If states differ in the fraction of their enrollees who are enrolled in other states in the same year or adjacent years, then the potential cross-state linkages that are lost due to missing or incorrect SSNs will depend on the completeness of SSNs by state. If SSNs tend to be more complete in states with disproportionately more cross-state enrollment, then we will miss fewer cross-state linkages than if SSNs tend to be less complete in those states.

Table IV.23 Agreement on MAX SSN Among Pairs Linked Across Years by MSIS ID

| State | MAX SSNs Agree | MAX SSNs Differ; Both Present | One MAX SSN Missing; One Present | Both MAX SSNs Missing | | |
|----------------------|----------------------|---|--|-----------------------|--------------------|--------------------------|
| | | | | EDB SSNs Agree | EDB SSNs Differ | Missing EDB SSN(s) |
| Alabama | 98.55 | 0.90 | 0.14 | 0.00 | 0.00 | 0.40 |
| Alaska | 97.44 | 0.14 | 0.68 | 0.00 | 0.00 | 1.74 |
| Arizona | 90.16 | 0.01 | 0.87 | 0.02 | 0.00 | 8.93 |
| Arkansas | 89.60 | 0.11 | 2.07 | 0.63 | 0.00 | 7.59 |
| California (SSN) | 69.83 | 0.00 | 0.00 | 0.00 | 0.00 | 30.17 |
| Colorado | 94.16 | 0.55 | 1.39 | 0.00 | 0.00 | 3.91 |
| Connecticut | 96.71 | 0.10 | 0.88 | 0.00 | 0.00 | 2.30 |
| Delaware | 91.35 | 0.07 | 1.37 | 0.00 | 0.00 | 7.21 |
| District of Columbia | 98.31 | 0.01 | 0.05 | 0.00 | 0.00 | 1.63 |
| Florida | 98.85 | 0.01 | 0.03 | 0.00 | 0.00 | 1.12 |
| Georgia | 96.05 | 0.02 | 0.08 | 0.03 | 0.00 | 3.81 |
| Hawaii | 98.86 | 0.00 | 0.00 | 0.00 | 0.00 | 1.14 |
| Idaho | 98.14 | 0.02 | 0.37 | 0.00 | 0.00 | 1.47 |
| Illinois | 98.32 | 0.13 | 0.25 | 0.00 | 0.00 | 1.31 |
| Indiana | 97.71 | 0.00 | 0.04 | 0.01 | 0.00 | 2.24 |
| Iowa | 99.03 | 0.15 | 0.51 | 0.00 | 0.00 | 0.30 |
| Kansas | 99.38 | 0.01 | 0.06 | 0.00 | 0.00 | 0.54 |
| Kentucky (SSN) | 99.97 | 0.00 | 0.03 | 0.00 | 0.00 | 0.00 |
| Louisiana (SSN) | 97.73 | 0.00 | 0.00 | 0.00 | 0.00 | 2.27 |
| Maine | 99.67 | 0.01 | 0.05 | 0.00 | 0.00 | 0.27 |
| Maryland | 97.93 | 0.03 | 0.12 | 0.00 | 0.00 | 1.92 |
| Massachusetts | 90.10 | 0.09 | 2.55 | 0.00 | 0.00 | 7.27 |
| Michigan | 93.65 | 0.07 | 1.96 | 0.00 | 0.00 | 4.31 |
| Minnesota (SSN) | 98.60 | 0.00 | 0.00 | 0.00 | 0.00 | 1.40 |
| Mississippi | 97.03 | 0.02 | 0.10 | 0.00 | 0.00 | 2.84 |
| Missouri | 99.13 | 0.00 | 0.00 | 0.00 | 0.00 | 0.87 |
| Montana | 98.35 | 1.12 | 0.00 | 0.07 | 0.00 | 0.46 |
| Nebraska | 97.11 | 0.05 | 1.84 | 0.00 | 0.00 | 1.00 |
| Nevada (SSN) | 95.61 | 0.00 | 0.00 | 0.00 | 0.00 | 4.39 |
| New Hampshire | 99.63 | 0.00 | 0.00 | 0.00 | 0.00 | 0.37 |
| New Jersey (SSN) | 97.18 | 0.00 | 0.05 | 0.03 | 0.00 | 2.74 |
| New Mexico (SSN) | 99.19 | 0.00 | 0.00 | 0.00 | 0.00 | 0.81 |
| New York | 95.55 | 0.00 | 0.01 | 0.00 | 0.00 | 4.43 |
| North Carolina | 98.93 | 0.00 | 0.02 | 0.00 | 0.00 | 1.05 |
| North Dakota | 99.71 | 0.02 | 0.05 | 0.00 | 0.00 | 0.22 |
| Ohio | 98.97 | 0.05 | 0.13 | 0.00 | 0.00 | 0.84 |
| Oklahoma | 98.29 | 0.01 | 0.02 | 0.00 | 0.00 | 1.68 |
| Oregon | 94.75 | 0.01 | 0.05 | 0.00 | 0.00 | 5.19 |
| Pennsylvania | 99.58 | 0.03 | 0.05 | 0.00 | 0.00 | 0.34 |
| Rhode Island | 99.28 | 0.01 | 0.09 | 0.00 | 0.00 | 0.62 |
| South Carolina | 95.53 | 0.19 | 2.39 | 0.00 | 0.00 | 1.89 |
| South Dakota | 97.42 | 0.14 | 1.64 | 0.00 | 0.00 | 0.80 |
| Tennessee | 99.62 | 0.02 | 0.03 | 0.00 | 0.00 | 0.34 |
| Texas | 96.79 | 0.16 | 1.16 | 0.00 | 0.00 | 1.89 |

| State | MAX SSNs Agree | MAX SSNs Differ; Both Present | One MAX SSN Missing; One Present | Both MAX SSNs Missing | | |
|----------------------|----------------------|---|--|-----------------------|--------------------|--------------------------|
| | | | | EDB SSNs Agree | EDB SSNs Differ | Missing EDB SSN(s) |
| Utah | 97.93 | 0.07 | 0.48 | 0.00 | 0.00 | 1.51 |
| Vermont (SSN) | 99.81 | 0.00 | 0.00 | 0.00 | 0.00 | 0.19 |
| Virginia | 96.31 | 0.15 | 0.94 | 0.00 | 0.00 | 2.60 |
| Washington | 95.75 | 0.25 | 2.25 | 0.00 | 0.00 | 1.76 |
| West Virginia | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Wisconsin | 97.72 | 0.02 | 0.64 | 0.00 | 0.00 | 1.63 |
| Wyoming | 97.33 | 0.32 | 0.40 | 0.00 | 0.00 | 1.95 |
| United States | 92.39 | 0.07 | 0.43 | 0.01 | 0.00 | 7.10 |

we should be mindful that SSNs could very well be used consistently within a state without being accurate. Overall, the most common reason that a record pair linked by MSIS ID could not be linked by SSN is that all four SSNs—both MAX SSNs and both EDB-SSNs—were missing. This was true of 7.10 percent of the linked pairs nationally. Only 0.43 percent of all linked pairs had one of the two MAX SSNs present, which would at least potentially allow linkages to other states. All four SSNs were missing from 30.17 percent of the linked pairs in California and between 5 and 10 percent of the linked pairs in Arizona (8.93 percent), Arkansas (7.59 percent), Delaware (7.21 percent), Massachusetts (7.27 percent), and Oregon (5.19 percent). In nearly all of the remaining states, missing MAX and EDB SSNs accounted for most of the pairs that were linked by MSIS ID but could not be linked by SSN.

If California were excluded, 96.9 percent of the within-state linkages by MSIS ID could be replicated with the MAX SSN (calculation not shown). This suggests that a minimum of 3 percent of potential linkages across states were missed because of the lack of a national identifier comparable to the MSIS ID. Table IV.23 suggests that in many states the impact may be as low as one to two percent, with impacts above 3 percent in selected other states.

b. Comparison with Independent Estimates

Another way to assess the across-state linkages is to compare their relative frequency, by state, with independent estimates. The American Community Survey (ACS), an annual survey of two million households, collects data on where each sample member lived one year earlier,²⁴ and as of 2008 the ACS also collects data on Medicaid and other health insurance coverage. From the responses recorded on the ACS public use file, we can determine whether a respondent who was

²⁴ The ACS asks of each person, “Did this person live in this house or apartment one year ago?” If the answer is no, the ACS asks “Where did this person live one year ago?” and requests the full address (or, if another country, the name of the country).

reported to be covered by Medicaid at the time of the survey had moved during the past year and, if so, whether the respondent was living in the same state or in a specific other state—or outside the United States—one year earlier. To estimate in-migration rates, we cross-tabulated Medicaid enrollees who had moved in the past year by their current state of residence and their residence one year earlier. To obtain a denominator for estimating migration rates, we tabulated those who had not moved or were under 1 year of age by their current state of residence. We also used the results of this same cross-tabulation to calculate rates of out-migration by state. That is, we classified Medicaid enrollees at the time of the survey by the state in which they lived one year earlier (when they may or may not have been enrolled in Medicaid) and determined how many had moved between states or within the same state during the interval. It is important to look at migration flows in both directions, even though the measurement of outflows is more limited than the measurement of inflows, because they are not necessarily the same in magnitude. Some states have net in-migration among the Medicaid population while other states have net out-migration.

The ACS estimate of persons with Medicaid (and other public) coverage at a point in time in 2008 is 41.7 million. While we do not have a point-in-time count of Medicaid enrollment for that year, the MAX estimate of persons ever enrolled in Medicaid during the year, prior to across-state unduplication, was 60.3 million. A point-in-time estimate would show lower enrollment; nevertheless, there is ample evidence that Medicaid participation is underreported in household surveys, and the ACS estimate of Medicaid coverage falls in line with other major surveys (Turner, Boudreaux, and Lynch 2009). Nevertheless, despite the undercount and whatever its magnitude, there is no reason to believe that the tables presented below seriously misrepresent the migration patterns of Medicaid enrollees.

Overall, 20.09 percent of reported Medicaid enrollees moved during the year preceding the survey (Table IV.24). Breaking this down, 17.87 percent moved within the same state, 1.82 percent moved from another state, and 0.41 percent moved from outside the U.S. Not surprisingly, these migration rates vary by state, ranging from an overall low of 14.08 (New York) to an overall high of 31.22 (Alaska). We find even more variation by source of migration. In three states, more than one percent of Medicaid enrollees had moved from another country, led by Hawaii at 1.85 percent, followed by Colorado at 1.25 percent and Massachusetts at 1.17 percent. At the low end, Delaware had no reported in-migration from outside the U.S., while six other states had in-migration rates below 0.1 percent. Rates of in-migration from other states, which interest us most, ranged from a low of 0.59 percent (California) to a high of 6.96 percent (North Dakota). New York was next lowest after California with an in-migration rate of 0.94 percent while Alaska was just below North Dakota at 6.65 percent. Within-state moves were highest in Iowa and Alaska (26.46 percent and 24.50 percent, respectively) and lowest in Delaware (10.90 percent), New Jersey (12.48 percent), and New York (12.54 percent).

Out-migration to other states, measured from the prior year, shows even wider variation than in-migration.²⁵ Alaska leads all states by far, with 13.13 percent out-migration. Other states with high out-migration rates include Wyoming (6.96 percent), Nevada (6.00 percent), Idaho (4.91 percent), New Hampshire (4.77 percent), Delaware (4.56 percent), and the District of Columbia (4.54 percent). California, with the lowest in-migration rate, also has the lowest out-migration rate at 0.92 percent, followed by Massachusetts (1.07 percent) and Kentucky (1.12 percent). Rates of movement within the state are virtually the same whether we look backwards or forwards because the raw numbers of moves are identical—only the denominators change.

²⁵ Medicaid enrollees who moved from outside the U.S. are excluded from these estimates.

Table IV.24 Percent of Medicaid Enrollees Who Moved to Their Current Home in the Past Year, by State of Residence in Current or Prior Year: 2008 ACS

| State of Residence | Percent of Current-Year Residents Who: | | | | Percent of Prior Year Residents Who: | | |
|----------------------|--|--------------------------|------------------------|--------------------|--------------------------------------|------------------------|--------------------|
| | Moved from Outside the U.S. | Moved from Another State | Moved Within the State | Moved in Past Year | Moved to Another State | Moved Within the State | Moved in Past Year |
| Alabama | 0.03 | 2.22 | 18.07 | 20.32 | 1.90 | 18.13 | 20.03 |
| Alaska | 0.06 | 6.65 | 24.50 | 31.22 | 13.13 | 22.82 | 35.95 |
| Arizona | 0.29 | 2.91 | 20.81 | 24.01 | 1.86 | 21.09 | 22.95 |
| Arkansas | 0.18 | 2.75 | 20.27 | 23.21 | 2.29 | 20.41 | 22.70 |
| California | 0.59 | 0.59 | 16.15 | 17.34 | 0.92 | 16.20 | 17.12 |
| Colorado | 1.25 | 3.89 | 19.47 | 24.60 | 3.46 | 19.81 | 23.27 |
| Connecticut | 0.24 | 2.43 | 16.28 | 18.94 | 1.42 | 16.48 | 17.90 |
| Delaware | 0.00 | 3.54 | 10.90 | 14.44 | 4.56 | 10.79 | 15.35 |
| District of Columbia | 0.30 | 2.47 | 15.47 | 18.24 | 4.54 | 15.19 | 19.73 |
| Florida | 0.66 | 2.28 | 18.52 | 21.46 | 3.36 | 18.45 | 21.80 |
| Georgia | 0.17 | 2.73 | 19.62 | 22.53 | 2.47 | 19.71 | 22.18 |
| Hawaii | 1.85 | 1.76 | 14.72 | 18.33 | 3.04 | 14.81 | 17.85 |
| Idaho | 0.85 | 3.66 | 21.89 | 26.40 | 4.91 | 21.80 | 26.71 |
| Illinois | 0.20 | 1.35 | 17.81 | 19.36 | 1.88 | 17.75 | 19.63 |
| Indiana | 0.20 | 2.79 | 20.45 | 23.45 | 2.07 | 20.65 | 22.72 |
| Iowa | 0.26 | 2.12 | 26.46 | 28.84 | 2.05 | 26.55 | 28.60 |
| Kansas | 0.33 | 2.81 | 22.73 | 25.88 | 3.25 | 22.71 | 25.96 |
| Kentucky | 0.31 | 2.01 | 19.22 | 21.54 | 1.12 | 19.46 | 20.58 |
| Louisiana | 0.17 | 1.62 | 16.77 | 18.56 | 2.12 | 16.71 | 18.83 |
| Maine | 0.04 | 1.11 | 21.55 | 22.71 | 1.53 | 21.47 | 22.99 |
| Maryland | 0.48 | 2.53 | 15.73 | 18.73 | 2.57 | 15.80 | 18.37 |
| Massachusetts | 1.17 | 1.80 | 16.60 | 19.56 | 1.07 | 16.92 | 17.99 |
| Michigan | 0.50 | 1.12 | 22.37 | 23.99 | 1.42 | 22.42 | 23.84 |
| Minnesota | 0.70 | 1.60 | 18.68 | 20.97 | 1.40 | 18.85 | 20.25 |
| Mississippi | 0.27 | 1.84 | 17.45 | 19.56 | 1.51 | 17.55 | 19.07 |
| Missouri | 0.15 | 2.42 | 24.48 | 27.06 | 1.53 | 24.75 | 26.28 |
| Montana | 0.04 | 3.30 | 15.36 | 18.69 | 3.92 | 15.26 | 19.18 |
| Nebraska | 0.01 | 4.46 | 20.06 | 24.52 | 2.87 | 20.39 | 23.26 |
| Nevada | 0.24 | 3.82 | 21.15 | 25.21 | 6.00 | 20.72 | 26.73 |
| New Hampshire | 0.24 | 4.45 | 15.69 | 20.38 | 4.77 | 15.68 | 20.45 |
| New Jersey | 0.44 | 1.81 | 12.48 | 14.74 | 2.12 | 12.50 | 14.62 |
| New Mexico | 0.22 | 3.29 | 15.54 | 19.05 | 1.83 | 15.81 | 17.64 |
| New York | 0.60 | 0.94 | 12.54 | 14.08 | 1.21 | 12.58 | 13.79 |
| North Carolina | 0.21 | 2.42 | 18.16 | 20.79 | 1.70 | 18.33 | 20.03 |
| North Dakota | 0.64 | 6.96 | 12.94 | 20.54 | 3.53 | 13.51 | 17.04 |
| Ohio | 0.18 | 1.30 | 22.28 | 23.76 | 1.23 | 22.34 | 23.57 |
| Oklahoma | 0.08 | 2.75 | 21.42 | 24.25 | 1.69 | 21.67 | 23.36 |
| Oregon | 0.61 | 1.84 | 19.97 | 22.42 | 2.67 | 19.92 | 22.59 |
| Pennsylvania | 0.33 | 1.36 | 16.36 | 18.05 | 1.38 | 16.41 | 17.79 |
| Rhode Island | 0.96 | 1.96 | 17.08 | 19.99 | 3.34 | 17.00 | 20.35 |
| South Carolina | 0.19 | 2.02 | 15.70 | 17.92 | 2.15 | 15.71 | 17.87 |

| State of Residence | Percent of Current-Year Residents Who: | | | | Percent of Prior Year Residents Who: | | |
|--------------------|--|--------------------------|------------------------|--------------------|--------------------------------------|------------------------|--------------------|
| | Moved from Outside the U.S. | Moved from Another State | Moved Within the State | Moved in Past Year | Moved to Another State | Moved Within the State | Moved in Past Year |
| South Dakota | 0.30 | 2.48 | 20.27 | 23.05 | 2.69 | 20.29 | 22.98 |
| Tennessee | 0.34 | 2.62 | 18.19 | 21.15 | 1.98 | 18.38 | 20.36 |
| Texas | 0.24 | 1.64 | 18.03 | 19.91 | 1.44 | 18.11 | 19.55 |
| Utah | 0.15 | 4.32 | 15.88 | 20.35 | 2.75 | 16.17 | 18.92 |
| Vermont | 0.13 | 2.72 | 14.63 | 17.48 | 3.11 | 14.59 | 17.70 |
| Virginia | 0.13 | 2.62 | 17.82 | 20.56 | 2.57 | 17.85 | 20.42 |
| Washington | 0.83 | 2.68 | 18.45 | 21.95 | 1.63 | 18.81 | 20.44 |
| West Virginia | 0.06 | 2.96 | 14.12 | 17.14 | 3.44 | 14.06 | 17.50 |
| Wisconsin | 0.26 | 1.43 | 22.00 | 23.69 | 1.89 | 21.95 | 23.85 |
| Wyoming | 0.23 | 2.47 | 23.29 | 25.99 | 6.96 | 22.27 | 29.23 |
| U.S. Total | 0.41 | 1.82 | 17.87 | 20.09 | 1.83 | 17.94 | 19.77 |

Source: Mathematica from the 2008 American Community Survey.

We cannot replicate the ACS operational measure of migration with MAXEM data because our linked records are limited to persons who were enrolled at both points in time. Furthermore, the estimates that we can construct from linked pairs in MAXEM do not mirror the 12-month ACS reference period for prior residence. Nevertheless, it is instructive to compare the ACS estimates with our own estimates of Medicaid cross-state migration based on the MAXEM data. For this purpose, we choose the across-year estimates from Table IV.16 as conceptually most similar to the ACS estimates of migration from the prior year to the current year among current year Medicaid enrollees. While the overall levels of migration are very different, given the way that we restricted the across-year links (Section A.4.a), we ought to observe similar patterns in the relative magnitudes of migration by state.

Indeed, there are distinct similarities in the two sets of estimates. The states with the two highest linkage rates, Nevada and Wyoming, have two of the three highest out-migration rates in the ACS as well (Table IV.25). The very high ACS estimate for Alaska has a wide confidence interval, so it may be overstated by a substantial margin.²⁶ Even so, Alaska does have one of the higher across-state linkage rates, so these results are not completely inconsistent. Continuing with other states, California has both the lowest linkage rate and the lowest ACS out-migration rate, and New York has the second lowest linkage rate and the third lowest ACS out-migration rate. Other state-specific results are mixed. For example, the cluster of states Montana, Idaho, North Dakota, and South Dakota has among the highest across-state linkage rates but a mix of

²⁶ The public-use sample for the ACS is on a one percent sample of U.S. households and residents of group quarters. Approximate sample sizes for estimates of totals can be derived by dividing the estimates by 100. The ACS estimate of the outmigration rate of Medicaid enrollees in Alaska is based on 800 to 850 respondents and has a standard error of 2.3 percentage points.

Table IV.25 Comparison of Across-State Linkage Rates to Independent Estimates of Across-State Migration of Medicaid Enrollees

| State | Percent of Medicaid Records Linking to Another State Across Years | Percent of Prior-Year Residents Who Moved to Another State (ACS) |
|----------------------|---|--|
| Alabama | 0.30 | 1.90 |
| Alaska | 0.78 | 13.13 |
| Arizona | 0.56 | 1.86 |
| Arkansas | 0.41 | 2.29 |
| California (SSN) | 0.20 | 0.92 |
| Colorado | 0.65 | 3.46 |
| Connecticut | 0.42 | 1.42 |
| Delaware | 0.51 | 4.56 |
| District of Columbia | 0.58 | 4.54 |
| Florida | 0.58 | 3.36 |
| Georgia | 0.50 | 2.47 |
| Hawaii | 0.47 | 3.04 |
| Idaho | 0.81 | 4.91 |
| Illinois | 0.27 | 1.88 |
| Indiana | 0.52 | 2.07 |
| Iowa | 0.64 | 2.05 |
| Kansas | 0.84 | 3.25 |
| Kentucky (SSN) | 0.41 | 1.12 |
| Louisiana (SSN) | 0.36 | 2.12 |
| Maine | 0.33 | 1.53 |
| Maryland | 0.43 | 2.57 |
| Massachusetts | 0.23 | 1.07 |
| Michigan | 0.33 | 1.42 |
| Minnesota (SSN) | 0.48 | 1.40 |
| Mississippi | 0.36 | 1.51 |
| Missouri | 0.53 | 1.53 |
| Montana | 0.92 | 3.92 |
| Nebraska | 0.80 | 2.87 |
| Nevada (SSN) | 1.48 | 6.00 |
| New Hampshire | 0.68 | 4.77 |
| New Jersey (SSN) | 0.38 | 2.12 |
| New Mexico (SSN) | 0.64 | 1.83 |
| New York | 0.26 | 1.21 |
| North Carolina | 0.40 | 1.70 |
| North Dakota | 1.05 | 3.53 |
| Ohio | 0.33 | 1.23 |
| Oklahoma | 0.54 | 1.69 |
| Oregon | 0.71 | 2.67 |
| Pennsylvania | 0.30 | 1.38 |
| Rhode Island | 0.46 | 3.34 |
| South Carolina | 0.37 | 2.15 |
| South Dakota | 0.73 | 2.69 |
| Tennessee | 0.27 | 1.98 |
| Texas | 0.35 | 1.44 |
| Utah | 0.77 | 2.75 |

| State | Percent of Medicaid Records Linking to Another State Across Years | Percent of Prior-Year Residents Who Moved to Another State (ACS) |
|----------------------|---|--|
| Vermont (SSN) | 0.45 | 3.11 |
| Virginia | 0.47 | 2.57 |
| Washington | 0.48 | 1.63 |
| West Virginia | 0.55 | 3.44 |
| Wisconsin | 0.33 | 1.89 |
| Wyoming | 1.09 | 6.96 |
| United States | 0.38 | 1.83 |

high and moderate ACS out-migration rates. Overall, however, the correlation between the two sets of rates is moderately strong at 0.608. In sum, the independent estimates from the ACS provide a degree of support for the observed state patterns of across-state, across-year linkages.

c. Multiple Linkages

While the overriding concern about the across-state linkages centers on the impact of missing SSNs, we also recognize that another area of concern about SSN quality involves possible SSN sharing and its potential role in creating false linkages across states. To explore this potential problem, we estimated the number of states in which each unique SSN was reported by a Medicaid enrollee in each of 2005 and 2006, and we did the same for MAXEM IDs after we completed the across-state unduplication. To unduplicate the MAXEM IDs, we required that records linked across states agree not only on their SSNs but on sex and at least two of the three parts of the DOB. If SSNs are being shared across states, we ought to find a reduction in the numbers of states in which individual SSNs appear when we base the count on MAXEM IDs—that is, unless the DOBs are being shared as well.

In 2005, 1.419 million MAX SSNs appeared in two or more states, with one SSN being reported in 10 states (Table IV.26). There was only a modest drop off with MAXEM IDs, as 1.368 million appeared in two or more states, with one showing up in 10 states as well. For both the SSNs and MAXEM IDs, 96.5 percent of those that occurred multiple times occurred exactly twice, and another 3.3 percent occurred exactly three times, leaving only 0.2 percent with appearances beyond three (calculated from the distributions in the table). While it is difficult to imagine that an individual could enroll in Medicaid in more than three states in a single year, the fraction of individuals who appear to have done so is exceedingly small. Clearly, the across-state linkage rates are not being influenced to any significant degree by SSNs that are reported in more than three states.

Table IV.26 MAX SSNs and MAXEM IDs Appearing in Multiple States, 2005 and 2006

| Number of States | 2005 | | 2006 | |
|------------------|------------------|------------------|------------------|------------------|
| | MAX SSNs | MAXEM IDs | MAX SSNs | MAXEM IDs |
| 2 | 1,369,413 | 1,320,671 | 1,330,039 | 1,277,914 |
| 3 | 47,125 | 45,007 | 44,221 | 42,166 |
| 4 | 2,185 | 2,115 | 1,888 | 1,812 |
| 5 | 179 | 168 | 162 | 157 |
| 6 | 27 | 23 | 39 | 40 |
| 7 | 12 | 10 | 5 | 3 |
| 8 | 1 | 2 | 3 | 3 |
| 9 | 0 | 0 | 0 | 0 |
| 10 | 1 | 1 | 0 | 0 |
| Total | 1,418,943 | 1,367,997 | 1,376,357 | 1,322,095 |

We also examined the joint occurrences in 2005 and 2006 among MAX SSNs that appeared in two or more states in either year. A majority of the SSNs that appeared in two states in 2005 appeared in only one state in 2006, and most of the SSNs that appeared in three states in 2005 appeared in fewer states in 2006 (Table IV.27). Even the SSNs that appeared in 8 or 10 states in 2005 appeared in only two in 2006. A similar table based on MAXEM IDs tells the same story (Table IV.28). While there may be good reason to be suspicious of SSNs that appear in more than two or three states in a given year, such SSNs are too rare to have much impact on our estimates.

d. Agreement on Race and BOE

Compared to the within-state linked pairs, the across-state linked pairs show markedly less agreement on race and BOE. For pairs linked across state but within the same year, 74.0 percent had the same race and BOE while 9.0 percent had a different race but the same BOE, 10.1 percent had a missing race but the same BOE, 5.1 percent had the same race but a different BOE, and 1.8 percent had a different or missing race and a different BOE (Table IV.29). For within-state linkages, the fraction with the same race and BOE was 89.1 percent. In all, 17 states had

discrepant race codes in 10 to 20 percent of their linked records. States varied less in the fraction with discrepant BOE codes. In only one state did this fraction exceed 10 percent (Colorado, based on summing 5.8 percent and 4.8 percent in the final two columns of the table), and the lowest incidence was 4.1 percent (Nebraska). Results for across-state linkages across years were similar (Table IV.30).

Table IV.27 MAX SSNs Appearing in Two or More States in 2005 or 2006: Occurrences in Both Years

| Occurrences in 2005 | Occurrences in 2006 | | | | | | | | | Total |
|---------------------|---------------------|----------------|------------------|---------------|--------------|------------|-----------|----------|----------|------------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
| 0 | 0 | 0 | 70,574 | 1,034 | 24 | 2 | 0 | 0 | 0 | 71,634 |
| 1 | 0 | 0 | 735,558 | 14,688 | 402 | 29 | 3 | 0 | 1 | 750,681 |
| 2 | 61,620 | 784,068 | 502,826 | 20,095 | 747 | 46 | 11 | 0 | 0 | 1,369,413 |
| 3 | 910 | 17,761 | 20,197 | 7,702 | 507 | 41 | 6 | 1 | 0 | 47,125 |
| 4 | 26 | 494 | 832 | 628 | 167 | 31 | 6 | 1 | 0 | 2,185 |
| 5 | 1 | 20 | 47 | 62 | 32 | 7 | 9 | 1 | 0 | 179 |
| 6 | 0 | 1 | 3 | 10 | 6 | 4 | 3 | 0 | 0 | 27 |
| 7 | 0 | 0 | 0 | 2 | 3 | 2 | 1 | 2 | 2 | 12 |
| 8 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Total | 62,557 | 802,344 | 1,330,039 | 44,221 | 1,888 | 162 | 39 | 5 | 3 | 2,241,258 |

Table IV.28 MAXEM IDs Appearing in Two or More States in 2005 or 2006: Occurrences in Both Years

| Occurrences in 2005 | Occurrences in 2006 | | | | | | | | | Total |
|---------------------|---------------------|----------------|------------------|---------------|--------------|------------|-----------|----------|----------|------------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
| 0 | 0 | 0 | 64,978 | 925 | 23 | 2 | 0 | 0 | 0 | 65,928 |
| 1 | 0 | 0 | 715,183 | 14,133 | 389 | 29 | 3 | 0 | 1 | 729,738 |
| 2 | 58,296 | 764,711 | 477,678 | 19,213 | 718 | 44 | 11 | 0 | 0 | 1,320,671 |
| 3 | 840 | 17,190 | 19,219 | 7,230 | 481 | 40 | 6 | 1 | 0 | 45,007 |
| 4 | 23 | 488 | 809 | 594 | 163 | 30 | 7 | 1 | 0 | 2,115 |
| 5 | 1 | 18 | 42 | 60 | 31 | 7 | 9 | 0 | 0 | 168 |
| 6 | 0 | 1 | 3 | 9 | 4 | 3 | 3 | 0 | 0 | 23 |
| 7 | 0 | 0 | 0 | 2 | 3 | 2 | 1 | 0 | 2 | 10 |
| 8 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 2 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Total | 59,160 | 782,408 | 1,277,914 | 42,166 | 1,812 | 157 | 40 | 3 | 3 | 2,163,663 |

Table IV.29 Agreement on Race and BOE Among Record Pairs Linked Across State and Within Year

| State | Same Race; Same BOE | Different Race; Same BOE | Missing Race; Same BOE | Same Race; Different BOE | Different or Missing Race; Different BOE |
|----------------------|------------------------|--------------------------------|---------------------------|-----------------------------|--|
| Alabama | 83.5 | 3.7 | 7.4 | 4.6 | 0.9 |
| Alaska | 70.6 | 12.5 | 10.1 | 5.1 | 1.7 |
| Arizona | 75.5 | 9.9 | 7.5 | 5.5 | 1.6 |
| Arkansas | 82.2 | 6.2 | 5.6 | 4.8 | 1.2 |
| California (SSN) | 72.5 | 11.1 | 10.4 | 4.4 | 1.6 |
| Colorado | 49.0 | 9.5 | 31.0 | 5.8 | 4.8 |
| Connecticut | 68.0 | 12.2 | 10.0 | 6.7 | 3.1 |
| Delaware | 78.8 | 8.9 | 4.2 | 6.9 | 1.3 |
| District of Columbia | 81.0 | 3.0 | 6.6 | 7.7 | 1.7 |
| Florida | 72.3 | 9.2 | 13.0 | 3.8 | 1.8 |
| Georgia | 73.5 | 10.6 | 7.4 | 6.3 | 2.1 |
| Hawaii | 67.3 | 18.7 | 7.8 | 4.4 | 1.8 |
| Idaho | 68.3 | 19.3 | 5.5 | 5.2 | 1.7 |
| Illinois | 74.6 | 8.8 | 7.2 | 7.4 | 2.0 |
| Indiana | 81.8 | 6.7 | 4.9 | 5.4 | 1.3 |
| Iowa | 55.0 | 6.7 | 32.7 | 3.2 | 2.5 |
| Kansas | 77.2 | 10.4 | 7.5 | 3.8 | 1.0 |
| Kentucky (SSN) | 81.9 | 5.5 | 6.3 | 5.1 | 1.3 |
| Louisiana (SSN) | 80.9 | 4.3 | 9.1 | 4.6 | 1.1 |
| Maine | 62.3 | 6.0 | 23.3 | 5.2 | 3.1 |
| Maryland | 77.7 | 5.8 | 8.5 | 6.6 | 1.5 |
| Massachusetts | 50.0 | 10.0 | 30.8 | 4.4 | 4.8 |
| Michigan | 79.9 | 8.2 | 6.1 | 4.7 | 1.1 |
| Minnesota (SSN) | 77.5 | 6.7 | 9.6 | 4.8 | 1.4 |
| Mississippi | 81.3 | 3.8 | 8.8 | 4.8 | 1.4 |
| Missouri | 76.2 | 9.9 | 6.8 | 5.6 | 1.5 |
| Montana | 77.3 | 9.0 | 5.2 | 6.7 | 1.7 |
| Nebraska | 72.2 | 9.7 | 14.0 | 3.0 | 1.1 |
| Nevada (SSN) | 78.3 | 12.6 | 4.8 | 3.3 | 0.9 |
| New Hampshire | 67.5 | 6.8 | 15.1 | 7.5 | 3.1 |
| New Jersey (SSN) | 54.7 | 20.0 | 15.5 | 5.5 | 4.3 |
| New Mexico (SSN) | 75.1 | 12.3 | 7.8 | 3.2 | 1.6 |
| New York | 63.1 | 15.0 | 13.6 | 5.3 | 3.1 |
| North Carolina | 75.1 | 6.9 | 9.7 | 6.5 | 1.7 |
| North Dakota | 81.4 | 8.7 | 4.2 | 4.4 | 1.2 |
| Ohio | 82.4 | 7.6 | 4.2 | 4.9 | 0.9 |
| Oklahoma | 79.8 | 11.0 | 3.9 | 4.3 | 1.0 |
| Oregon | 69.9 | 8.5 | 13.7 | 5.8 | 2.0 |
| Pennsylvania | 72.5 | 10.8 | 9.3 | 5.5 | 1.8 |
| Rhode Island | 41.4 | 6.3 | 45.1 | 3.4 | 3.8 |
| South Carolina | 78.4 | 5.2 | 9.4 | 5.6 | 1.4 |
| South Dakota | 78.1 | 11.1 | 5.9 | 4.0 | 0.9 |
| Tennessee | 79.9 | 4.8 | 7.3 | 6.4 | 1.6 |
| Texas | 79.3 | 9.1 | 6.5 | 4.0 | 1.1 |
| Utah | 74.0 | 11.2 | 5.9 | 7.3 | 1.7 |

| State | Same Race; Same BOE | Different Race; Same BOE | Missing Race; Same BOE | Same Race; Different BOE | Different or Missing Race; Different BOE |
|----------------------|------------------------|--------------------------------|---------------------------|-----------------------------|--|
| Vermont (SSN) | 53.1 | 3.1 | 34.9 | 5.1 | 3.8 |
| Virginia | 77.1 | 9.2 | 5.5 | 6.6 | 1.6 |
| Washington | 65.6 | 13.4 | 15.1 | 3.8 | 2.1 |
| West Virginia | 85.5 | 5.2 | 3.6 | 5.0 | 0.6 |
| Wisconsin | 63.6 | 5.8 | 23.7 | 4.0 | 3.0 |
| Wyoming | 78.2 | 8.8 | 7.0 | 4.8 | 1.2 |
| United States | 74.0 | 9.0 | 10.1 | 5.1 | 1.8 |

Table IV.30 Agreement on Race and BOE among Record Pairs Linked Across State and Across Year

| State | Same Race; Same BOE | Different Race; Same BOE | Missing Race; Same BOE | Same Race; Different BOE | Different or Missing Race; Different BOE |
|----------------------|------------------------|--------------------------------|---------------------------|-----------------------------|--|
| Alabama | 82.4 | 4.0 | 7.0 | 5.7 | 1.0 |
| Alaska | 69.8 | 11.9 | 10.8 | 5.4 | 2.1 |
| Arizona | 73.6 | 9.6 | 7.5 | 7.2 | 2.0 |
| Arkansas | 81.9 | 6.0 | 5.6 | 5.3 | 1.3 |
| California (SSN) | 71.6 | 10.9 | 10.5 | 5.2 | 1.9 |
| Colorado | 49.3 | 8.9 | 30.6 | 6.3 | 5.0 |
| Connecticut | 68.6 | 12.1 | 9.1 | 7.1 | 3.2 |
| Delaware | 77.2 | 8.7 | 4.4 | 8.2 | 1.5 |
| District of Columbia | 81.3 | 3.2 | 5.6 | 8.6 | 1.3 |
| Florida | 72.0 | 9.0 | 12.4 | 4.5 | 2.1 |
| Georgia | 71.6 | 11.1 | 6.9 | 8.0 | 2.4 |
| Hawaii | 65.5 | 17.5 | 8.7 | 5.9 | 2.5 |
| Idaho | 68.7 | 17.4 | 6.1 | 5.9 | 1.8 |
| Illinois | 73.5 | 8.5 | 7.4 | 8.3 | 2.3 |
| Indiana | 81.0 | 6.4 | 5.0 | 6.2 | 1.3 |
| Iowa | 51.6 | 5.9 | 35.7 | 3.4 | 3.3 |
| Kansas | 76.8 | 10.2 | 7.2 | 4.7 | 1.2 |
| Kentucky (SSN) | 81.4 | 5.7 | 5.5 | 6.0 | 1.4 |
| Louisiana (SSN) | 81.2 | 4.5 | 8.3 | 4.8 | 1.1 |
| Maine | 60.5 | 5.9 | 23.5 | 6.3 | 3.9 |
| Maryland | 76.4 | 5.8 | 8.4 | 7.7 | 1.7 |
| Massachusetts | 49.8 | 9.0 | 30.5 | 5.4 | 5.3 |
| Michigan | 78.9 | 8.1 | 6.0 | 5.8 | 1.3 |
| Minnesota (SSN) | 76.7 | 6.5 | 9.4 | 5.8 | 1.6 |
| Mississippi | 81.4 | 3.4 | 8.4 | 5.3 | 1.5 |
| Missouri | 75.6 | 9.5 | 7.0 | 6.3 | 1.6 |
| Montana | 76.0 | 8.8 | 5.4 | 7.8 | 2.0 |
| Nebraska | 70.8 | 9.2 | 14.7 | 4.0 | 1.3 |
| Nevada (SSN) | 77.5 | 12.7 | 4.9 | 3.9 | 1.0 |
| New Hampshire | 66.1 | 5.8 | 16.3 | 8.2 | 3.7 |
| New Jersey (SSN) | 53.7 | 20.4 | 14.0 | 6.8 | 5.2 |
| New Mexico (SSN) | 75.4 | 11.5 | 7.2 | 4.5 | 1.5 |
| New York | 64.0 | 14.6 | 11.9 | 6.2 | 3.2 |
| North Carolina | 74.1 | 6.9 | 9.5 | 7.7 | 1.9 |
| North Dakota | 79.9 | 8.6 | 4.4 | 5.9 | 1.2 |
| Ohio | 81.9 | 7.0 | 4.3 | 5.8 | 0.9 |
| Oklahoma | 79.2 | 10.4 | 3.9 | 5.3 | 1.1 |
| Oregon | 68.1 | 7.7 | 14.9 | 7.0 | 2.3 |
| Pennsylvania | 72.5 | 10.8 | 8.3 | 6.4 | 2.0 |
| Rhode Island | 41.9 | 6.1 | 43.6 | 4.2 | 4.2 |
| South Carolina | 77.3 | 5.3 | 9.4 | 6.5 | 1.5 |
| South Dakota | 77.6 | 11.0 | 5.9 | 4.5 | 1.0 |
| Tennessee | 81.6 | 5.3 | 5.1 | 6.7 | 1.3 |
| Texas | 78.7 | 9.6 | 6.1 | 4.4 | 1.2 |
| Utah | 72.3 | 10.6 | 6.1 | 9.1 | 2.0 |

| State | Same Race; Same BOE | Different Race; Same BOE | Missing Race; Same BOE | Same Race; Different BOE | Different or Missing Race; Different BOE |
|----------------------|------------------------|--------------------------------|---------------------------|-----------------------------|--|
| Vermont (SSN) | 50.8 | 3.1 | 36.6 | 5.3 | 4.1 |
| Virginia | 76.3 | 9.7 | 4.9 | 7.5 | 1.6 |
| Washington | 64.0 | 11.7 | 17.2 | 4.5 | 2.6 |
| West Virginia | 84.7 | 5.2 | 3.3 | 6.2 | 0.6 |
| Wisconsin | 65.2 | 6.2 | 20.7 | 4.8 | 3.1 |
| Wyoming | 78.6 | 8.4 | 6.7 | 5.1 | 1.2 |
| United States | 73.1 | 9.1 | 9.9 | 5.9 | 2.0 |

While linkage errors could very well play a role, another possible explanation for the much greater differences by race compared to the within-state linkages is that states differ in how they apply the race codes. Certainly this bears scrutiny in future MAXEM work. The more modest increase in discrepant BOE codes is consistent with this interpretation. If linkage error were the principal cause of the increase incidence of discrepant race codes, then we ought to have seen a similar increase in discrepant BOE codes.

C. OUTPUT FILES

The files that were produced for this project include two MAXEM research files for national and cross-state analyses—one for 2005 and another for 2006—as well as two cross-reference files—one for each year—for cross-year and more in-depth national and cross-state studies. Each MAXEM file contains one record for each unique person enrolled in Medicaid or S-CHIP (for states that submit S-CHIP data to MSIS) in each state. It includes a MAXEM person identifier and a subset of variables from MAX PS files that can be used to produce basic counts of Medicaid enrollment by enrollee characteristic and service use. The associated cross-reference file contains only linkage variables designed to be used with MAX files for unduplicating records within a state and year and across years and states. This section describes the contents and layout of the MAXEM and cross-reference files. Because the cross-reference files were produced first and then used to create the MAXEM files, we describe their contents before detailing the MAXEM file structure.

1. MAXEM Cross-Reference File

The construction of the MAXEM file required us to map each record in state PS files to a unique MAXEM ID. To do so, we created a cross-reference file for each of 2005 and 2006 that contains one record for each record found in the PS file for the corresponding year. For example, if a person had two records in MAX 2005 in Arizona, another record in MAX 2006 in Arizona,

and a fourth record in MAX 2006 in California, we included two records in the MAXEM cross-reference file for 2005 and two records in the cross-reference file for 2006. Each of the four records has the same MAXEM ID. Table IV.31 lists the fields included in the cross-reference file for each year.

Table IV.31 Variable List for CMS Cross-Reference File

| Variable | Label |
|----------------|--|
| FNL_MAXEM_ID | MAXEM ID |
| STATE | STATE |
| YEAR | YEAR |
| MSIS ID | Original MSIS ID |
| FLAG_CLMNOELIG | Flag- Claims but no eligibility record |

Although it was a necessary part of the development of MAXEM, the cross-reference file may also be useful to researchers using MAX who want to link and unduplicate records. While the MAXEM research files will be sufficient for researchers interested in basic demographic and enrollment characteristics of unique enrollees, others will need to create their own analytic files to study measures not included in MAXEM—for example, expenditure patterns among enrollees in more than one state or more than one year. The MAXEM cross-reference file will enable researchers to merge records for the same individual within a MAX year and across years and states.

2. MAXEM Research File

Two MAXEM research files were constructed—one file representing unique persons in each state in MAX 2005 and the other in MAX 2006. Unlike the cross-reference file, which is intended for linking purposes only, MAXEM is a stand-alone research file containing one record per unique individual in the MAX PS files within a state (and year). A person enrolled in Medicaid in more than one state will have one record per state, but all of these records will have the same MAXEM ID.

Table IV.32 Variable List for CMS MAXEM Research File

| Variable | Label |
|--------------|--|
| FNL_MAXEM_ID | Final MAXEM ID |
| STATE | State |
| YEAR | Year |
| NSTATE | Total number of states person is enrolled in specific year |
| NEW_MAX_SSN | Updated SSN (from MAX) |
| NEW_EDB_SSN | Updated SSN (from EDB) |
| NEW_HIC | Updated Medicare HIC number |
| NEW_DOB | Updated date of birth |
| NEW_SEX | Updated sex |
| NEW_RACETHN | Updated race/ethnicity (from MAX) |
| NEW_CHIP_1 | Updated SCHIP eligibility (Jan) |
| NEW_CHIP_2 | Updated SCHIP eligibility (Feb) |
| NEW_CHIP_3 | Updated SCHIP eligibility (Mar) |
| NEW_CHIP_4 | Updated SCHIP eligibility (Apr) |
| NEW_CHIP_5 | Updated SCHIP eligibility (May) |
| NEW_CHIP_6 | Updated SCHIP eligibility (Jun) |
| NEW_CHIP_7 | Updated SCHIP eligibility (Jul) |
| NEW_CHIP_8 | Updated SCHIP eligibility (Aug) |
| NEW_CHIP_9 | Updated SCHIP eligibility (Sep) |
| NEW_CHIP_10 | Updated SCHIP eligibility (Oct) |
| NEW_CHIP_11 | Updated SCHIP eligibility (Nov) |
| NEW_CHIP_12 | Updated SCHIP eligibility (Dec) |
| NEW_UEG_ANN | Updated uniform eligibility group (annual) |
| NEW_UEG_1 | Updated MAX eligibility group (Jan) |
| NEW_UEG_2 | Updated MAX eligibility group (Feb) |
| NEW_UEG_3 | Updated MAX eligibility group (Mar) |
| NEW_UEG_4 | Updated MAX eligibility group (Apr) |
| NEW_UEG_5 | Updated MAX eligibility group (May) |
| NEW_UEG_6 | Updated MAX eligibility group (Jun) |
| NEW_UEG_7 | Updated MAX eligibility group (Jul) |
| NEW_UEG_8 | Updated MAX eligibility group (Aug) |
| NEW_UEG_9 | Updated MAX eligibility group (Sep) |
| NEW_UEG_10 | Updated MAX eligibility group (Oct) |
| NEW_UEG_11 | Updated MAX eligibility group (Nov) |
| NEW_UEG_12 | Updated MAX eligibility group (Dec) |
| NEW_RBF_ANN | Updated restricted benefits flag (annual) |
| NEW_DUAL_ANN | Updated Medicare/Medicaid Dual (annual) |
| NEW_TOS_01 | Updated type of service indicator (MAX TOS 01) |
| NEW_TOS_02 | Updated type of service indicator (MAX TOS 02) |
| NEW_TOS_04 | Updated type of service indicator (MAX TOS 04) |
| NEW_TOS_05 | Updated type of service indicator (MAX TOS 05) |
| NEW_TOS_07 | Updated type of service indicator (MAX TOS 07) |
| NEW_TOS_08 | Updated type of service indicator (MAX TOS 08) |
| NEW_TOS_09 | Updated type of service indicator (MAX TOS 09) |
| NEW_TOS_10 | Updated type of service indicator (MAX TOS 10) |
| NEW_TOS_10 | Updated type of service indicator (MAX TOS 10) |
| NEW_TOS_11 | Updated type of service indicator (MAX TOS 11) |
| NEW_TOS_12 | Updated type of service indicator (MAX TOS 12) |

| Variable | Label |
|------------|--|
| NEW_TOS_13 | Updated type of service indicator (MAX TOS 13) |
| NEW_TOS_15 | Updated type of service indicator (MAX TOS 15) |
| NEW_TOS_16 | Updated type of service indicator (MAX TOS 16) |
| NEW_TOS_19 | Updated type of service indicator (MAX TOS 19) |
| NEW_TOS_20 | Updated type of service indicator (MAX TOS 20) |
| NEW_TOS_21 | Updated type of service indicator (MAX TOS 21) |
| NEW_TOS_22 | Updated type of service indicator (MAX TOS 22) |
| NEW_TOS_24 | Updated type of service indicator (MAX TOS 24) |
| NEW_TOS_25 | Updated type of service indicator (MAX TOS 25) |
| NEW_TOS_26 | Updated type of service indicator (MAX TOS 26) |
| NEW_TOS_30 | Updated type of service indicator (MAX TOS 30) |
| NEW_TOS_31 | Updated type of service indicator (MAX TOS 31) |
| NEW_TOS_33 | Updated type of service indicator (MAX TOS 33) |
| NEW_TOS_34 | Updated type of service indicator (MAX TOS 34) |
| NEW_TOS_35 | Updated type of service indicator (MAX TOS 35) |
| NEW_TOS_36 | Updated type of service indicator (MAX TOS 36) |
| NEW_TOS_37 | Updated type of service indicator (MAX TOS 37) |
| NEW_TOS_38 | Updated type of service indicator (MAX TOS 38) |
| NEW_TOS_39 | Updated type of service indicator (MAX TOS 39) |
| NEW_TOS_51 | Updated type of service indicator (MAX TOS 51) |
| NEW_TOS_52 | Updated type of service indicator (MAX TOS 52) |
| NEW_TOS_53 | Updated type of service indicator (MAX TOS 53) |
| NEW_TOS_54 | Updated type of service indicator (MAX TOS 54) |
| NEW_TOS_99 | Updated type of service indicator (MAX TOS 99) |

The core variables included in the MAXEM files were defined by CMS and include basic identifiers (MAX SSN, EDB-SSN, HIC, state, and year), demographic characteristics (sex, DOB, and race/ethnicity), the final MAXEM ID, the total number of states in which the person was enrolled in that year, eligibility characteristics (dual Medicare and Medicaid enrollment status, MAX annual and monthly CHIP and uniform eligibility group codes), and both service use and premium payment indicators (for capitation payments associated with managed care enrollment).

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V. IMPACT OF UNDUPLICATION

In the design report, we proposed creating a series of public-use tables to show MAXEM users the impact of unduplication on state and national estimates of the full range of enrollee variables included in the MAXEM research files. These tables are reproduced in the Appendix, which also includes an overview. Section A of this chapter summarizes select findings, including unduplicated counts of Medicaid enrollees nationally in 2005 and 2006. Section B presents tabulations of cross-state linkages by state pairs.

A. Selected Findings from Unduplication

The principal finding from the unduplication of Medicaid records nationally is an estimate of the unduplicated number of Medicaid enrollees nationally in each of 2005 and 2006. Results for both years are presented in Table V.1. In 2005, duplicate records within states accounted for just 0.30 percent of the total Medicaid enrollment records in the MAX PS file (including enrollees with only S-CHIP during the year) whereas cross-state duplicates accounted for 2.34 percent of the total enrollment records. Subtracting these duplicates from the 60.516 million total Medicaid and S-CHIP-only enrollment records yields an unduplicated count of 58.917 million enrollees in 2005, or 97.36 percent of the total enrollment records. The figures for 2006 were very similar. The unduplicated annual enrollment in Medicaid and S-CHIP-only in 2006 was 97.52 percent of the total enrollment records for that year.

Before unduplication, there were about 891,000 S-CHIP-only enrollees in 2005 and 1.061 million in 2006. Duplication was less common among S-CHIP enrollees than among other Medicaid enrollees. The unduplicated total number of S-CHIP-only enrollees was 98.26 percent of the 2005 total S-CHIP-only enrollees and 98.45 percent of the 2006 total S-CHIP-only enrollees. The unduplicated count of Medicaid enrollees excluding those with only S-CHIP was 58.041 million in 2005 and 58.281 million in 2006.

Table V.1 Unduplication of National Annual Medicaid Enrollment, 2005 and 2006

| Enrollee Population | Number of Enrollment Records | | Percent of Total Enrollment Records | |
|---|------------------------------|------------|-------------------------------------|--------|
| | 2005 | 2006 | 2005 | 2006 |
| Medicaid Including S-CHIP Only | | | | |
| Total Medicaid and S-CHIP Records in MAX PS | 60,515,865 | 60,832,034 | 100.00 | 100.00 |
| Duplicate Records Within States | 181,000 | 137,705 | 0.30 | 0.23 |
| Duplicate Records Across States | 1,417,953 | 1,368,740 | 2.34 | 2.25 |
| Unduplicated Medicaid and S-CHIP Enrollment | 58,916,912 | 59,325,589 | 97.36 | 97.52 |
| S-CHIP Only | | | | |
| Total S-CHIP Only Records in MAX PS | 891,163 | 1,061,213 | 100.00 | 100.00 |
| Duplicate Records Within States | 4,811 | 4,521 | 0.54 | 0.43 |
| Duplicate Records Across States | 10,678 | 11,879 | 1.20 | 1.12 |
| Unduplicated S-CHIP Only Enrollment | 875,674 | 1,044,813 | 98.26 | 98.45 |
| Medicaid Excluding S-CHIP Only | | | | |
| Total Medicaid Records in MAX PS | 59,624,702 | 59,770,821 | 100.00 | 100.00 |
| Duplicate Records Within States | 176,189 | 133,184 | 0.30 | 0.22 |
| Duplicate Records Across States | 1,407,275 | 1,356,861 | 2.36 | 2.27 |
| Unduplicated Medicaid Enrollment | 58,041,238 | 58,280,776 | 97.34 | 97.51 |

The incidence of duplication in Medicaid enrollment varies by eligibility group. Disabled and child beneficiaries have twice the rate of duplication as aged beneficiaries and about 50 percent more duplication than adult beneficiaries. In 2005, the unduplicated annual enrollment of aged beneficiaries was 98.42 percent of the total annual enrollment of this subpopulation (Table V.2).²⁷ The unduplicated annual enrollment was 96.93 percent of the annual total enrollment for disabled beneficiaries, 96.87 percent for child beneficiaries, and 98.11 percent for adult beneficiaries. The unduplicated totals for these eligibility groups accounted for similar shares of total enrollment in 2006 (Table V.3). We are not surprised that aged beneficiaries have the lowest level of duplication, given their likely low rates of geographic mobility, but we would not

²⁷ To calculate an unduplicated national total, we weighted each record by the inverse of the number of states in which that individual was enrolled during the calendar year. For example, if the individual was enrolled in two states, the weight was 1/2. If the individual was classified as a child in one state and an adult in the other, then the individual would be counted in both eligibility groups but as half an enrollee in each.

have expected to find the highest rates of duplication among disabled and child beneficiaries, or to find adult beneficiaries more similar to aged beneficiaries than to either disabled or child beneficiaries. This suggests a need for further research, for which the MAXEM data may be uniquely well suited.

Table V.2 Unduplication of National Annual Medicaid Enrollment by Basis of Eligibility, 2005

| Enrollee Population | Aged | Disabled | Child | Adult |
|-------------------------------------|-----------|-----------|------------|------------|
| Number of Enrollment Records | | | | |
| Total Medicaid Records in MAX PS | 5,484,215 | 9,016,615 | 29,690,217 | 15,433,655 |
| Duplicate Records Within States | 26,560 | 20,390 | 104,512 | 24,727 |
| Duplicate Records Across States | 60,280 | 255,971 | 824,691 | 266,333 |
| Unduplicated Medicaid Enrollment | 5,397,375 | 8,740,254 | 28,761,014 | 15,142,595 |
| Percent of Total Enrollment Records | | | | |
| Total Medicaid Records in MAX PS | 100.00 | 100.00 | 100.00 | 100.00 |
| Duplicate Records Within States | 0.48 | 0.23 | 0.35 | 0.16 |
| Duplicate Records Across States | 1.10 | 2.84 | 2.78 | 1.73 |
| Unduplicated Medicaid Enrollment | 98.42 | 96.93 | 96.87 | 98.11 |

Note: Estimates exclude S-CHIP only enrollment.

Table V.3 Unduplication of National Annual Medicaid Enrollment by Basis of Eligibility, 2006

| Enrollee Population | Aged | Disabled | Child | Adult |
|-------------------------------------|-----------|-----------|------------|------------|
| Number of Enrollment Records | | | | |
| Total Medicaid Records in MAX PS | 5,324,879 | 9,160,962 | 29,828,370 | 15,456,610 |
| Duplicate Records Within States | 10,155 | 18,934 | 79,884 | 24,211 |
| Duplicate Records Across States | 59,763 | 252,068 | 791,513 | 253,516 |
| Unduplicated Medicaid Enrollment | 5,254,961 | 8,889,960 | 28,956,973 | 15,178,883 |
| Percent of Total Enrollment Records | | | | |
| Total Medicaid Records in MAX PS | 100.00 | 100.00 | 100.00 | 100.00 |
| Duplicate Records Within States | 0.19 | 0.21 | 0.27 | 0.16 |
| Duplicate Records Across States | 1.12 | 2.75 | 2.65 | 1.64 |
| Unduplicated Medicaid Enrollment | 98.69 | 97.04 | 97.08 | 98.20 |

Note: Estimates exclude S-CHIP only enrollment.

An estimate of the percentage of enrollee records that are duplicates is not the same as an estimate of the fraction of enrollees with multiple records. There are more duplicates than

enrollees with multiple enrollment records because an enrollee can have more than two enrollment records. As we reported in Chapter IV, however, more than 96 percent of enrollees who were enrolled in more than one state in 2005 or 2006 were enrolled in just two states. This implies that estimates of the percentage of enrollee records that are duplicates, as reported in Tables V.1 through V.3, will differ by only a few percentage points from estimates of the percentage of enrollees with multiple enrollment records, as reported in Chapter IV. We identified 1.368 million Medicaid plus S-CHIP-only enrollees who were enrolled in multiple states in 2005, and 1.322 million in 2006 (Table IV.26). These compare to estimates of 1.418 million duplicate Medicaid plus S-CHIP-only enrollee records across states in 2005 and 1.369 million in 2006 (Table V.1). Dividing the number enrolled in more than one state by the unduplicated count of enrollees from Table V.1, we estimate that 2.32 percent of unique Medicaid and S-CHIP-only enrollees in 2005 and 2.23 percent in 2006 were enrolled in more than one state.

These estimates of the proportion of unique Medicaid and S-CHIP enrollees who were eligible in more than one state in the same calendar year can be compared to estimates generated by a recent project that linked MSIS records from 2000 to 2002 to several household surveys in order to evaluate Medicaid reporting. This project, which was conducted by a team from several organizations, including CMS, estimated that 2.2 percent of unique individuals who were eligible for Medicaid in the same calendar year were eligible in more than one state *in the same month* (Research Project to Understand the Medicaid Undercount 2007). In addition, 1.7 percent were eligible not only in the same month but for more than the number of days in the month—true evidence of duplicate enrollment. Our own estimates reflect a less restrictive definition of

duplicate enrollment consistent with our desire to determine how many unique individuals were ever enrolled in Medicaid during a given calendar year.²⁸ That they approximate the upper bound of the estimates produced by the Medicaid Undercount project gives us confidence that we have identified a very large fraction of the duplicate enrollees within the 2005 and 2006 MAX PS files.

B. Cross-state Linkages

In Chapter IV we documented the relative frequency of cross-state linkages by state. Here we document the frequency with which each combination of states occurred in pairs of records linked within year (specifically 2005) and between years (2005 and 2006). The frequencies of individual pairs of states are reflective of migration patterns among Medicaid enrollees who moved and re-enrolled within the same calendar year or who moved at some point between one year and the next and were enrolled in the first state in 2005 and the second state in 2006.

Counts of pairs of records linked across states within 2005 are reported in Table V.4. In all, there were 1.471 million linked pairs, where each pair represents two states in no particular order. There are a dozen state pairings with frequencies in excess of 10,000. The pair with the highest frequency by far is Louisiana-Texas, with 49,171. As noted earlier, 2005 was the year that Hurricane Katrina struck New Orleans, producing extensive dislocation of Louisiana residents. Florida-New York is next most common pair, with a frequency of 28,091. Arizona-California and Florida-Georgia follow, with frequencies over 24,000. California-Texas, California-Nevada, and New York-Pennsylvania follow in that order, with frequencies ranging

²⁸ The project also limited the estimate of duplicates to SSNs that were successfully validated by comparing the sex and DOB to the corresponding information maintained in SSA records. The impact of this restriction is not obvious. Validated SSNs could produce a higher linkage rate because of their higher quality and, perhaps more importantly, the smaller denominator, but they also preclude linkages that result from SSN sharing—that is, different individuals using the same SSN—except where the individuals who are sharing the same SSN also share the same sex and DOB (at least as reported to Medicaid).

from 17,445 down to 16,014. The remaining pairs, in order, are Illinois-Indiana (15,876), California-Washington (14,681), Georgia-Louisiana (13,879), Oklahoma-Texas (10,613), and North Carolina-New York (10,137). These combinations reflect the importance of proximity (seven of the pairs involve neighboring states), size, and a rare, momentous event (producing an evacuation).

Table V.5 reports counts of pairs linked across states within 2006. The findings are very similar to those for 2005, both in terms of total linked pairs and the frequency of specific state-to-state transitions.

Table V.6 provides counts of cross-year, cross-state pairs. These differ from the within-year pairs in Tables V.4 and V.5 in that they have direction. The rows indicate the 2005 state, and the columns indicate the 2006 state. To compare the counts in Table V.6 with those in Table V.4, one must sum the flows between pairs of states in both directions reported in Table V.6, since Table V.4 reports the combined flows in a single number. In addition, Table V.6 reports two estimates for each state pair—one showing movement from the first state to the second and the other showing movement from the second state to the first. For example, the table shows that 200 persons moved from California to Alabama while 88 moved from Alabama to California.

In general, Table V.6 supports the same conclusions as Tables V.4 and V.5—namely, that the magnitudes of flows between states reflect the importance of proximity, size, and special events. And while the counts in Table V.6 are low because we restricted the across-state pairs to those that were not already included among the within-state pairs, they convey useful information about the direction of movement between states. We see, for example, that the movement of enrollees from California to Arizona and Nevada is twice the size of the movement in the reverse direction. Specifically, 3,172 enrollees moved from California to Arizona but only 1,494 moved from Arizona to California; and 1,940 enrollees moved from California to Nevada

but only 1,144 moved from Nevada to California. Other pairings show asymmetric migration as well. For instance, reflecting the impact of Hurricane Katrina, 1,583 enrollees moved from Louisiana to Texas while only 895 moved from Texas to Louisiana.

Table V.4a. Cross-State Linked Pairs, 2005

| State | AL | AK | AZ | AR | CA | CO | CT | DE | DC | FL | GA |
|-------|----|----|-----|-----|--------|-------|-----|-----|-----|-------|--------|
| AL | 0 | 77 | 381 | 765 | 1,740 | 311 | 212 | 59 | 46 | 7,327 | 9,437 |
| AK | 0 | 0 | 329 | 92 | 1,069 | 176 | 20 | 8 | 2 | 276 | 144 |
| AZ | 0 | 0 | 0 | 859 | 24,241 | 3,191 | 277 | 113 | 26 | 2,039 | 1,093 |
| AR | 0 | 0 | 0 | 0 | 3,868 | 650 | 74 | 43 | 19 | 1,890 | 1,296 |
| CA | 0 | 0 | 0 | 0 | 0 | 6,471 | 579 | 224 | 222 | 6,925 | 5,969 |
| CO | 0 | 0 | 0 | 0 | 0 | 0 | 93 | 38 | 37 | 1,854 | 814 |
| CT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 130 | 30 | 4,098 | 1,126 |
| DE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 36 | 814 | 433 |
| DC | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 317 | 337 |
| FL | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24,075 |
| GA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| HI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| IL | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| IN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| IA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| KS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| KY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ME | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MD | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MO | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NV | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NH | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NJ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NC | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ND | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| OH | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| OK | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| OR | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| RI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SC | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SD | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TX | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| UT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| VT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| VA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| State | AL | AK | AZ | AR | CA | CO | CT | DE | DC | FL | GA |
|-------|----|----|-----|-------|--------|--------|-------|-----|-----|--------|--------|
| WV | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 77 | 710 | 1,716 | 30,918 | 10,799 | 1,255 | 615 | 418 | 25,540 | 44,724 |

Table V.4b. Cross-State Linked Pairs, 2005

| State | HI | ID | IL | IN | IA | KS | KY | LA | ME | MD | MA |
|-------|-------|-------|-------|--------|-------|-------|-------|--------|-------|-------|-------|
| AL | 49 | 72 | 1,738 | 933 | 214 | 217 | 856 | 3,351 | 131 | 374 | 299 |
| AK | 339 | 256 | 75 | 71 | 42 | 48 | 44 | 121 | 44 | 30 | 54 |
| AZ | 391 | 1,085 | 3,274 | 1,357 | 860 | 837 | 469 | 1,234 | 272 | 447 | 661 |
| AR | 48 | 156 | 2,894 | 928 | 639 | 1,089 | 598 | 4,998 | 83 | 172 | 139 |
| CA | 2,589 | 3,694 | 7,449 | 2,793 | 1,746 | 2,181 | 1,197 | 6,460 | 441 | 1,566 | 2,038 |
| CO | 153 | 530 | 1,450 | 519 | 598 | 1,495 | 289 | 1,294 | 124 | 246 | 240 |
| CT | 25 | 9 | 237 | 123 | 52 | 42 | 56 | 202 | 681 | 300 | 3,128 |
| DE | 9 | 17 | 101 | 80 | 31 | 12 | 53 | 130 | 42 | 2,730 | 123 |
| DC | 2 | 1 | 85 | 25 | 7 | 8 | 20 | 229 | 2 | 7,699 | 58 |
| FL | 372 | 336 | 7,119 | 4,514 | 912 | 846 | 3,902 | 5,976 | 1,344 | 3,313 | 8,656 |
| GA | 172 | 136 | 4,878 | 2,024 | 502 | 626 | 1,915 | 13,879 | 304 | 1,992 | 1,690 |
| HI | 0 | 73 | 136 | 50 | 25 | 61 | 43 | 82 | 31 | 59 | 91 |
| ID | 0 | 0 | 207 | 104 | 144 | 144 | 96 | 143 | 25 | 67 | 68 |
| IL | 0 | 0 | 0 | 15,876 | 6,404 | 957 | 2,836 | 2,676 | 144 | 556 | 588 |
| IN | 0 | 0 | 0 | 0 | 644 | 363 | 6,570 | 1,233 | 96 | 327 | 208 |
| IA | 0 | 0 | 0 | 0 | 0 | 504 | 223 | 559 | 75 | 106 | 96 |
| KS | 0 | 0 | 0 | 0 | 0 | 0 | 229 | 711 | 63 | 105 | 106 |
| KY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,113 | 102 | 264 | 153 |
| LA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 139 | 1,010 | 441 |
| ME | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 155 | 2,502 |
| MD | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 567 |
| MA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MO | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NV | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NH | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NJ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NC | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ND | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| OH | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| OK | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| OR | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| RI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SC | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SD | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TX | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| UT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| VT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| VA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| State | HI | ID | IL | IN | IA | KS | KY | LA | ME | MD | MA |
|-------|-------|-------|--------|--------|--------|-------|--------|--------|-------|--------|--------|
| WV | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 4,149 | 6,365 | 29,643 | 29,397 | 12,820 | 9,430 | 19,396 | 44,391 | 4,143 | 21,518 | 21,906 |

Table V.4c. Cross-State Linked Pairs, 2005

| State | MI | MN | MS | MO | MT | NE | NV | NH | NJ | NM | NY |
|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|--------|
| AL | 2,001 | 243 | 3,274 | 814 | 46 | 136 | 159 | 55 | 361 | 160 | 1,289 |
| AK | 151 | 155 | 46 | 162 | 125 | 78 | 151 | 11 | 31 | 86 | 130 |
| AZ | 1,924 | 1,009 | 397 | 1,892 | 511 | 572 | 2,400 | 130 | 416 | 5,914 | 1,980 |
| AR | 1,543 | 539 | 1,775 | 6,463 | 130 | 317 | 330 | 17 | 105 | 331 | 431 |
| CA | 3,410 | 2,837 | 1,895 | 5,044 | 1,160 | 1,566 | 16,104 | 229 | 1,356 | 3,760 | 4,903 |
| CO | 761 | 629 | 394 | 1,437 | 449 | 1,423 | 942 | 57 | 184 | 3,265 | 668 |
| CT | 234 | 56 | 70 | 133 | 19 | 43 | 76 | 213 | 929 | 38 | 5,449 |
| DE | 98 | 33 | 41 | 62 | 6 | 11 | 24 | 20 | 943 | 21 | 1,122 |
| DC | 66 | 33 | 48 | 44 | 5 | 8 | 17 | 1 | 89 | 14 | 445 |
| FL | 7,934 | 1,248 | 3,081 | 2,939 | 276 | 510 | 1,051 | 922 | 8,500 | 768 | 28,091 |
| GA | 3,999 | 809 | 4,013 | 1,924 | 94 | 300 | 465 | 125 | 2,851 | 287 | 9,441 |
| HI | 109 | 72 | 20 | 164 | 33 | 16 | 609 | 9 | 62 | 94 | 216 |
| ID | 143 | 125 | 47 | 289 | 762 | 125 | 638 | 10 | 36 | 244 | 97 |
| IL | 5,135 | 5,896 | 3,947 | 9,224 | 144 | 699 | 1,167 | 80 | 620 | 572 | 1,823 |
| IN | 5,042 | 1,180 | 1,096 | 1,577 | 97 | 225 | 365 | 51 | 265 | 225 | 899 |
| IA | 538 | 1,808 | 439 | 2,514 | 102 | 3,274 | 194 | 14 | 64 | 194 | 260 |
| KS | 349 | 322 | 367 | 7,862 | 97 | 1,072 | 275 | 39 | 82 | 573 | 246 |
| KY | 1,974 | 225 | 574 | 1,056 | 30 | 118 | 127 | 60 | 180 | 145 | 752 |
| LA | 1,747 | 703 | 7,668 | 2,336 | 113 | 396 | 857 | 87 | 499 | 421 | 1,263 |
| ME | 130 | 180 | 60 | 175 | 21 | 38 | 50 | 1,370 | 168 | 64 | 688 |
| MD | 444 | 197 | 280 | 346 | 14 | 57 | 153 | 82 | 1,347 | 118 | 3,832 |
| MA | 345 | 200 | 143 | 306 | 45 | 52 | 155 | 3,024 | 1,206 | 91 | 6,687 |
| MI | 0 | 1,017 | 1,400 | 1,640 | 104 | 364 | 592 | 80 | 395 | 338 | 1,863 |
| MN | 0 | 0 | 554 | 1,229 | 234 | 670 | 316 | 39 | 194 | 220 | 604 |
| MS | 0 | 0 | 0 | 1,292 | 55 | 199 | 260 | 16 | 175 | 144 | 554 |
| MO | 0 | 0 | 0 | 0 | 240 | 1,006 | 500 | 91 | 209 | 477 | 823 |
| MT | 0 | 0 | 0 | 0 | 0 | 123 | 231 | 12 | 18 | 228 | 70 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 198 | 21 | 73 | 203 | 166 |
| NV | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28 | 181 | 605 | 633 |
| NH | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 81 | 26 | 520 |
| NJ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 112 | 10,917 |
| NM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 289 |
| NY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NC | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ND | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| OH | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| OK | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| OR | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| RI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SC | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SD | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TX | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| UT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| VT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| VA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| State | MI | MN | MS | MO | MT | NE | NV | NH | NJ | NM | NY |
|-------|--------|--------|--------|--------|-------|--------|--------|-------|--------|--------|--------|
| WV | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 38,077 | 19,516 | 31,629 | 50,924 | 4,912 | 13,398 | 28,406 | 6,893 | 21,620 | 19,738 | 87,151 |

Table V.4d. Cross-State Linked Pairs, 2005

| State | NC | ND | OH | OK | OR | PA | RI | SC | SD | TN | TX |
|-------|--------|-------|-------|-------|--------|--------|-------|--------|-------|-------|--------|
| AL | 1,201 | 24 | 1,748 | 406 | 182 | 562 | 52 | 941 | 41 | 4,233 | 2,229 |
| AK | 130 | 22 | 90 | 136 | 594 | 98 | 20 | 84 | 25 | 82 | 324 |
| AZ | 875 | 145 | 1,821 | 1,331 | 2,107 | 1,184 | 107 | 412 | 336 | 1,156 | 4,763 |
| AR | 666 | 39 | 686 | 5,390 | 412 | 322 | 29 | 291 | 113 | 3,671 | 8,020 |
| CA | 3,901 | 256 | 3,288 | 4,845 | 12,210 | 2,387 | 332 | 1,296 | 541 | 4,131 | 17,445 |
| CO | 608 | 148 | 670 | 1,297 | 826 | 459 | 59 | 257 | 542 | 669 | 5,124 |
| CT | 1,283 | 9 | 386 | 109 | 39 | 1,120 | 718 | 754 | 15 | 226 | 345 |
| DE | 472 | 4 | 157 | 37 | 13 | 2,225 | 20 | 220 | 7 | 167 | 247 |
| DC | 829 | 3 | 138 | 23 | 6 | 295 | 12 | 360 | 5 | 59 | 138 |
| FL | 9,848 | 109 | 9,212 | 1,627 | 723 | 8,872 | 1,846 | 5,560 | 205 | 8,414 | 9,768 |
| GA | 7,152 | 53 | 4,630 | 1,088 | 344 | 2,997 | 358 | 8,203 | 93 | 8,417 | 6,356 |
| HI | 137 | 10 | 122 | 72 | 486 | 106 | 13 | 58 | 14 | 95 | 329 |
| ID | 119 | 44 | 168 | 245 | 2,266 | 144 | 18 | 74 | 130 | 198 | 854 |
| IL | 1,743 | 105 | 3,258 | 1,279 | 405 | 1,017 | 95 | 785 | 246 | 5,844 | 7,792 |
| IN | 1,089 | 29 | 5,037 | 580 | 221 | 642 | 51 | 515 | 124 | 3,764 | 3,356 |
| IA | 326 | 76 | 396 | 497 | 275 | 186 | 12 | 144 | 714 | 598 | 1,813 |
| KS | 350 | 72 | 321 | 3,450 | 264 | 253 | 18 | 170 | 144 | 482 | 3,325 |
| KY | 1,171 | 42 | 8,236 | 390 | 150 | 585 | 47 | 699 | 56 | 7,370 | 1,400 |
| LA | 2,387 | 59 | 1,731 | 1,885 | 367 | 873 | 112 | 1,234 | 93 | 4,221 | 49,171 |
| ME | 435 | 12 | 228 | 91 | 86 | 363 | 361 | 218 | 20 | 269 | 332 |
| MD | 3,594 | 18 | 877 | 184 | 76 | 4,244 | 119 | 1,426 | 37 | 748 | 1,165 |
| MA | 1,471 | 12 | 643 | 129 | 125 | 1,876 | 3,347 | 729 | 31 | 616 | 869 |
| MI | 1,851 | 79 | 5,742 | 696 | 362 | 1,121 | 80 | 903 | 119 | 4,646 | 6,882 |
| MN | 516 | 1,725 | 680 | 480 | 370 | 343 | 44 | 169 | 1,502 | 896 | 5,098 |
| MS | 929 | 19 | 949 | 578 | 188 | 469 | 65 | 578 | 55 | 6,522 | 3,542 |
| MO | 874 | 95 | 1,294 | 3,811 | 627 | 662 | 61 | 437 | 253 | 2,623 | 4,831 |
| MT | 83 | 446 | 89 | 175 | 794 | 113 | 5 | 50 | 323 | 158 | 492 |
| NE | 193 | 103 | 186 | 463 | 194 | 139 | 14 | 90 | 1,350 | 393 | 1,760 |
| NV | 312 | 33 | 551 | 359 | 1,014 | 367 | 29 | 128 | 87 | 386 | 1,521 |
| NH | 288 | 6 | 99 | 30 | 44 | 168 | 141 | 173 | 8 | 161 | 152 |
| NJ | 3,884 | 9 | 888 | 100 | 65 | 8,797 | 214 | 1,503 | 7 | 571 | 1,064 |
| NM | 252 | 53 | 328 | 1,047 | 335 | 176 | 28 | 144 | 209 | 373 | 7,712 |
| NY | 10,137 | 34 | 3,013 | 371 | 334 | 16,014 | 1,529 | 4,755 | 83 | 1,822 | 3,074 |
| NC | 0 | 0 | 3,019 | 633 | 214 | 3,791 | 376 | 11,308 | 72 | 3,545 | 3,518 |
| ND | 0 | 0 | 60 | 89 | 96 | 42 | 2 | 11 | 1,056 | 51 | 575 |
| OH | 0 | 0 | 0 | 697 | 301 | 4,839 | 135 | 1,593 | 93 | 4,745 | 3,704 |
| OK | 0 | 0 | 0 | 0 | 536 | 344 | 40 | 332 | 144 | 1,102 | 10,613 |
| OR | 0 | 0 | 0 | 0 | 0 | 212 | 12 | 140 | 163 | 406 | 1,302 |
| PA | 0 | 0 | 0 | 0 | 0 | 0 | 376 | 2,072 | 110 | 1,266 | 1,671 |
| RI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 230 | 4 | 119 | 176 |
| SC | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 46 | 1,688 | 1,509 |
| SD | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 111 | 439 |
| TN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4,338 |
| TX | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| UT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| VT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| VA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| State | NC | ND | OH | OK | OR | PA | RI | SC | SD | TN | TX |
|-------|--------|-------|--------|--------|--------|--------|--------|--------|-------|--------|---------|
| WV | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 59,106 | 3,893 | 60,741 | 34,620 | 27,651 | 68,407 | 10,897 | 49,046 | 9,216 | 87,014 | 189,138 |

Table V.4e. Cross-State Linked Pairs, 2005

| State | UT | VT | VA | WA | WV | WI | WY | Total |
|-------|-------|-----|-------|--------|-------|--------|-------|---------|
| AL | 76 | 36 | 639 | 362 | 216 | 427 | 49 | 50,551 |
| AK | 126 | 18 | 57 | 1,237 | 16 | 170 | 51 | 7,646 |
| AZ | 2,664 | 117 | 453 | 3,161 | 196 | 1,134 | 476 | 82,309 |
| AR | 161 | 19 | 277 | 661 | 136 | 914 | 158 | 53,530 |
| CA | 4,550 | 170 | 2,045 | 14,681 | 393 | 2,445 | 635 | 170,359 |
| CO | 1,219 | 56 | 355 | 1,310 | 148 | 484 | 1,408 | 35,622 |
| CT | 41 | 283 | 603 | 114 | 70 | 111 | 12 | 23,737 |
| DE | 18 | 14 | 513 | 38 | 87 | 32 | 6 | 11,269 |
| DC | 7 | 5 | 1,232 | 33 | 70 | 32 | 0 | 12,807 |
| FL | 568 | 642 | 4,066 | 1,504 | 1,787 | 2,084 | 221 | 183,741 |
| GA | 255 | 123 | 3,261 | 1,003 | 691 | 1,102 | 91 | 98,643 |
| HI | 304 | 28 | 109 | 1,028 | 17 | 73 | 15 | 5,071 |
| ID | 1,803 | 14 | 109 | 4,447 | 29 | 127 | 436 | 14,739 |
| IL | 363 | 48 | 884 | 1,159 | 335 | 11,868 | 158 | 96,728 |
| IN | 176 | 30 | 588 | 510 | 442 | 1,663 | 87 | 39,367 |
| IA | 195 | 19 | 170 | 402 | 58 | 1,238 | 125 | 18,208 |
| KS | 168 | 20 | 193 | 535 | 89 | 266 | 193 | 22,811 |
| KY | 116 | 39 | 896 | 343 | 1,816 | 383 | 65 | 30,677 |
| LA | 384 | 45 | 1,806 | 1,167 | 189 | 721 | 127 | 84,252 |
| ME | 47 | 371 | 211 | 160 | 66 | 75 | 27 | 8,973 |
| MD | 78 | 75 | 4,642 | 256 | 2,190 | 127 | 21 | 27,314 |
| MA | 115 | 933 | 680 | 300 | 107 | 209 | 24 | 24,470 |
| MI | 179 | 54 | 860 | 701 | 464 | 2,742 | 100 | 35,374 |
| MN | 183 | 19 | 239 | 885 | 63 | 5,628 | 139 | 23,039 |
| MS | 74 | 29 | 622 | 331 | 122 | 1,152 | 53 | 18,972 |
| MO | 391 | 40 | 554 | 1,145 | 231 | 1,115 | 234 | 22,624 |
| MT | 385 | 8 | 55 | 2,083 | 38 | 163 | 633 | 6,775 |
| NE | 191 | 11 | 105 | 339 | 50 | 218 | 513 | 6,973 |
| NV | 1,173 | 31 | 174 | 1,333 | 46 | 314 | 137 | 9,442 |
| NH | 29 | 982 | 150 | 58 | 33 | 37 | 11 | 3,197 |
| NJ | 64 | 73 | 2,019 | 223 | 218 | 149 | 19 | 30,896 |
| NM | 652 | 34 | 136 | 591 | 55 | 162 | 264 | 12,840 |
| NY | 273 | 946 | 5,713 | 781 | 524 | 646 | 44 | 50,093 |
| NC | 162 | 225 | 8,798 | 583 | 2,599 | 647 | 91 | 39,581 |
| ND | 57 | 3 | 19 | 313 | 15 | 158 | 102 | 2,649 |
| OH | 245 | 107 | 1,663 | 734 | 6,951 | 779 | 100 | 26,686 |
| OK | 318 | 36 | 345 | 829 | 122 | 415 | 241 | 15,417 |
| OR | 726 | 36 | 123 | 9,707 | 52 | 270 | 289 | 13,438 |
| PA | 185 | 164 | 2,557 | 414 | 1,834 | 448 | 108 | 11,205 |
| RI | 18 | 69 | 203 | 41 | 8 | 79 | 1 | 948 |
| SC | 109 | 143 | 1,938 | 375 | 841 | 292 | 46 | 6,987 |
| SD | 151 | 6 | 50 | 382 | 41 | 208 | 409 | 1,797 |
| TN | 208 | 142 | 3,515 | 716 | 960 | 1,643 | 119 | 11,641 |
| TX | 998 | 92 | 1,967 | 3,026 | 512 | 2,706 | 600 | 9,901 |
| UT | 0 | 22 | 179 | 1,152 | 44 | 153 | 749 | 2,299 |
| VT | 0 | 0 | 87 | 37 | 54 | 34 | 20 | 232 |
| VA | 0 | 0 | 0 | 377 | 2,859 | 231 | 47 | 3,514 |
| WA | 0 | 0 | 0 | 0 | 110 | 604 | 410 | 1,124 |

| State | UT | VT | VA | WA | WV | WI | WY | Total |
|-------|--------|-------|--------|--------|--------|--------|-------|-----------|
| WV | 0 | 0 | 0 | 0 | 0 | 93 | 24 | 117 |
| WI | 0 | 0 | 0 | 0 | 0 | 0 | 81 | 81 |
| WY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 20,205 | 6,377 | 55,860 | 61,567 | 27,994 | 46,771 | 9,969 | 1,470,666 |

Table V.5 Cross-State Linked Pairs, 2006

| State | AL | AK | AZ | AR | CA | CO | CT | DE | DC | FL | GA |
|-------|----|----|-----|-----|--------|-------|-----|-----|-----|-------|--------|
| AL | 0 | 70 | 371 | 736 | 1,695 | 320 | 208 | 63 | 36 | 6,625 | 8,472 |
| AK | 0 | 0 | 264 | 94 | 1,007 | 173 | 31 | 1 | 2 | 234 | 138 |
| AZ | 0 | 0 | 0 | 854 | 21,883 | 3,077 | 182 | 66 | 42 | 1,786 | 999 |
| AR | 0 | 0 | 0 | 0 | 3,950 | 589 | 38 | 30 | 23 | 1,762 | 1,258 |
| CA | 0 | 0 | 0 | 0 | 0 | 6,016 | 541 | 216 | 249 | 5,934 | 5,605 |
| CO | 0 | 0 | 0 | 0 | 0 | 0 | 103 | 47 | 26 | 1,632 | 655 |
| CT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 131 | 16 | 3,522 | 995 |
| DE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 49 | 683 | 361 |
| DC | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 286 | 271 |
| FL | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22,749 |
| GA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| HI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| IL | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| IN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| IA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| KS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| KY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ME | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MD | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MO | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NV | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NH | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NJ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NC | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ND | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| OH | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| OK | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| OR | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| RI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SC | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SD | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TX | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| UT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| VT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| VA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| State | AL | AK | AZ | AR | CA | CO | CT | DE | DC | FL | GA |
|-------|----|----|-----|-------|--------|--------|-------|-----|-----|--------|--------|
| WV | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 70 | 635 | 1,684 | 28,535 | 10,175 | 1,103 | 554 | 443 | 22,464 | 41,503 |

Table V.5b Cross-State Linked Pairs, 2006

| State | HI | ID | IL | IN | IA | KS | KY | LA | ME | MD | MA |
|-------|-------|-------|-------|--------|-------|-------|-------|--------|-------|-------|-------|
| AL | 46 | 46 | 1,824 | 945 | 181 | 209 | 784 | 3,776 | 139 | 307 | 315 |
| AK | 317 | 176 | 92 | 69 | 44 | 47 | 51 | 115 | 32 | 22 | 37 |
| AZ | 434 | 863 | 3,246 | 1,132 | 736 | 834 | 453 | 1,083 | 345 | 343 | 656 |
| AR | 57 | 135 | 2,854 | 867 | 623 | 978 | 605 | 5,374 | 47 | 171 | 152 |
| CA | 2,510 | 3,326 | 7,373 | 2,673 | 1,599 | 2,026 | 1,149 | 5,671 | 348 | 1,484 | 1,918 |
| CO | 182 | 502 | 1,393 | 504 | 591 | 1,421 | 290 | 1,373 | 109 | 235 | 252 |
| CT | 24 | 12 | 230 | 110 | 45 | 37 | 72 | 186 | 630 | 286 | 3,158 |
| DE | 8 | 9 | 116 | 87 | 16 | 19 | 62 | 103 | 46 | 2,577 | 114 |
| DC | 4 | 1 | 81 | 27 | 8 | 10 | 22 | 179 | 6 | 7,489 | 80 |
| FL | 312 | 284 | 6,440 | 4,116 | 811 | 711 | 3,553 | 5,859 | 1,213 | 2,995 | 8,264 |
| GA | 145 | 123 | 4,547 | 1,910 | 454 | 508 | 1,686 | 14,220 | 275 | 1,896 | 1,801 |
| HI | 0 | 87 | 115 | 92 | 38 | 51 | 49 | 55 | 32 | 57 | 97 |
| ID | 0 | 0 | 245 | 106 | 124 | 113 | 66 | 96 | 24 | 36 | 42 |
| IL | 0 | 0 | 0 | 16,048 | 6,905 | 909 | 2,727 | 2,225 | 189 | 512 | 622 |
| IN | 0 | 0 | 0 | 0 | 640 | 312 | 6,398 | 1,240 | 98 | 335 | 253 |
| IA | 0 | 0 | 0 | 0 | 0 | 521 | 252 | 491 | 53 | 96 | 95 |
| KS | 0 | 0 | 0 | 0 | 0 | 0 | 252 | 675 | 52 | 82 | 99 |
| KY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,020 | 98 | 275 | 174 |
| LA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 117 | 943 | 407 |
| ME | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 2,486 |
| MD | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 552 |
| MA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MO | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NV | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NH | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NJ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NC | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ND | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| OH | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| OK | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| OR | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| RI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SC | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SD | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TX | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| UT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| VT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| VA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| State | HI | ID | IL | IN | IA | KS | KY | LA | ME | MD | MA |
|-------|-------|-------|--------|--------|--------|-------|--------|--------|-------|--------|--------|
| WV | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 4,039 | 5,564 | 28,556 | 28,686 | 12,815 | 8,706 | 18,471 | 43,741 | 3,853 | 20,268 | 21,574 |

Table V.5c Cross-State Linked Pairs, 2006

| State | MI | MN | MS | MO | MT | NE | NV | NH | NJ | NM | NY |
|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|--------|
| AL | 1,907 | 232 | 3,370 | 688 | 38 | 92 | 165 | 31 | 356 | 134 | 1,269 |
| AK | 110 | 176 | 38 | 115 | 92 | 47 | 113 | 11 | 25 | 109 | 126 |
| AZ | 2,089 | 991 | 400 | 1,552 | 421 | 513 | 2,068 | 140 | 431 | 5,298 | 1,732 |
| AR | 1,474 | 543 | 1,825 | 5,842 | 147 | 306 | 261 | 31 | 120 | 306 | 445 |
| CA | 3,406 | 2,464 | 1,814 | 4,448 | 1,092 | 1,614 | 14,364 | 218 | 1,430 | 3,511 | 4,761 |
| CO | 701 | 606 | 382 | 1,266 | 451 | 1,265 | 803 | 40 | 185 | 2,937 | 606 |
| CT | 177 | 67 | 67 | 101 | 10 | 17 | 71 | 207 | 898 | 49 | 5,305 |
| DE | 82 | 19 | 36 | 44 | 1 | 18 | 34 | 25 | 901 | 14 | 1,096 |
| DC | 76 | 23 | 54 | 24 | 6 | 3 | 20 | 1 | 110 | 11 | 443 |
| FL | 7,510 | 1,075 | 3,071 | 2,344 | 209 | 490 | 945 | 803 | 7,603 | 621 | 24,500 |
| GA | 3,750 | 740 | 3,723 | 1,524 | 68 | 306 | 431 | 155 | 2,969 | 281 | 8,675 |
| HI | 107 | 89 | 16 | 151 | 38 | 19 | 560 | 6 | 58 | 87 | 216 |
| ID | 189 | 136 | 36 | 301 | 650 | 127 | 551 | 22 | 46 | 206 | 102 |
| IL | 4,919 | 5,628 | 3,664 | 8,500 | 131 | 704 | 1,008 | 77 | 628 | 569 | 1,852 |
| IN | 5,015 | 1,146 | 1,122 | 1,485 | 61 | 188 | 355 | 55 | 322 | 231 | 888 |
| IA | 491 | 1,788 | 459 | 2,343 | 112 | 3,215 | 140 | 18 | 78 | 171 | 289 |
| KS | 360 | 353 | 334 | 7,079 | 79 | 976 | 221 | 16 | 87 | 483 | 217 |
| KY | 1,877 | 259 | 592 | 1,045 | 66 | 108 | 124 | 48 | 212 | 141 | 696 |
| LA | 1,652 | 659 | 8,276 | 2,144 | 121 | 359 | 688 | 64 | 472 | 387 | 1,093 |
| ME | 147 | 114 | 63 | 133 | 21 | 24 | 52 | 1,320 | 174 | 57 | 706 |
| MD | 463 | 174 | 254 | 278 | 26 | 51 | 117 | 64 | 1,355 | 95 | 3,638 |
| MA | 368 | 213 | 158 | 230 | 43 | 41 | 175 | 3,082 | 1,364 | 96 | 7,016 |
| MI | 0 | 948 | 1,374 | 1,553 | 116 | 296 | 680 | 79 | 462 | 367 | 1,611 |
| MN | 0 | 0 | 603 | 1,180 | 244 | 557 | 271 | 27 | 175 | 187 | 603 |
| MS | 0 | 0 | 0 | 1,200 | 46 | 190 | 229 | 27 | 193 | 101 | 528 |
| MO | 0 | 0 | 0 | 0 | 143 | 976 | 439 | 58 | 208 | 400 | 639 |
| MT | 0 | 0 | 0 | 0 | 0 | 122 | 182 | 7 | 17 | 204 | 88 |
| NE | 0 | 0 | 0 | 0 | 0 | 0 | 171 | 23 | 69 | 162 | 134 |
| NV | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 179 | 494 | 574 |
| NH | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 85 | 22 | 486 |
| NJ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 79 | 11,746 |
| NM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 262 |
| NY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NC | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ND | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| OH | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| OK | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| OR | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| RI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SC | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SD | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TX | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| UT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| VT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| VA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| State | MI | MN | MS | MO | MT | NE | NV | NH | NJ | NM | NY |
|-------|--------|--------|--------|--------|-------|--------|--------|-------|--------|--------|--------|
| WV | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 36,870 | 18,443 | 31,731 | 45,570 | 4,432 | 12,624 | 25,238 | 6,686 | 21,212 | 17,810 | 82,342 |

Table V.5d Cross-State Linked Pairs, 2006

| State | NC | ND | OH | OK | OR | PA | RI | SC | SD | TN | TX |
|-------|--------|-------|-------|-------|--------|--------|-------|--------|-------|-------|--------|
| AL | 1,246 | 18 | 1,670 | 393 | 159 | 600 | 32 | 802 | 32 | 4,288 | 2,212 |
| AK | 142 | 24 | 86 | 121 | 534 | 81 | 4 | 63 | 31 | 127 | 351 |
| AZ | 794 | 131 | 1,687 | 1,291 | 1,934 | 1,000 | 103 | 362 | 324 | 1,134 | 4,178 |
| AR | 648 | 31 | 770 | 5,506 | 402 | 349 | 45 | 277 | 97 | 3,815 | 7,705 |
| CA | 3,847 | 233 | 3,107 | 4,573 | 10,909 | 2,271 | 273 | 1,179 | 514 | 4,062 | 17,790 |
| CO | 548 | 190 | 650 | 1,189 | 668 | 513 | 62 | 246 | 522 | 738 | 4,825 |
| CT | 1,273 | 6 | 376 | 69 | 38 | 1,263 | 772 | 678 | 28 | 235 | 300 |
| DE | 487 | 5 | 148 | 31 | 16 | 2,230 | 13 | 185 | 3 | 175 | 209 |
| DC | 848 | 2 | 111 | 25 | 5 | 266 | 11 | 357 | 1 | 80 | 157 |
| FL | 9,631 | 126 | 8,202 | 1,478 | 608 | 7,994 | 1,731 | 4,904 | 270 | 8,319 | 8,901 |
| GA | 6,486 | 72 | 4,116 | 884 | 330 | 2,922 | 322 | 6,841 | 74 | 8,123 | 5,847 |
| HI | 127 | 10 | 101 | 91 | 432 | 77 | 8 | 56 | 13 | 97 | 349 |
| ID | 139 | 48 | 175 | 180 | 1,946 | 127 | 9 | 50 | 102 | 175 | 811 |
| IL | 1,760 | 101 | 3,209 | 1,249 | 386 | 1,079 | 110 | 735 | 209 | 6,206 | 7,224 |
| IN | 1,034 | 46 | 4,892 | 598 | 240 | 700 | 55 | 490 | 119 | 3,838 | 2,950 |
| IA | 346 | 75 | 363 | 426 | 207 | 197 | 18 | 144 | 758 | 612 | 1,776 |
| KS | 307 | 29 | 327 | 3,173 | 186 | 193 | 24 | 142 | 148 | 536 | 2,986 |
| KY | 1,232 | 43 | 8,236 | 363 | 170 | 640 | 38 | 636 | 58 | 7,557 | 1,315 |
| LA | 2,374 | 32 | 1,515 | 1,997 | 321 | 810 | 106 | 959 | 106 | 5,046 | 61,049 |
| ME | 451 | 20 | 257 | 94 | 63 | 355 | 376 | 207 | 23 | 282 | 246 |
| MD | 3,549 | 14 | 827 | 195 | 72 | 4,455 | 127 | 1,351 | 28 | 825 | 1,097 |
| MA | 1,740 | 25 | 814 | 160 | 129 | 1,996 | 3,495 | 809 | 41 | 717 | 706 |
| MI | 1,768 | 85 | 5,810 | 692 | 274 | 1,084 | 57 | 889 | 129 | 4,822 | 6,307 |
| MN | 506 | 1,894 | 689 | 424 | 339 | 370 | 74 | 178 | 1,390 | 897 | 4,804 |
| MS | 938 | 9 | 960 | 632 | 152 | 446 | 51 | 492 | 42 | 7,030 | 3,896 |
| MO | 704 | 103 | 1,121 | 3,364 | 539 | 591 | 31 | 365 | 238 | 2,490 | 4,150 |
| MT | 93 | 442 | 91 | 155 | 718 | 90 | 5 | 57 | 330 | 123 | 432 |
| NE | 133 | 142 | 191 | 443 | 212 | 182 | 12 | 84 | 1,276 | 373 | 1,529 |
| NV | 287 | 43 | 519 | 338 | 917 | 302 | 30 | 135 | 70 | 361 | 1,346 |
| NH | 231 | 8 | 92 | 27 | 27 | 201 | 180 | 120 | 9 | 165 | 121 |
| NJ | 4,144 | 14 | 919 | 116 | 86 | 9,617 | 263 | 1,429 | 15 | 591 | 964 |
| NM | 222 | 33 | 339 | 931 | 370 | 208 | 27 | 129 | 186 | 340 | 6,611 |
| NY | 10,134 | 47 | 2,879 | 437 | 270 | 15,908 | 1,491 | 4,386 | 70 | 1,834 | 2,490 |
| NC | 0 | 57 | 3,024 | 571 | 217 | 4,024 | 424 | 10,341 | 65 | 3,565 | 3,314 |
| ND | 0 | 0 | 40 | 77 | 101 | 43 | 2 | 20 | 997 | 58 | 481 |
| OH | 0 | 0 | 0 | 659 | 317 | 4,833 | 116 | 1,480 | 92 | 4,739 | 3,314 |
| OK | 0 | 0 | 0 | 0 | 509 | 363 | 33 | 287 | 203 | 1,097 | 9,831 |
| OR | 0 | 0 | 0 | 0 | 0 | 190 | 18 | 169 | 217 | 420 | 1,165 |
| PA | 0 | 0 | 0 | 0 | 0 | 0 | 443 | 2,009 | 68 | 1,313 | 1,849 |
| RI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 225 | 11 | 130 | 125 |
| SC | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 1,622 | 1,217 |
| SD | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 374 |
| TN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4,273 |
| TX | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| UT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| VT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| VA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| State | NC | ND | OH | OK | OR | PA | RI | SC | SD | TN | TX |
|-------|--------|-------|--------|--------|--------|--------|--------|--------|-------|--------|---------|
| WV | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WI | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 58,169 | 4,158 | 58,313 | 32,952 | 24,803 | 68,570 | 10,991 | 44,268 | 8,932 | 89,078 | 191,577 |

Table V.5e Cross-State Linked Pairs, 2006

| State | UT | VT | VA | WA | WV | WI | WY | Total |
|-------|-------|-------|-------|--------|-------|--------|-------|---------|
| AL | 115 | 38 | 640 | 357 | 240 | 381 | 41 | 48,714 |
| AK | 95 | 14 | 70 | 1,244 | 17 | 114 | 42 | 7,068 |
| AZ | 2,227 | 114 | 436 | 2,985 | 178 | 1,048 | 418 | 74,993 |
| AR | 171 | 29 | 332 | 625 | 125 | 905 | 134 | 52,779 |
| CA | 4,729 | 175 | 1,976 | 13,999 | 314 | 2,235 | 672 | 160,618 |
| CO | 1,113 | 56 | 338 | 1,227 | 117 | 532 | 1,357 | 33,448 |
| CT | 43 | 253 | 537 | 126 | 70 | 114 | 9 | 22,613 |
| DE | 23 | 14 | 475 | 55 | 93 | 30 | 5 | 10,717 |
| DC | 9 | 6 | 1,235 | 33 | 64 | 29 | 1 | 12,475 |
| FL | 514 | 580 | 3,782 | 1,322 | 1,676 | 1,937 | 152 | 168,605 |
| GA | 178 | 121 | 2,907 | 1,031 | 573 | 982 | 78 | 92,074 |
| HI | 221 | 14 | 112 | 1,036 | 12 | 53 | 19 | 4,848 |
| ID | 1,615 | 24 | 75 | 3,991 | 23 | 98 | 412 | 13,218 |
| IL | 332 | 47 | 939 | 1,193 | 270 | 12,095 | 171 | 95,132 |
| IN | 187 | 51 | 632 | 535 | 475 | 1,506 | 88 | 38,580 |
| IA | 180 | 15 | 175 | 465 | 56 | 1,301 | 122 | 17,848 |
| KS | 174 | 22 | 178 | 431 | 66 | 267 | 149 | 20,703 |
| KY | 129 | 49 | 889 | 330 | 1,747 | 388 | 46 | 30,601 |
| LA | 314 | 50 | 1,682 | 1,147 | 170 | 650 | 125 | 95,835 |
| ME | 57 | 365 | 246 | 165 | 88 | 84 | 24 | 8,827 |
| MD | 73 | 73 | 4,548 | 278 | 2,083 | 140 | 18 | 26,820 |
| MA | 104 | 944 | 786 | 326 | 129 | 207 | 26 | 25,940 |
| MI | 205 | 42 | 865 | 679 | 488 | 2,755 | 173 | 34,610 |
| MN | 159 | 28 | 255 | 864 | 38 | 5,201 | 145 | 22,102 |
| MS | 121 | 18 | 601 | 340 | 130 | 1,229 | 66 | 18,467 |
| MO | 374 | 40 | 527 | 1,057 | 176 | 1,054 | 245 | 21,232 |
| MT | 309 | 23 | 43 | 1,767 | 36 | 139 | 590 | 6,063 |
| NE | 143 | 13 | 126 | 360 | 33 | 180 | 398 | 6,389 |
| NV | 1,029 | 12 | 185 | 1,233 | 72 | 336 | 109 | 8,602 |
| NH | 34 | 1,106 | 123 | 35 | 39 | 40 | 17 | 3,168 |
| NJ | 74 | 79 | 2,076 | 231 | 240 | 168 | 21 | 32,872 |
| NM | 527 | 31 | 139 | 612 | 53 | 160 | 224 | 11,404 |
| NY | 241 | 973 | 5,246 | 747 | 458 | 547 | 61 | 48,219 |
| NC | 201 | 209 | 8,948 | 643 | 2,375 | 558 | 69 | 38,605 |
| ND | 53 | 2 | 18 | 254 | 11 | 119 | 108 | 2,384 |
| OH | 224 | 85 | 1,504 | 672 | 6,471 | 925 | 88 | 25,519 |
| OK | 284 | 26 | 359 | 872 | 140 | 412 | 266 | 14,682 |
| OR | 610 | 26 | 134 | 9,010 | 59 | 231 | 201 | 12,450 |
| PA | 170 | 127 | 2,507 | 501 | 1,772 | 445 | 81 | 11,285 |
| RI | 8 | 77 | 209 | 44 | 17 | 75 | 2 | 923 |
| SC | 86 | 109 | 1,756 | 389 | 712 | 295 | 41 | 6,250 |
| SD | 88 | 11 | 48 | 314 | 27 | 246 | 451 | 1,680 |
| TN | 240 | 125 | 3,873 | 796 | 917 | 1,856 | 121 | 12,201 |
| TX | 852 | 85 | 1,817 | 3,047 | 434 | 2,378 | 580 | 9,193 |
| UT | 0 | 18 | 151 | 1,013 | 27 | 108 | 603 | 1,920 |
| VT | 0 | 0 | 112 | 68 | 23 | 32 | 8 | 243 |
| VA | 0 | 0 | 0 | 382 | 2,731 | 267 | 41 | 3,421 |
| WA | 0 | 0 | 0 | 0 | 107 | 572 | 379 | 1,058 |

| State | UT | VT | VA | WA | WV | WI | WY | Total |
|-------|--------|-------|--------|--------|--------|--------|-------|-----------|
| WV | 0 | 0 | 0 | 0 | 0 | 92 | 18 | 110 |
| WI | 0 | 0 | 0 | 0 | 0 | 0 | 93 | 93 |
| WY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 18,635 | 6,319 | 54,612 | 58,831 | 26,172 | 45,516 | 9,308 | 1,417,601 |

Table V.6 Cross-state Linked Pairs, 2005 to 2006

| State | AL | AK | AZ | AR | CA | CO | CT | DE | DC | FL | GA |
|-------|-----|-----|-------|-----|-------|-----|-----|-----|-----|-------|-------|
| AL | 0 | 3 | 25 | 65 | 88 | 20 | 14 | 3 | 1 | 365 | 514 |
| AK | 15 | 0 | 61 | 16 | 115 | 31 | 6 | 2 | 0 | 39 | 28 |
| AZ | 70 | 49 | 0 | 113 | 1,494 | 367 | 23 | 13 | 6 | 217 | 102 |
| AR | 47 | 8 | 51 | 0 | 155 | 48 | 5 | 3 | 1 | 85 | 92 |
| CA | 200 | 114 | 3,172 | 522 | 0 | 710 | 82 | 23 | 19 | 657 | 577 |
| CO | 31 | 23 | 333 | 52 | 379 | 0 | 8 | 5 | 3 | 119 | 71 |
| CT | 24 | 4 | 25 | 10 | 36 | 7 | 0 | 3 | 4 | 480 | 129 |
| DE | 4 | 0 | 6 | 2 | 18 | 4 | 7 | 0 | 2 | 84 | 34 |
| DC | 7 | 1 | 5 | 0 | 17 | 1 | 2 | 2 | 0 | 21 | 27 |
| FL | 686 | 38 | 264 | 178 | 558 | 144 | 317 | 47 | 24 | 0 | 2,144 |
| GA | 830 | 29 | 132 | 125 | 370 | 102 | 60 | 32 | 18 | 1,598 | 0 |
| HI | 6 | 34 | 68 | 7 | 238 | 26 | 2 | 0 | 3 | 41 | 30 |
| ID | 7 | 17 | 117 | 13 | 173 | 52 | 0 | 0 | 2 | 27 | 21 |
| IL | 120 | 10 | 248 | 204 | 333 | 89 | 8 | 10 | 5 | 410 | 262 |
| IN | 75 | 8 | 144 | 87 | 173 | 48 | 12 | 8 | 5 | 451 | 205 |
| IA | 14 | 2 | 107 | 59 | 134 | 61 | 8 | 1 | 1 | 70 | 48 |
| KS | 18 | 15 | 116 | 94 | 150 | 151 | 8 | 0 | 1 | 98 | 59 |
| KY | 77 | 4 | 59 | 45 | 87 | 24 | 9 | 8 | 3 | 271 | 131 |
| LA | 110 | 7 | 42 | 235 | 182 | 50 | 3 | 2 | 6 | 182 | 307 |
| ME | 3 | 5 | 55 | 9 | 35 | 15 | 61 | 10 | 1 | 99 | 22 |
| MD | 30 | 5 | 53 | 24 | 99 | 19 | 19 | 184 | 426 | 298 | 193 |
| MA | 17 | 3 | 71 | 8 | 97 | 23 | 169 | 22 | 2 | 520 | 136 |
| MI | 143 | 12 | 288 | 140 | 241 | 77 | 10 | 15 | 7 | 643 | 309 |
| MN | 33 | 11 | 106 | 65 | 199 | 72 | 5 | 2 | 2 | 137 | 115 |
| MS | 267 | 6 | 29 | 120 | 82 | 24 | 10 | 0 | 6 | 178 | 210 |
| MO | 76 | 10 | 203 | 503 | 351 | 142 | 21 | 3 | 2 | 280 | 163 |
| MT | 10 | 7 | 61 | 14 | 93 | 51 | 4 | 0 | 0 | 33 | 8 |
| NE | 19 | 2 | 91 | 44 | 143 | 128 | 5 | 3 | 2 | 67 | 25 |
| NV | 13 | 20 | 385 | 42 | 1,144 | 87 | 11 | 0 | 7 | 93 | 52 |
| NH | 8 | 0 | 14 | 6 | 35 | 9 | 29 | 0 | 0 | 81 | 16 |
| NJ | 26 | 6 | 59 | 15 | 101 | 19 | 112 | 66 | 13 | 708 | 236 |
| NM | 27 | 17 | 607 | 44 | 262 | 342 | 10 | 1 | 1 | 114 | 28 |
| NY | 127 | 14 | 226 | 49 | 391 | 65 | 589 | 127 | 31 | 2,652 | 878 |
| NC | 97 | 15 | 115 | 55 | 231 | 68 | 84 | 56 | 34 | 707 | 549 |
| ND | 5 | 0 | 20 | 4 | 27 | 38 | 0 | 0 | 0 | 6 | 6 |
| OH | 169 | 6 | 189 | 56 | 249 | 74 | 34 | 19 | 24 | 776 | 359 |
| OK | 47 | 13 | 129 | 404 | 312 | 128 | 11 | 0 | 2 | 138 | 79 |
| OR | 17 | 72 | 253 | 44 | 757 | 85 | 2 | 0 | 2 | 64 | 27 |
| PA | 47 | 11 | 121 | 30 | 181 | 61 | 126 | 219 | 21 | 763 | 219 |
| RI | 6 | 0 | 10 | 0 | 37 | 7 | 114 | 2 | 0 | 158 | 24 |
| SC | 73 | 7 | 38 | 14 | 79 | 28 | 25 | 22 | 13 | 323 | 494 |
| SD | 2 | 3 | 40 | 7 | 55 | 42 | 4 | 0 | 0 | 19 | 5 |
| TN | 219 | 10 | 81 | 146 | 108 | 42 | 14 | 5 | 2 | 344 | 332 |
| TX | 269 | 66 | 608 | 719 | 1,197 | 623 | 51 | 23 | 10 | 844 | 514 |
| UT | 8 | 31 | 378 | 27 | 372 | 148 | 3 | 0 | 1 | 48 | 22 |
| VT | 10 | 0 | 24 | 10 | 34 | 9 | 39 | 1 | 0 | 39 | 6 |
| VA | 63 | 5 | 65 | 28 | 110 | 24 | 31 | 34 | 81 | 383 | 228 |
| WA | 58 | 147 | 389 | 72 | 885 | 121 | 17 | 5 | 5 | 187 | 110 |

| State | AL | AK | AZ | AR | CA | CO | CT | DE | DC | FL | GA |
|-------|-------|-----|-------|-------|--------|-------|-------|-----|-----|--------|--------|
| WV | 24 | 9 | 25 | 21 | 16 | 13 | 10 | 10 | 3 | 122 | 47 |
| WI | 47 | 7 | 117 | 89 | 151 | 41 | 4 | 3 | 1 | 175 | 109 |
| WY | 10 | 10 | 43 | 10 | 61 | 120 | 0 | 1 | 0 | 19 | 3 |
| Total | 4,311 | 896 | 9,868 | 4,646 | 12,835 | 4,680 | 2,198 | 995 | 803 | 16,233 | 10,305 |

Table V.6b. Cross-state Linked Pairs, 2005 to 2006

| State | HI | ID | IL | IN | IA | KS | KY | LA | ME | MD | MA |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AL | 4 | 5 | 88 | 72 | 17 | 22 | 62 | 81 | 13 | 16 | 22 |
| AK | 45 | 12 | 8 | 7 | 11 | 6 | 2 | 5 | 6 | 4 | 3 |
| AZ | 53 | 136 | 244 | 144 | 142 | 107 | 74 | 73 | 34 | 37 | 52 |
| AR | 1 | 20 | 120 | 65 | 36 | 43 | 53 | 188 | 6 | 15 | 6 |
| CA | 210 | 431 | 532 | 354 | 219 | 283 | 166 | 243 | 48 | 107 | 139 |
| CO | 14 | 38 | 88 | 50 | 65 | 145 | 19 | 29 | 15 | 30 | 22 |
| CT | 5 | 0 | 18 | 9 | 6 | 5 | 3 | 10 | 46 | 30 | 172 |
| DE | 4 | 4 | 5 | 6 | 5 | 4 | 4 | 12 | 2 | 180 | 9 |
| DC | 0 | 0 | 7 | 1 | 1 | 0 | 0 | 4 | 1 | 592 | 2 |
| FL | 36 | 51 | 513 | 472 | 98 | 103 | 372 | 247 | 124 | 227 | 437 |
| GA | 21 | 11 | 351 | 240 | 72 | 68 | 183 | 300 | 44 | 127 | 89 |
| HI | 0 | 9 | 14 | 4 | 4 | 2 | 5 | 6 | 4 | 11 | 9 |
| ID | 5 | 0 | 27 | 14 | 15 | 8 | 14 | 3 | 1 | 1 | 5 |
| IL | 9 | 13 | 0 | 796 | 425 | 55 | 213 | 93 | 5 | 34 | 21 |
| IN | 3 | 17 | 700 | 0 | 112 | 24 | 597 | 47 | 13 | 24 | 18 |
| IA | 4 | 18 | 319 | 63 | 0 | 41 | 39 | 25 | 7 | 16 | 12 |
| KS | 7 | 14 | 87 | 26 | 59 | 0 | 24 | 42 | 3 | 12 | 7 |
| KY | 6 | 8 | 134 | 488 | 31 | 24 | 0 | 33 | 9 | 17 | 6 |
| LA | 8 | 3 | 69 | 36 | 36 | 22 | 30 | 0 | 6 | 17 | 9 |
| ME | 4 | 1 | 14 | 8 | 8 | 4 | 2 | 6 | 0 | 17 | 113 |
| MD | 1 | 4 | 20 | 31 | 6 | 15 | 18 | 30 | 12 | 0 | 39 |
| MA | 10 | 5 | 26 | 20 | 9 | 9 | 13 | 9 | 178 | 26 | 0 |
| MI | 14 | 14 | 300 | 402 | 72 | 44 | 175 | 107 | 9 | 45 | 31 |
| MN | 7 | 21 | 252 | 92 | 236 | 43 | 20 | 23 | 11 | 14 | 17 |
| MS | 5 | 3 | 161 | 70 | 19 | 17 | 64 | 215 | 3 | 10 | 8 |
| MO | 23 | 54 | 676 | 123 | 278 | 712 | 99 | 97 | 7 | 17 | 20 |
| MT | 6 | 59 | 17 | 18 | 10 | 15 | 9 | 12 | 7 | 3 | 3 |
| NE | 5 | 14 | 56 | 31 | 351 | 88 | 7 | 19 | 4 | 14 | 10 |
| NV | 56 | 119 | 108 | 44 | 36 | 48 | 19 | 44 | 10 | 21 | 14 |
| NH | 4 | 6 | 10 | 4 | 4 | 5 | 2 | 1 | 159 | 6 | 196 |
| NJ | 4 | 2 | 44 | 25 | 13 | 5 | 12 | 19 | 13 | 90 | 81 |
| NM | 9 | 26 | 53 | 27 | 17 | 68 | 32 | 38 | 5 | 17 | 13 |
| NY | 21 | 20 | 146 | 101 | 27 | 24 | 98 | 49 | 74 | 323 | 437 |
| NC | 11 | 19 | 90 | 89 | 29 | 41 | 121 | 80 | 34 | 185 | 68 |
| ND | 1 | 8 | 7 | 9 | 19 | 4 | 6 | 4 | 1 | 2 | 1 |
| OH | 7 | 11 | 167 | 441 | 54 | 36 | 648 | 66 | 38 | 62 | 36 |
| OK | 3 | 15 | 81 | 64 | 50 | 236 | 51 | 63 | 6 | 20 | 8 |
| OR | 47 | 244 | 31 | 28 | 38 | 25 | 9 | 20 | 13 | 11 | 12 |
| PA | 10 | 13 | 61 | 74 | 32 | 21 | 56 | 35 | 25 | 292 | 121 |
| RI | 0 | 1 | 9 | 7 | 0 | 2 | 7 | 3 | 25 | 14 | 201 |
| SC | 5 | 3 | 58 | 37 | 15 | 14 | 66 | 54 | 19 | 72 | 41 |
| SD | 1 | 7 | 22 | 12 | 90 | 16 | 9 | 3 | 0 | 0 | 1 |
| TN | 5 | 9 | 181 | 191 | 47 | 37 | 341 | 64 | 11 | 30 | 31 |
| TX | 29 | 85 | 544 | 302 | 185 | 302 | 203 | 895 | 33 | 103 | 62 |
| UT | 27 | 180 | 36 | 22 | 29 | 27 | 15 | 25 | 6 | 8 | 6 |
| VT | 1 | 0 | 0 | 12 | 0 | 2 | 10 | 6 | 48 | 3 | 61 |
| VA | 3 | 1 | 58 | 73 | 17 | 14 | 68 | 57 | 14 | 297 | 50 |
| WA | 62 | 376 | 79 | 60 | 57 | 62 | 48 | 34 | 16 | 24 | 31 |

| State | HI | ID | IL | IN | IA | KS | KY | LA | ME | MD | MA |
|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| WV | 6 | 5 | 24 | 39 | 4 | 5 | 119 | 16 | 5 | 156 | 9 |
| WI | 3 | 21 | 475 | 109 | 117 | 24 | 52 | 56 | 8 | 14 | 24 |
| WY | 4 | 45 | 16 | 9 | 14 | 16 | 3 | 6 | 1 | 3 | 3 |
| Total | 829 | 2,181 | 7,146 | 5,421 | 3,237 | 2,943 | 4,262 | 3,597 | 1,182 | 3,396 | 2,788 |

Table V.6c. Cross-state Linked Pairs, 2005 to 2006

| State | MI | MN | MS | MO | MT | NE | NV | NH | NJ | NM | NY |
|-------|-----|-----|-----|-----|-----|-----|-------|-----|-------|-----|-------|
| AL | 88 | 13 | 190 | 37 | 8 | 7 | 21 | 5 | 26 | 6 | 47 |
| AK | 10 | 9 | 0 | 14 | 32 | 7 | 23 | 1 | 3 | 14 | 11 |
| AZ | 192 | 142 | 70 | 189 | 79 | 74 | 310 | 10 | 39 | 672 | 191 |
| AR | 77 | 58 | 93 | 300 | 12 | 28 | 33 | 5 | 9 | 16 | 13 |
| CA | 273 | 294 | 136 | 441 | 110 | 148 | 1,940 | 30 | 148 | 437 | 378 |
| CO | 73 | 66 | 14 | 105 | 45 | 129 | 76 | 7 | 30 | 269 | 42 |
| CT | 16 | 7 | 1 | 19 | 2 | 3 | 18 | 34 | 88 | 3 | 328 |
| DE | 7 | 5 | 2 | 5 | 0 | 0 | 6 | 3 | 81 | 2 | 79 |
| DC | 0 | 2 | 1 | 2 | 0 | 0 | 1 | 2 | 8 | 0 | 15 |
| FL | 559 | 138 | 221 | 235 | 26 | 67 | 114 | 102 | 591 | 64 | 1,675 |
| GA | 278 | 95 | 247 | 140 | 6 | 27 | 74 | 21 | 185 | 27 | 551 |
| HI | 3 | 7 | 2 | 15 | 1 | 4 | 99 | 0 | 6 | 18 | 39 |
| ID | 25 | 21 | 12 | 21 | 62 | 20 | 66 | 6 | 13 | 34 | 13 |
| IL | 295 | 280 | 181 | 473 | 5 | 50 | 79 | 3 | 25 | 42 | 79 |
| IN | 442 | 128 | 67 | 130 | 5 | 23 | 43 | 3 | 27 | 23 | 57 |
| IA | 66 | 192 | 36 | 202 | 32 | 275 | 21 | 1 | 11 | 9 | 45 |
| KS | 35 | 38 | 27 | 641 | 19 | 102 | 23 | 4 | 2 | 49 | 18 |
| KY | 104 | 23 | 35 | 102 | 7 | 9 | 15 | 5 | 10 | 7 | 45 |
| LA | 54 | 21 | 300 | 79 | 7 | 8 | 38 | 1 | 12 | 26 | 35 |
| ME | 16 | 10 | 2 | 17 | 5 | 9 | 11 | 129 | 26 | 6 | 76 |
| MD | 38 | 16 | 26 | 32 | 1 | 7 | 8 | 3 | 111 | 7 | 192 |
| MA | 30 | 14 | 11 | 12 | 0 | 0 | 8 | 214 | 70 | 7 | 305 |
| MI | 0 | 117 | 88 | 143 | 16 | 40 | 87 | 8 | 41 | 37 | 128 |
| MN | 99 | 0 | 43 | 101 | 30 | 55 | 34 | 3 | 20 | 38 | 39 |
| MS | 86 | 61 | 0 | 59 | 1 | 13 | 15 | 3 | 9 | 10 | 23 |
| MO | 154 | 136 | 98 | 0 | 25 | 119 | 56 | 2 | 17 | 39 | 84 |
| MT | 9 | 55 | 4 | 18 | 0 | 18 | 28 | 1 | 1 | 19 | 11 |
| NE | 41 | 42 | 15 | 107 | 5 | 0 | 29 | 6 | 8 | 29 | 17 |
| NV | 42 | 33 | 32 | 89 | 31 | 35 | 0 | 5 | 23 | 60 | 63 |
| NH | 19 | 3 | 8 | 9 | 0 | 3 | 4 | 0 | 14 | 4 | 49 |
| NJ | 37 | 19 | 11 | 23 | 2 | 1 | 15 | 16 | 0 | 5 | 566 |
| NM | 33 | 31 | 12 | 36 | 28 | 35 | 55 | 4 | 6 | 0 | 40 |
| NY | 136 | 63 | 40 | 67 | 11 | 22 | 84 | 70 | 1,342 | 30 | 0 |
| NC | 154 | 41 | 49 | 50 | 12 | 19 | 34 | 21 | 187 | 32 | 494 |
| ND | 9 | 223 | 2 | 9 | 47 | 16 | 22 | 2 | 6 | 12 | 3 |
| OH | 434 | 78 | 79 | 101 | 17 | 21 | 54 | 15 | 80 | 38 | 193 |
| OK | 40 | 51 | 48 | 235 | 24 | 49 | 48 | 2 | 6 | 96 | 30 |
| OR | 29 | 39 | 7 | 61 | 80 | 27 | 133 | 8 | 7 | 51 | 22 |
| PA | 64 | 37 | 27 | 52 | 9 | 10 | 54 | 21 | 602 | 31 | 911 |
| RI | 6 | 10 | 2 | 4 | 4 | 0 | 5 | 17 | 17 | 1 | 95 |
| SC | 76 | 19 | 34 | 42 | 10 | 8 | 13 | 20 | 87 | 12 | 213 |
| SD | 4 | 124 | 10 | 13 | 21 | 79 | 18 | 3 | 2 | 19 | 9 |
| TN | 190 | 38 | 301 | 103 | 10 | 17 | 18 | 1 | 27 | 22 | 93 |
| TX | 394 | 401 | 286 | 405 | 49 | 160 | 172 | 18 | 69 | 739 | 254 |
| UT | 41 | 20 | 7 | 57 | 31 | 18 | 176 | 5 | 12 | 78 | 30 |
| VT | 9 | 4 | 2 | 7 | 0 | 1 | 12 | 121 | 7 | 4 | 111 |
| VA | 64 | 20 | 27 | 55 | 9 | 9 | 23 | 9 | 113 | 14 | 330 |
| WA | 86 | 105 | 33 | 105 | 160 | 32 | 147 | 7 | 20 | 58 | 73 |

| State | MI | MN | MS | MO | MT | NE | NV | NH | NJ | NM | NY |
|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|-------|-------|
| WV | 33 | 12 | 14 | 21 | 3 | 3 | 4 | 0 | 16 | 0 | 40 |
| WI | 202 | 467 | 75 | 70 | 26 | 18 | 36 | 7 | 20 | 15 | 55 |
| WY | 25 | 18 | 9 | 20 | 39 | 30 | 17 | 1 | 1 | 18 | 2 |
| Total | 5,197 | 3,846 | 3,037 | 5,273 | 1,164 | 1,855 | 4,420 | 985 | 4,281 | 3,249 | 8,212 |

Table V.6d. Cross-state Linked Pairs, 2005 to 2006

| State | NC | ND | OH | OK | OR | PA | RI | SC | SD | TN | TX |
|-------|-------|-----|-----|-------|-------|-------|-----|-----|-----|-----|-------|
| AL | 93 | 2 | 86 | 35 | 12 | 28 | 2 | 41 | 1 | 215 | 205 |
| AK | 22 | 1 | 9 | 25 | 91 | 11 | 2 | 6 | 10 | 4 | 33 |
| AZ | 102 | 18 | 204 | 218 | 272 | 142 | 9 | 48 | 31 | 123 | 521 |
| AR | 52 | 7 | 44 | 324 | 30 | 18 | 2 | 26 | 15 | 171 | 545 |
| CA | 474 | 45 | 279 | 581 | 1,181 | 218 | 38 | 147 | 56 | 387 | 2,361 |
| CO | 79 | 13 | 69 | 148 | 53 | 42 | 0 | 22 | 55 | 49 | 464 |
| CT | 156 | 0 | 43 | 4 | 8 | 155 | 68 | 67 | 1 | 42 | 30 |
| DE | 53 | 1 | 9 | 10 | 0 | 155 | 1 | 15 | 0 | 18 | 23 |
| DC | 72 | 0 | 5 | 4 | 0 | 17 | 2 | 10 | 1 | 1 | 23 |
| FL | 1,144 | 12 | 722 | 195 | 103 | 818 | 92 | 505 | 19 | 877 | 961 |
| GA | 666 | 18 | 356 | 97 | 42 | 256 | 26 | 530 | 6 | 675 | 702 |
| HI | 25 | 1 | 13 | 22 | 46 | 7 | 3 | 7 | 3 | 9 | 42 |
| ID | 23 | 8 | 8 | 25 | 197 | 22 | 1 | 3 | 7 | 28 | 83 |
| IL | 136 | 7 | 151 | 96 | 58 | 79 | 8 | 25 | 23 | 308 | 484 |
| IN | 130 | 3 | 439 | 63 | 19 | 75 | 12 | 61 | 11 | 309 | 263 |
| IA | 20 | 20 | 66 | 72 | 27 | 20 | 0 | 21 | 73 | 47 | 215 |
| KS | 43 | 8 | 45 | 352 | 33 | 10 | 0 | 28 | 18 | 46 | 330 |
| KY | 100 | 1 | 613 | 35 | 25 | 61 | 2 | 63 | 1 | 411 | 142 |
| LA | 66 | 3 | 37 | 124 | 32 | 28 | 0 | 21 | 2 | 219 | 1,583 |
| ME | 25 | 0 | 29 | 8 | 10 | 39 | 23 | 18 | 1 | 15 | 10 |
| MD | 354 | 1 | 94 | 17 | 9 | 422 | 11 | 80 | 6 | 63 | 99 |
| MA | 149 | 0 | 26 | 13 | 13 | 111 | 177 | 70 | 1 | 29 | 29 |
| MI | 196 | 15 | 504 | 83 | 35 | 100 | 1 | 95 | 16 | 355 | 479 |
| MN | 74 | 227 | 74 | 72 | 50 | 43 | 0 | 12 | 143 | 69 | 415 |
| MS | 53 | 0 | 57 | 55 | 12 | 23 | 4 | 19 | 0 | 398 | 262 |
| MO | 115 | 7 | 130 | 386 | 75 | 48 | 6 | 35 | 26 | 227 | 419 |
| MT | 15 | 36 | 13 | 21 | 81 | 8 | 0 | 5 | 26 | 16 | 46 |
| NE | 14 | 26 | 29 | 55 | 31 | 6 | 3 | 16 | 104 | 27 | 175 |
| NV | 39 | 11 | 49 | 82 | 160 | 42 | 0 | 24 | 12 | 51 | 239 |
| NH | 34 | 0 | 7 | 1 | 3 | 23 | 13 | 25 | 1 | 9 | 11 |
| NJ | 351 | 2 | 67 | 19 | 8 | 912 | 12 | 103 | 2 | 59 | 116 |
| NM | 32 | 13 | 21 | 147 | 37 | 23 | 0 | 28 | 17 | 39 | 699 |
| NY | 1,092 | 4 | 293 | 39 | 23 | 1,844 | 106 | 354 | 3 | 144 | 273 |
| NC | 0 | 2 | 213 | 85 | 38 | 257 | 28 | 761 | 11 | 291 | 284 |
| ND | 2 | 0 | 7 | 21 | 15 | 5 | 0 | 3 | 93 | 3 | 65 |
| OH | 305 | 13 | 0 | 78 | 27 | 349 | 7 | 148 | 9 | 286 | 354 |
| OK | 66 | 14 | 50 | 0 | 60 | 45 | 2 | 44 | 19 | 78 | 869 |
| OR | 37 | 18 | 33 | 57 | 0 | 28 | 3 | 7 | 18 | 56 | 146 |
| PA | 396 | 15 | 332 | 38 | 25 | 0 | 26 | 140 | 8 | 97 | 155 |
| RI | 60 | 2 | 19 | 1 | 0 | 36 | 0 | 31 | 1 | 14 | 12 |
| SC | 803 | 5 | 110 | 40 | 15 | 159 | 10 | 0 | 1 | 144 | 134 |
| SD | 9 | 87 | 11 | 26 | 21 | 4 | 0 | 10 | 0 | 6 | 20 |
| TN | 203 | 12 | 211 | 63 | 22 | 88 | 6 | 98 | 3 | 0 | 197 |
| TX | 374 | 63 | 343 | 1,277 | 158 | 174 | 12 | 127 | 38 | 352 | 0 |
| UT | 22 | 8 | 34 | 41 | 114 | 16 | 0 | 9 | 9 | 17 | 170 |
| VT | 46 | 0 | 7 | 9 | 7 | 15 | 5 | 9 | 0 | 4 | 5 |
| VA | 758 | 5 | 115 | 36 | 16 | 217 | 12 | 110 | 4 | 225 | 183 |
| WA | 90 | 50 | 53 | 85 | 852 | 81 | 8 | 43 | 33 | 103 | 297 |

| State | NC | ND | OH | OK | OR | PA | RI | SC | SD | TN | TX |
|-------|-------|-----|-------|-------|-------|-------|-----|-------|-------|-------|--------|
| WV | 226 | 4 | 427 | 16 | 8 | 144 | 0 | 42 | 5 | 84 | 52 |
| WI | 55 | 29 | 57 | 41 | 28 | 57 | 1 | 14 | 27 | 102 | 189 |
| WY | 9 | 12 | 8 | 29 | 24 | 3 | 0 | 4 | 41 | 11 | 45 |
| Total | 9,460 | 849 | 6,621 | 5,371 | 4,206 | 7,484 | 744 | 4,130 | 1,011 | 7,313 | 15,459 |

Table V.6e. Cross-state Linked Pairs, 2005 to 2006

| State | UT | VT | VA | WA | WV | WI | WY | Total |
|-------|-----|-----|-----|-------|-----|-----|-----|--------|
| AL | 9 | 0 | 51 | 42 | 15 | 42 | 4 | 2,831 |
| AK | 23 | 3 | 11 | 215 | 0 | 6 | 19 | 1,037 |
| AZ | 308 | 9 | 81 | 424 | 26 | 123 | 71 | 8,248 |
| AR | 18 | 2 | 15 | 52 | 5 | 39 | 13 | 3,070 |
| CA | 607 | 30 | 193 | 1,412 | 50 | 201 | 94 | 21,497 |
| CO | 128 | 5 | 49 | 153 | 13 | 61 | 124 | 3,922 |
| CT | 9 | 30 | 56 | 8 | 2 | 9 | 3 | 2,236 |
| DE | 0 | 0 | 37 | 7 | 8 | 3 | 0 | 926 |
| DC | 0 | 0 | 97 | 3 | 8 | 2 | 1 | 968 |
| FL | 78 | 61 | 401 | 192 | 174 | 227 | 21 | 17,474 |
| GA | 52 | 10 | 289 | 130 | 52 | 89 | 17 | 10,466 |
| HI | 40 | 2 | 11 | 129 | 0 | 11 | 3 | 1,091 |
| ID | 207 | 1 | 9 | 394 | 2 | 9 | 47 | 1,889 |
| IL | 35 | 3 | 40 | 83 | 10 | 599 | 13 | 7,033 |
| IN | 16 | 4 | 65 | 62 | 60 | 142 | 12 | 5,465 |
| IA | 25 | 1 | 14 | 64 | 4 | 113 | 12 | 2,753 |
| KS | 21 | 3 | 15 | 41 | 4 | 35 | 12 | 2,993 |
| KY | 9 | 0 | 66 | 41 | 118 | 40 | 10 | 3,574 |
| LA | 5 | 3 | 49 | 48 | 10 | 21 | 6 | 4,200 |
| ME | 12 | 28 | 20 | 18 | 4 | 8 | 5 | 1,072 |
| MD | 6 | 4 | 364 | 24 | 198 | 14 | 5 | 3,738 |
| MA | 4 | 64 | 40 | 40 | 7 | 7 | 2 | 2,826 |
| MI | 22 | 8 | 73 | 67 | 45 | 230 | 11 | 6,138 |
| MN | 26 | 3 | 27 | 149 | 2 | 485 | 16 | 3,832 |
| MS | 7 | 3 | 24 | 25 | 3 | 72 | 7 | 2,811 |
| MO | 56 | 5 | 56 | 119 | 21 | 99 | 19 | 6,439 |
| MT | 42 | 4 | 4 | 185 | 2 | 5 | 70 | 1,183 |
| NE | 25 | 0 | 8 | 33 | 8 | 29 | 65 | 2,081 |
| NV | 179 | 5 | 14 | 194 | 4 | 45 | 34 | 3,970 |
| NH | 2 | 111 | 18 | 9 | 6 | 3 | 2 | 986 |
| NJ | 7 | 2 | 146 | 33 | 24 | 11 | 3 | 4,241 |
| NM | 103 | 3 | 14 | 93 | 3 | 34 | 26 | 3,370 |
| NY | 23 | 93 | 424 | 81 | 58 | 60 | 3 | 13,251 |
| NC | 26 | 17 | 589 | 81 | 222 | 57 | 8 | 6,841 |
| ND | 10 | 1 | 2 | 24 | 1 | 29 | 9 | 809 |
| OH | 27 | 7 | 131 | 72 | 505 | 62 | 7 | 7,018 |
| OK | 33 | 0 | 29 | 80 | 22 | 30 | 19 | 3,949 |
| OR | 105 | 4 | 35 | 1,132 | 8 | 36 | 30 | 4,018 |
| PA | 28 | 20 | 216 | 51 | 117 | 23 | 8 | 6,052 |
| RI | 2 | 6 | 18 | 11 | 3 | 6 | 0 | 1,010 |
| SC | 9 | 9 | 126 | 27 | 52 | 24 | 10 | 3,712 |
| SD | 9 | 1 | 2 | 29 | 1 | 23 | 42 | 941 |
| TN | 9 | 12 | 174 | 61 | 55 | 69 | 7 | 4,360 |
| TX | 103 | 13 | 223 | 298 | 40 | 201 | 57 | 14,467 |
| UT | 0 | 5 | 22 | 157 | 6 | 13 | 112 | 2,649 |
| VT | 5 | 0 | 7 | 10 | 5 | 12 | 0 | 739 |
| VA | 20 | 15 | 0 | 34 | 230 | 20 | 3 | 4,380 |
| WA | 124 | 20 | 49 | 0 | 11 | 67 | 61 | 5,698 |

| State | UT | VT | VA | WA | WV | WI | WY | Total |
|-------|-------|-----|-------|-------|-------|-------|-------|---------|
| WV | 4 | 2 | 222 | 10 | 0 | 8 | 3 | 2,091 |
| WI | 20 | 1 | 20 | 80 | 11 | 0 | 10 | 3,380 |
| WY | 63 | 1 | 8 | 35 | 2 | 14 | 0 | 886 |
| Total | 2,701 | 634 | 4,654 | 6,762 | 2,237 | 3,568 | 1,136 | 230,611 |

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VI. RECOMMENDATIONS FOR FUTURE MAXEM DEVELOPMENT

Drawing from our experience implementing and evaluating MAXEM for 2005 and 2006, we have a number of observations and recommendations for future MAXEM development. We divide these into priorities for MSIS/MAX enhancements and prospective modifications to the implementation process for MAXEM 2007.

A. Priorities for MSIS/MAX Enhancements

The quality of the unduplication of MAX records for MAXEM depends on the underlying data. Records can be linked correctly only if the person-level identifiers needed to establish that two records do or do not belong to the same individual are captured and correctly recorded. Because of missing, incomplete, or incorrect information, records belonging to the same individual may go unlinked, and records belonging to different individuals may be associated inappropriately. Such linkage errors will very likely continue to plague future MAXEM file production unless significant improvements in the data provided by a large number of states can be realized. Particular problems that need to be addressed include:

- Missing SSNs
- Incorrect SSNs
- Discrepant MSIS IDs
- Insufficient information to validate linkages
- Data anomalies

We discuss these areas in turn.

Missing SSNs. The single greatest obstacle to full unduplication of MAX records is the absence of SSNs for a significant percentage of records in many states. Between 9 and 10 percent of the records that we attempted to unduplicate lacked SSNs—a level of missing data that has not declined since at least 2000. Because of the way the SSNs are distributed, we do not

believe that these missing SSNs translate directly into 10 percent too few linked pairs, nevertheless, this is the single greatest source of missed linkages in MAXEM. Roughly two-thirds of the missing SSNs are from California, which has the largest number of recipients of partial benefits, most of whom, we suspect, are not likely to be eligible for Medicaid in other states in the near term. In other states, however, there is no reason to suspect that records with missing SSNs belong to individuals who are any less likely to become eligible in another state than those with complete SSNs. While 14 states were missing between 5 and 10 percent of MAX SSNs in 2006, very few states were missing fewer than 1 percent. Improved capture of SSNs would do more to enhance the unduplication of MAX records than any other improvement to the data or unduplication process.

Incorrect SSNs. When SSNs are present, the evidence that we and others have compiled suggests that their quality is very high but that errors do occur. In our own work, we were limited to performing range checks through the high group test discussed in Chapter II. Exceedingly few SSNs failed this test, but passing the test provides little assurance that the reported SSN is correct. In the Medicaid undercount project mentioned in Chapter V, Census Bureau staff performed a validation check by comparing MSIS SSNs and their reported sex and DOB with SSA records. Of the SSNs that passed range checks, 98.8 percent were validated (Research Project to Understand the Medicaid Undercount 2007). The 1.2 percent that failed validation in that study is much smaller than the 10 percent that is missing MAX SSNs, but it nevertheless implies potential missed links and indicates that there is room for improvement.

Discrepant MSIS IDs. Generally speaking, duplication of enrollment records within a state and year should not occur, as state Medicaid tracking systems were designed to prevent this. We found, however, that while 35 states had within-year duplication rates below 0.1 percent of their total records, four states had within-year duplication rates in excess of 1 percent and ranging as

high as 2.6 percent. The states with this issue stand out; identifying them should help them see they have a problem relative to other states and seek solutions. Because most states have dealt so effectively with tracking Medicaid enrollees, the technical know-how to solve tracking problems should be widely available.

Insufficient Information to Validate Linkages. With the MSIS IDs and SSNs reported on MAX records, we can readily establish links among records but we lack the information needed to confirm that a linkage is correct. In the implementation of MAXEM for 2005 and 2006, we were forced to attempt to validate linkages using variables that show considerable disagreement even when linkages are correct. We could not explore small enhancements to our methods because we could not measure improvement with sufficient reliability. Given this situation, we cannot underestimate the importance of obtaining additional identifying information for at least a sample of linked records.

In addition, the discrepancies in reported race/ethnicity that appear to stem from state-to-state differences in race coding should be examined to determine their source. Such discrepancies seriously weaken the value of agreement on race/ethnicity in confirming linkages across states.

Data Anomalies. Annual listings of known irregularities in Medicaid data have been compiled by the states and CMS contractors for decades, but the number of problems do not seem to have diminished over time—perhaps, in part, because both internal and external review have improved. In Chapter IV we noted problems affecting thousands of records in a number of states. Such problems are isolated, but they continue to crop up, requiring vigilance by the states and MAX users alike. We found indirect evidence, through divergent linkage rates, of data anomalies in several states, but we could only flag these states as outliers rather than trace the apparent problems to specific sources.

Past experience suggests that there will be no significant improvement in any of these areas without some incentive to the states. Yet the most significant enhancement to the unduplication of Medicaid records clearly would come through increased reporting of SSNs. How to bring this about is a challenge that CMS must confront if the agency is to achieve better outcomes with MAXEM.

B. Process Improvements

While this report reviews implementation of MAXEM on the 2005 and 2006 MAX files, the prospective addition of a third year compels us to consider how we might approach the task differently in light of the modified requirements. Four main topics are relevant to this review:

- The linkage algorithm
- The pair-wise approach to linkage
- Updating MAXEM data
- Dissemination of findings

We consider these aspects of MAXEM unduplication in turn.

Linkage Algorithm. The deterministic record-linkage algorithm that was selected for implementation of MAXEM performed admirably. The algorithm is well suited to the data, which provides two high-quality linking variables: the MSIS ID, which is highly effective in linking records within states but of no use in linking records across states; and the MAX SSN, which adds little to the linkages identified through the MSIS ID but accounts for nearly all of the cross-state linkages. The EDB-SSN and the EDB-HIC account for few linkages not already identified by the MSIS ID or SSN. One strength of the deterministic algorithm in this context is its efficiency, which is vitally important when each year of MAX files contains 60 million records. We see no value in exploring small refinements to the linkage algorithm—such as making additional allowance for error in the linking variables—as these have been shown to add too few records to offset the risks of increased numbers of false positives.

Pair-wise Linking. Our approach to unduplicating each MAX file is built on the construction of linked pairs; if four records represent the same individual, the construction of linked pairs will yield six pairs. This strategy for reassigning MAXEM IDs two records at a time appears cumbersome, but it proved effective and we have no countersuggestion, pending an assessment of its performance with three years of data.

One area where the pair-wise approach did present problems was in its creation of asymmetric linked pairs. It is possible, for example, that record A will link to records B, C, and D, but record C will not link to D. In such a case, depending on how the MAXEM IDs were distributed among the records, it is possible that record C might end up with a different MAXEM ID than records A, B, and D.

We found no good solution to this problem. In a few cases, the application of cross-state linkage resulted in a new, common MAXEM ID being assigned to records that previously had different MAXEM IDs—in some cases creating within-year duplicates. As a result, these within-year duplicates were not resolved into a common record, as they would have been if the common MAXEM ID had been assigned earlier. We recommend that subsequent MAXEM development efforts improve on the algorithm's treatment of multiple asymmetric linked pairs.

Updating MAXEM Data. Each new year of data that is added to MAXEM will introduce corrections and new linkages to previously completed data, so it is important to consider how to update the research products without putting users in the position of having to discard files used previously or, worse, redo their research. Finding a suitable strategy will require, first, that we take careful note of how a third year of data affects previous MAXEM data. We can anticipate that the 2007 data will provide numerous corrections to the 2006 data, just as 2006 did to 2005. By favoring later over earlier information in resolving inconsistencies, we ensure that the latest year of data will receive fewer edits than the previous year. What will be important to note,

however, is whether the third year of data yields any edits to the first year. If the edits are minor, it may be best to ignore them, establishing a pattern where the latest MAXEM research file can be viewed as interim while previous files are considered frozen.

Linkages between year three and year one introduce not only potential edits but changes to MAXEM IDs, which in turn have implications for prior cross-reference files. One way to make certain that previously assigned MAXEM IDs do not change is to incorporate the data year into the first segment of the MAXEM ID. Then, when the lower of two MAXEM IDs is assigned to each linked pair, any record from year one or year two that is linked to a record from year three will retain its MAXEM ID. That is, the year one or year two MAXEM ID will be assigned to the year three record. When the MAXEM ID was created for the 2005 and 2006 implementation of MAXEM, the year was included in the second rather than the first segment of the ID. The current MAXEM ID, then, will be subject to change when records from year three are linked to records from year two and, quite possibly, year one. This can be prevented in the future by changing the way that the MAXEM ID is constructed; we recommend that such a change be implemented.

Dissemination of Findings. For now, the public-use tables represent the only vehicle for disseminating the findings from this initial implementation of MAXEM. The tables should be reviewed to assess whether they provide sufficient information to potential users of MAXEM and others who may be interested in what CMS has learned by producing MAXEM. We recommend that CMS also consider other vehicles for disseminating key findings from future MAXEM production. Issue briefs and journal articles would be especially suitable for presenting findings that go beyond what can be communicated in stand-alone tables. Much of what MAXEM can tell us about enrollment patterns within and across states is complex. To fully

comprehend this information will require additional analysis, and communicating the findings to an outside audience will require well-written, thoroughly documented narrative.

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APPENDIX A
PUBLIC-USE TABLES

This appendix contains public-use tables that document the impact of unduplication. The public-use tables are tailored to high-level users who want detailed administrative counts of Medicaid enrollees and/or an in-depth breakdown of the degree of duplication within the MAX PS files. Each table contains statistics by state, and collectively the eight tables report the impact of unduplication on state-level counts for every programmatic variable included in MAXEM. These eight tables are described below.

Table A.1 was intended originally as a validation table for assessing the results of the unduplication and was presented as such in the design report (Wenzlow and Sykes 2009). Given that the full contents of Table A.1 are replicated in Tables A.2 through A.7 but with a different structure, we felt that Table A.1 was more appropriately classified as a public use table and have grouped it with those tables in this final report.

Table A.1 compares basic counts, before and after unduplication, for a wide range of MAXEM variables. There is a separate page (102 in all) for the District of Columbia and each state and for each year. Each page, or subtable, includes columns for counts produced before and after unduplication, followed by the percentage reduction in each row count as a result of unduplication.¹ The first set of rows includes the total PS records, the number with no enrollment, the number with S-CHIP only enrollment, and the total number of enrollment records (PS records less those with no enrollment). The remaining rows include the following sets of categories: (1) basis of eligibility (aged, disabled, child, and adult), (2) basis of eligibility after removing enrollees who qualified only for restricted benefits, (3) type of managed care premium payment—that is, health maintenance organization (HMO) or health insuring organization (HIO), pre-paid health plan (PHP), or primary care case management (PCCM), and (4) type of

¹ The percentage reduction is calculated as the difference between the count before versus after unduplication expressed as a percentage of the count before un-duplication

service used (for example, inpatient hospital services, mental hospital services for the aged, inpatient psychiatric facility services for individuals under age 21).

Tables A.2 through A.7 differ from Table A.1 in that they include all 50 states and the District of Columbia on each page. Each table also includes two rows containing national-level totals. The first national row is simply the sum of the state-level counts. A person who was enrolled in Medicaid in more than one state within a year is counted in each of these respective states and, therefore, is counted multiple times in the national total. In contrast, the second national total includes each individual only once; that is, it provides an unduplicated count of enrollees in that column.

Table A.2 displays counts of total PS records, records with no enrollment data, records with only S-CHIP enrollment during the year, and total enrollees (total PS records less those with no enrollment). There are three pages for each year (for a total of six), which present counts before unduplication, counts after unduplication, and counts of duplicates (the difference between the first two counts).²

Table A.3 displays counts of total enrollees (that is, Medicaid plus S-CHIP only) before and after unduplication along with counts of duplicates. There is a separate page for each of the two years. Table A.4 breaks down the Medicaid enrollees by basis of eligibility in the most recent month of enrollment, providing separate counts for aged, disabled, child, and adult enrollees. There are separate pages for counts before and after unduplication as well as the number of duplicates—all three for both years for a total of six pages. Table A.5 has the same layout as Table A.4, but the counts also exclude enrollees who qualified only for restricted Medicaid

² Counts of within-state duplicates removed in 2005 and 2006 were reported in Chapter IV—specifically, in Tables IV.10 and IV.11. In all, 181,000 records were removed from the 2005 file, and 137,705 were removed from the 2006 file.

benefits (family planning only, aliens eligible only for emergency services, and dual-eligibles receiving only cost-sharing benefits).

Table A.6 classifies Medicaid enrollees by type of managed care premium payment in the calendar year (i.e. HMO or HIO, PHP, PCCM). As with Tables A.3 through A.5, counts before and after unduplication and counts of duplicates are reported on separate pages, yielding three pages for each of the two calendar years.

Table A.7 provides counts of service utilization before and after unduplication along with the number of duplicates for each of 31 types of Medicaid service used in the calendar year (for example, inpatient hospital services, mental hospital services for the aged, inpatient psychiatric facility services for individuals under age 21, and so on). There is a printed page for each of the 31 types of service for each of 2005 and 2006, or 62 pages in all.

Finally, Table A.8 departs from the display of counts to report the Medicaid turnover rate before and after unduplication and the percent reduction (as calculated in Table A.1). The turnover rate measures the degree to which the Medicaid caseload has changed between years. The turnover rate equals the number of people who were ever enrolled in Medicaid over a two-year period (in this case 2005 and 2006) divided by the average number of enrollees across the two years. For example, if the number of enrollees was 100 in the first year, 75 are still enrolled in second year, 25 leave, and 50 enter, then the turnover rate would be 1.33 (ever enrolled = $75 + 25 + 50$; average enrolled = $(100 + 125)/2 = 112.5$; ever/average = 1.33). The turnover rate varies between a minimum of 1.0 (the same persons are enrolled in both years) and a maximum of 2.0 (entirely different persons are enrolled in the two years).

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, Alabama.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 963,526 | 962,325 | 0.12 |
| No enrollment | 7,936 | 7,936 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 955,590 | 954,389 | 0.13 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 102,706 | 102,628 | 0.08 |
| Disabled | 206,514 | 206,302 | 0.10 |
| Child | 442,298 | 441,564 | 0.17 |
| Adult | 204,072 | 203,895 | 0.09 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 99,916 | 99,829 | 0.09 |
| Disabled | 202,889 | 202,678 | 0.10 |
| Child | 441,428 | 440,697 | 0.17 |
| Adult | 167,723 | 167,539 | 0.11 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 0 | 0 | 0.00 |
| PHP | 597,153 | 596,320 | 0.14 |
| PCCM | 439,529 | 439,229 | 0.07 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 113,587 | 113,563 | 0.02 |
| Mental Hospital Services for the Aged | 218 | 218 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 0 | 0 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 245 | 245 | 0.00 |
| Nursing Facility Services | 26,543 | 26,526 | 0.06 |
| Physician Services | 551,652 | 551,290 | 0.07 |
| Dental Services | 169,234 | 169,195 | 0.02 |
| Other Practitioner Services | 106,555 | 106,549 | 0.01 |
| Outpatient Services | 232,167 | 232,086 | 0.03 |
| Clinic Services | 225,315 | 225,221 | 0.04 |
| Home Health Services | 56,666 | 56,650 | 0.03 |
| Lab/Xray Services | 485,520 | 485,285 | 0.05 |
| Drugs | 548,899 | 548,512 | 0.07 |
| Other Services | 40,192 | 40,186 | 0.01 |
| Sterilizations | 2,925 | 2,925 | 0.00 |
| Abortions | 1,465 | 1,465 | 0.00 |
| Transportation Services | 45,672 | 45,659 | 0.03 |
| Personal Care Services | 0 | 0 | 0.00 |
| Targeted Case Management | 30,550 | 30,509 | 0.13 |
| Rehabilitation Services | 4,486 | 4,483 | 0.07 |
| PT/OT/Hearing/Speech Services | 4,661 | 4,656 | 0.11 |
| Hospice Services | 3,687 | 3,687 | 0.00 |
| Nurse Midwife Services | 4,357 | 4,357 | 0.00 |
| Nurse Practitioner Services | 0 | 0 | 0.00 |
| Private Nursing Services | 36 | 36 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 145,628 | 145,609 | 0.01 |
| Residential Care Services | 2,828 | 2,828 | 0.00 |
| Psychiatric Services | 91,564 | 91,495 | 0.08 |
| Adult Day Care | 238 | 238 | 0.00 |
| Unknown Services | 144,893 | 144,819 | 0.05 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, Alaska.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 133,699 | 133,651 | 0.04 |
| No enrollment | 849 | 849 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 132,850 | 132,802 | 0.04 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 7,306 | 7,306 | 0.00 |
| Disabled | 14,987 | 14,986 | 0.01 |
| Child | 82,319 | 82,273 | 0.06 |
| Adult | 28,238 | 28,237 | 0.00 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 7,292 | 7,292 | 0.00 |
| Disabled | 14,975 | 14,974 | 0.01 |
| Child | 82,319 | 82,273 | 0.06 |
| Adult | 28,238 | 28,237 | 0.00 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 0 | 0 | 0.00 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 14,599 | 14,599 | 0.00 |
| Mental Hospital Services for the Aged | 6 | 6 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 1,423 | 1,423 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 0 | 0 | 0.00 |
| Nursing Facility Services | 947 | 947 | 0.00 |
| Physician Services | 84,856 | 84,850 | 0.01 |
| Dental Services | 40,764 | 40,760 | 0.01 |
| Other Practitioner Services | 21,047 | 21,045 | 0.01 |
| Outpatient Services | 43,986 | 43,980 | 0.01 |
| Clinic Services | 34,951 | 34,948 | 0.01 |
| Home Health Services | 379 | 379 | 0.00 |
| Lab/Xray Services | 62,979 | 62,976 | 0.00 |
| Drugs | 77,759 | 77,753 | 0.01 |
| Other Services | 8,186 | 8,186 | 0.00 |
| Sterilizations | 351 | 351 | 0.00 |
| Abortions | 0 | 0 | 0.00 |
| Transportation Services | 22,657 | 22,655 | 0.01 |
| Personal Care Services | 4,768 | 4,767 | 0.02 |
| Targeted Case Management | 4,664 | 4,664 | 0.00 |
| Rehabilitation Services | 163 | 163 | 0.00 |
| PT/OT/Hearing/Speech Services | 6,519 | 6,518 | 0.02 |
| Hospice Services | 24 | 24 | 0.00 |
| Nurse Midwife Services | 2,434 | 2,434 | 0.00 |
| Nurse Practitioner Services | 12,271 | 12,269 | 0.02 |
| Private Nursing Services | 144 | 144 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 30,394 | 30,392 | 0.01 |
| Residential Care Services | 861 | 861 | 0.00 |
| Psychiatric Services | 17,398 | 17,398 | 0.00 |
| Adult Day Care | 439 | 439 | 0.00 |
| Unknown Services | 2,741 | 2,741 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, Arizona.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 1,491,569 | 1,489,015 | 0.17 |
| No enrollment | 14,727 | 14,727 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 1,476,842 | 1,474,288 | 0.17 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 79,784 | 77,986 | 2.25 |
| Disabled | 137,043 | 136,645 | 0.29 |
| Child | 671,165 | 670,946 | 0.03 |
| Adult | 588,850 | 588,711 | 0.02 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 78,877 | 76,825 | 2.60 |
| Disabled | 136,587 | 136,147 | 0.32 |
| Child | 670,384 | 670,166 | 0.03 |
| Adult | 579,197 | 579,028 | 0.03 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 943,281 | 943,094 | 0.02 |
| PHP | 946,074 | 945,852 | 0.02 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 187,132 | 187,123 | 0.00 |
| Mental Hospital Services for the Aged | 0 | 0 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 758 | 758 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 212 | 212 | 0.00 |
| Nursing Facility Services | 17,010 | 17,010 | 0.00 |
| Physician Services | 847,631 | 847,530 | 0.01 |
| Dental Services | 515 | 515 | 0.00 |
| Other Practitioner Services | 150,639 | 150,633 | 0.00 |
| Outpatient Services | 523,645 | 523,606 | 0.01 |
| Clinic Services | 124,014 | 124,010 | 0.00 |
| Home Health Services | 10,744 | 10,742 | 0.02 |
| Lab/Xray Services | 663,750 | 663,688 | 0.01 |
| Drugs | 731,940 | 731,878 | 0.01 |
| Other Services | 104,105 | 104,101 | 0.00 |
| Sterilizations | 3,439 | 3,439 | 0.00 |
| Abortions | 4,205 | 4,205 | 0.00 |
| Transportation Services | 162,838 | 162,823 | 0.01 |
| Personal Care Services | 10,978 | 10,978 | 0.00 |
| Targeted Case Management | 0 | 0 | 0.00 |
| Rehabilitation Services | 21,713 | 21,712 | 0.00 |
| PT/OT/Hearing/Speech Services | 8,166 | 8,166 | 0.00 |
| Hospice Services | 0 | 0 | 0.00 |
| Nurse Midwife Services | 7,287 | 7,286 | 0.01 |
| Nurse Practitioner Services | 105,222 | 105,218 | 0.00 |
| Private Nursing Services | 6 | 6 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 259,774 | 259,766 | 0.00 |
| Residential Care Services | 11,177 | 11,177 | 0.00 |
| Psychiatric Services | 192,171 | 192,163 | 0.00 |
| Adult Day Care | 929 | 929 | 0.00 |
| Unknown Services | 215,309 | 215,299 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, Arkansas.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 762,193 | 761,387 | 0.11 |
| No enrollment | 15,687 | 15,687 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 746,506 | 745,700 | 0.11 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 63,588 | 63,434 | 0.24 |
| Disabled | 111,714 | 111,397 | 0.28 |
| Child | 398,675 | 398,517 | 0.04 |
| Adult | 172,529 | 172,352 | 0.10 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 62,447 | 62,190 | 0.41 |
| Disabled | 110,504 | 109,973 | 0.48 |
| Child | 397,651 | 397,490 | 0.04 |
| Adult | 154,572 | 154,364 | 0.13 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 0 | 0 | 0.00 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 462,403 | 462,254 | 0.03 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 85,549 | 85,532 | 0.02 |
| Mental Hospital Services for the Aged | 0 | 0 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 5,705 | 5,704 | 0.02 |
| Intermediate Care Facility Services for the Mentally Retarded | 1,691 | 1,691 | 0.00 |
| Nursing Facility Services | 18,518 | 18,509 | 0.05 |
| Physician Services | 481,010 | 480,802 | 0.04 |
| Dental Services | 132,391 | 132,380 | 0.01 |
| Other Practitioner Services | 111,199 | 111,184 | 0.01 |
| Outpatient Services | 244,442 | 244,374 | 0.03 |
| Clinic Services | 206,444 | 206,391 | 0.03 |
| Home Health Services | 6,389 | 6,387 | 0.03 |
| Lab/Xray Services | 353,199 | 353,072 | 0.04 |
| Drugs | 455,727 | 455,532 | 0.04 |
| Other Services | 58,982 | 58,930 | 0.09 |
| Sterilizations | 4,115 | 4,115 | 0.00 |
| Abortions | 0 | 0 | 0.00 |
| Transportation Services | 536,144 | 535,803 | 0.06 |
| Personal Care Services | 15,300 | 15,297 | 0.02 |
| Targeted Case Management | 37,755 | 37,750 | 0.01 |
| Rehabilitation Services | 40 | 40 | 0.00 |
| PT/OT/Hearing/Speech Services | 18,439 | 18,435 | 0.02 |
| Hospice Services | 1,624 | 1,624 | 0.00 |
| Nurse Midwife Services | 842 | 842 | 0.00 |
| Nurse Practitioner Services | 6,432 | 6,432 | 0.00 |
| Private Nursing Services | 136 | 136 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 140,940 | 140,918 | 0.02 |
| Residential Care Services | 0 | 0 | 0.00 |
| Psychiatric Services | 80,531 | 80,467 | 0.08 |
| Adult Day Care | 490 | 490 | 0.00 |
| Unknown Services | 104,071 | 104,065 | 0.01 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, California.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 10,924,768 | 10,924,364 | 0.00 |
| No enrollment | 331,245 | 331,245 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 10,593,523 | 10,593,119 | 0.00 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 751,508 | 751,362 | 0.02 |
| Disabled | 1,111,609 | 1,111,577 | 0.00 |
| Child | 4,318,735 | 4,318,541 | 0.00 |
| Adult | 4,411,671 | 4,411,639 | 0.00 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 740,656 | 740,502 | 0.02 |
| Disabled | 1,108,128 | 1,108,095 | 0.00 |
| Child | 4,292,800 | 4,292,592 | 0.00 |
| Adult | 4,384,911 | 4,384,849 | 0.00 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 4,149,147 | 4,149,077 | 0.00 |
| PHP | 6,581,392 | 6,581,225 | 0.00 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 588,772 | 588,771 | 0.00 |
| Mental Hospital Services for the Aged | 13 | 13 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 576 | 576 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 9,980 | 9,980 | 0.00 |
| Nursing Facility Services | 128,051 | 128,021 | 0.02 |
| Physician Services | 4,531,205 | 4,531,127 | 0.00 |
| Dental Services | 2,103,714 | 2,103,705 | 0.00 |
| Other Practitioner Services | 654,637 | 654,635 | 0.00 |
| Outpatient Services | 2,009,350 | 2,009,320 | 0.00 |
| Clinic Services | 2,561,336 | 2,561,315 | 0.00 |
| Home Health Services | 41,886 | 41,886 | 0.00 |
| Lab/Xray Services | 4,525,217 | 4,525,180 | 0.00 |
| Drugs | 5,263,706 | 5,263,572 | 0.00 |
| Other Services | 1,477,393 | 1,477,364 | 0.00 |
| Sterilizations | 21,557 | 21,557 | 0.00 |
| Abortions | 0 | 0 | 0.00 |
| Transportation Services | 292,050 | 292,045 | 0.00 |
| Personal Care Services | 372,763 | 372,753 | 0.00 |
| Targeted Case Management | 200,266 | 200,264 | 0.00 |
| Rehabilitation Services | 90,891 | 90,891 | 0.00 |
| PT/OT/Hearing/Speech Services | 59,058 | 59,058 | 0.00 |
| Hospice Services | 13,725 | 13,725 | 0.00 |
| Nurse Midwife Services | 13,884 | 13,884 | 0.00 |
| Nurse Practitioner Services | 52,060 | 52,059 | 0.00 |
| Private Nursing Services | 1,820 | 1,820 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 3,465,836 | 3,465,814 | 0.00 |
| Residential Care Services | 61,088 | 61,087 | 0.00 |
| Psychiatric Services | 1,013,293 | 1,013,289 | 0.00 |
| Adult Day Care | 80,926 | 80,923 | 0.00 |
| Unknown Services | 934,387 | 934,364 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, Colorado.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 645,965 | 645,723 | 0.04 |
| No enrollment | 42,016 | 42,016 | 0.00 |
| Enrollees with S-CHIP only | 47,057 | 47,045 | 0.03 |
| Total Medicaid Enrollees | 603,949 | 603,707 | 0.04 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 50,802 | 50,796 | 0.01 |
| Disabled | 78,934 | 78,924 | 0.01 |
| Child | 328,711 | 328,503 | 0.06 |
| Adult | 98,445 | 98,439 | 0.01 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 49,312 | 49,306 | 0.01 |
| Disabled | 76,632 | 76,622 | 0.01 |
| Child | 328,554 | 328,346 | 0.06 |
| Adult | 97,748 | 97,741 | 0.01 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 120,423 | 120,417 | 0.00 |
| PHP | 522,901 | 522,683 | 0.04 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 43,617 | 43,616 | 0.00 |
| Mental Hospital Services for the Aged | 12 | 12 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 166 | 166 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 131 | 131 | 0.00 |
| Nursing Facility Services | 14,778 | 14,778 | 0.00 |
| Physician Services | 54,835 | 54,832 | 0.01 |
| Dental Services | 115,031 | 115,023 | 0.01 |
| Other Practitioner Services | 14,864 | 14,864 | 0.00 |
| Outpatient Services | 147,543 | 147,531 | 0.01 |
| Clinic Services | 331,655 | 331,596 | 0.02 |
| Home Health Services | 10,332 | 10,330 | 0.02 |
| Lab/Xray Services | 212,577 | 212,557 | 0.01 |
| Drugs | 240,494 | 240,461 | 0.01 |
| Other Services | 26,829 | 26,828 | 0.00 |
| Sterilizations | 1,853 | 1,853 | 0.00 |
| Abortions | 9 | 9 | 0.00 |
| Transportation Services | 21,865 | 21,865 | 0.00 |
| Personal Care Services | 0 | 0 | 0.00 |
| Targeted Case Management | 0 | 0 | 0.00 |
| Rehabilitation Services | 0 | 0 | 0.00 |
| PT/OT/Hearing/Speech Services | 1,303 | 1,303 | 0.00 |
| Hospice Services | 2,669 | 2,669 | 0.00 |
| Nurse Midwife Services | 539 | 539 | 0.00 |
| Nurse Practitioner Services | 672 | 672 | 0.00 |
| Private Nursing Services | 195 | 195 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 111,308 | 111,303 | 0.00 |
| Residential Care Services | 4,412 | 4,412 | 0.00 |
| Psychiatric Services | 29,365 | 29,365 | 0.00 |
| Adult Day Care | 1,200 | 1,200 | 0.00 |
| Unknown Services | 58,671 | 58,658 | 0.02 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unuplication, 2005, Connecticut.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 531,515 | 530,865 | 0.12 |
| No enrollment | 2,396 | 2,396 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 529,119 | 528,469 | 0.12 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 64,105 | 64,091 | 0.02 |
| Disabled | 64,093 | 64,074 | 0.03 |
| Child | 285,444 | 284,846 | 0.21 |
| Adult | 115,477 | 115,458 | 0.02 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 61,266 | 61,246 | 0.03 |
| Disabled | 60,865 | 60,846 | 0.03 |
| Child | 285,444 | 284,846 | 0.21 |
| Adult | 115,353 | 115,333 | 0.02 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 383,092 | 382,543 | 0.14 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 30,526 | 30,526 | 0.00 |
| Mental Hospital Services for the Aged | 1,166 | 1,165 | 0.09 |
| Inpatient Psychiatric Facility Services (under Age 21) | 152 | 152 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 1,269 | 1,269 | 0.00 |
| Nursing Facility Services | 29,479 | 29,478 | 0.00 |
| Physician Services | 92,243 | 92,234 | 0.01 |
| Dental Services | 35,673 | 35,671 | 0.01 |
| Other Practitioner Services | 35,496 | 35,494 | 0.01 |
| Outpatient Services | 81,036 | 81,028 | 0.01 |
| Clinic Services | 30,870 | 30,868 | 0.01 |
| Home Health Services | 21,633 | 21,631 | 0.01 |
| Lab/Xray Services | 96,011 | 96,001 | 0.01 |
| Drugs | 120,626 | 120,613 | 0.01 |
| Other Services | 52,160 | 52,147 | 0.02 |
| Sterilizations | 275 | 275 | 0.00 |
| Abortions | 41 | 41 | 0.00 |
| Transportation Services | 33,305 | 33,304 | 0.00 |
| Personal Care Services | 12,846 | 12,846 | 0.00 |
| Targeted Case Management | 14,395 | 14,393 | 0.01 |
| Rehabilitation Services | 5,799 | 5,799 | 0.00 |
| PT/OT/Hearing/Speech Services | 2,094 | 2,094 | 0.00 |
| Hospice Services | 42 | 42 | 0.00 |
| Nurse Midwife Services | 1,136 | 1,136 | 0.00 |
| Nurse Practitioner Services | 9,290 | 9,290 | 0.00 |
| Private Nursing Services | 0 | 0 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 64,486 | 64,483 | 0.00 |
| Residential Care Services | 6,500 | 6,499 | 0.02 |
| Psychiatric Services | 30,348 | 30,347 | 0.00 |
| Adult Day Care | 4,809 | 4,808 | 0.02 |
| Unknown Services | 5,828 | 5,828 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, Delaware.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 181,053 | 181,031 | 0.01 |
| No enrollment | 1,118 | 1,118 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 179,935 | 179,913 | 0.01 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 12,728 | 12,727 | 0.01 |
| Disabled | 20,723 | 20,721 | 0.01 |
| Child | 77,346 | 77,329 | 0.02 |
| Adult | 69,138 | 69,136 | 0.00 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 12,276 | 12,274 | 0.02 |
| Disabled | 20,017 | 20,015 | 0.01 |
| Child | 77,137 | 77,120 | 0.02 |
| Adult | 63,888 | 63,886 | 0.00 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 127,465 | 127,452 | 0.01 |
| PHP | 155,596 | 155,582 | 0.01 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 12,348 | 12,348 | 0.00 |
| Mental Hospital Services for the Aged | 223 | 223 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 52 | 52 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 181 | 181 | 0.00 |
| Nursing Facility Services | 3,673 | 3,673 | 0.00 |
| Physician Services | 119,503 | 119,494 | 0.01 |
| Dental Services | 23,812 | 23,812 | 0.00 |
| Other Practitioner Services | 42,890 | 42,889 | 0.00 |
| Outpatient Services | 17,096 | 17,095 | 0.01 |
| Clinic Services | 8,812 | 8,812 | 0.00 |
| Home Health Services | 1,313 | 1,313 | 0.00 |
| Lab/Xray Services | 86,245 | 86,243 | 0.00 |
| Drugs | 110,970 | 110,966 | 0.00 |
| Other Services | 26,613 | 26,612 | 0.00 |
| Sterilizations | 683 | 683 | 0.00 |
| Abortions | 109 | 109 | 0.00 |
| Transportation Services | 16,003 | 16,003 | 0.00 |
| Personal Care Services | 0 | 0 | 0.00 |
| Targeted Case Management | 0 | 0 | 0.00 |
| Rehabilitation Services | 537 | 537 | 0.00 |
| PT/OT/Hearing/Speech Services | 7,414 | 7,414 | 0.00 |
| Hospice Services | 428 | 428 | 0.00 |
| Nurse Midwife Services | 236 | 236 | 0.00 |
| Nurse Practitioner Services | 1,214 | 1,214 | 0.00 |
| Private Nursing Services | 2,856 | 2,856 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 26,119 | 26,119 | 0.00 |
| Residential Care Services | 309 | 309 | 0.00 |
| Psychiatric Services | 24,425 | 24,425 | 0.00 |
| Adult Day Care | 203 | 203 | 0.00 |
| Unknown Services | 63,812 | 63,810 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, District of Columbia.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 167,845 | 167,771 | 0.04 |
| No enrollment | 1,331 | 1,331 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 166,514 | 166,440 | 0.04 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 10,116 | 10,110 | 0.06 |
| Disabled | 34,150 | 34,121 | 0.08 |
| Child | 80,409 | 80,383 | 0.03 |
| Adult | 41,839 | 41,826 | 0.03 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 9,208 | 9,199 | 0.10 |
| Disabled | 33,483 | 33,456 | 0.08 |
| Child | 80,408 | 80,382 | 0.03 |
| Adult | 41,766 | 41,753 | 0.03 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 112,269 | 112,256 | 0.01 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 14,407 | 14,407 | 0.00 |
| Mental Hospital Services for the Aged | 86 | 86 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 239 | 239 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 749 | 749 | 0.00 |
| Nursing Facility Services | 4,206 | 4,206 | 0.00 |
| Physician Services | 22,943 | 22,942 | 0.00 |
| Dental Services | 2,528 | 2,528 | 0.00 |
| Other Practitioner Services | 7,109 | 7,109 | 0.00 |
| Outpatient Services | 19,454 | 19,453 | 0.01 |
| Clinic Services | 17,934 | 17,930 | 0.02 |
| Home Health Services | 2,895 | 2,895 | 0.00 |
| Lab/Xray Services | 30,171 | 30,169 | 0.01 |
| Drugs | 36,968 | 36,963 | 0.01 |
| Other Services | 18,752 | 18,750 | 0.01 |
| Sterilizations | 61 | 61 | 0.00 |
| Abortions | 6 | 6 | 0.00 |
| Transportation Services | 13,915 | 13,912 | 0.02 |
| Personal Care Services | 0 | 0 | 0.00 |
| Targeted Case Management | 0 | 0 | 0.00 |
| Rehabilitation Services | 119 | 119 | 0.00 |
| PT/OT/Hearing/Speech Services | 0 | 0 | 0.00 |
| Hospice Services | 165 | 165 | 0.00 |
| Nurse Midwife Services | 0 | 0 | 0.00 |
| Nurse Practitioner Services | 958 | 958 | 0.00 |
| Private Nursing Services | 0 | 0 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 19,660 | 19,659 | 0.01 |
| Residential Care Services | 0 | 0 | 0.00 |
| Psychiatric Services | 17,139 | 17,138 | 0.01 |
| Adult Day Care | 0 | 0 | 0.00 |
| Unknown Services | 2,122 | 2,121 | 0.05 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, Georgia.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 2,107,826 | 2,104,924 | 0.14 |
| No enrollment | 24,602 | 24,602 | 0.00 |
| Enrollees with S-CHIP only | 244,314 | 243,326 | 0.40 |
| Total Medicaid Enrollees | 2,083,224 | 2,080,322 | 0.14 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 134,996 | 134,965 | 0.02 |
| Disabled | 291,736 | 291,639 | 0.03 |
| Child | 1,093,356 | 1,091,637 | 0.16 |
| Adult | 318,822 | 318,755 | 0.02 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 127,682 | 127,642 | 0.03 |
| Disabled | 285,350 | 285,250 | 0.04 |
| Child | 1,092,698 | 1,090,979 | 0.16 |
| Adult | 316,746 | 316,679 | 0.02 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 0 | 0 | 0.00 |
| PHP | 1,624,392 | 1,623,913 | 0.03 |
| PCCM | 1,286,010 | 1,285,410 | 0.05 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 241,321 | 241,319 | 0.00 |
| Mental Hospital Services for the Aged | 0 | 0 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 0 | 0 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 1,146 | 1,146 | 0.00 |
| Nursing Facility Services | 39,255 | 39,254 | 0.00 |
| Physician Services | 1,230,830 | 1,230,611 | 0.02 |
| Dental Services | 493,269 | 493,218 | 0.01 |
| Other Practitioner Services | 281,578 | 281,568 | 0.00 |
| Outpatient Services | 709,241 | 709,177 | 0.01 |
| Clinic Services | 462,344 | 462,310 | 0.01 |
| Home Health Services | 9,259 | 9,259 | 0.00 |
| Lab/Xray Services | 914,456 | 914,343 | 0.01 |
| Drugs | 1,175,475 | 1,175,293 | 0.02 |
| Other Services | 84,499 | 84,489 | 0.01 |
| Sterilizations | 8,233 | 8,233 | 0.00 |
| Abortions | 103 | 103 | 0.00 |
| Transportation Services | 93,959 | 93,957 | 0.00 |
| Personal Care Services | 0 | 0 | 0.00 |
| Targeted Case Management | 205,519 | 205,507 | 0.01 |
| Rehabilitation Services | 0 | 0 | 0.00 |
| PT/OT/Hearing/Speech Services | 1,683 | 1,683 | 0.00 |
| Hospice Services | 5,854 | 5,854 | 0.00 |
| Nurse Midwife Services | 20,398 | 20,397 | 0.00 |
| Nurse Practitioner Services | 183,898 | 183,889 | 0.00 |
| Private Nursing Services | 559 | 559 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 488,240 | 488,220 | 0.00 |
| Residential Care Services | 4,266 | 4,266 | 0.00 |
| Psychiatric Services | 199,088 | 199,082 | 0.00 |
| Adult Day Care | 5,411 | 5,411 | 0.00 |
| Unknown Services | 359,987 | 359,964 | 0.01 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, Florida.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 3,059,524 | 3,059,056 | 0.02 |
| No enrollment | 39,422 | 39,422 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 3,020,102 | 3,019,634 | 0.02 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 347,360 | 347,307 | 0.02 |
| Disabled | 533,460 | 533,320 | 0.03 |
| Child | 1,570,668 | 1,570,406 | 0.02 |
| Adult | 568,614 | 568,601 | 0.00 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 331,934 | 331,874 | 0.02 |
| Disabled | 516,483 | 516,340 | 0.03 |
| Child | 1,569,690 | 1,569,428 | 0.02 |
| Adult | 554,482 | 554,467 | 0.00 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 1,254,716 | 1,254,626 | 0.01 |
| PHP | 243,855 | 243,844 | 0.00 |
| PCCM | 1,195,568 | 1,195,482 | 0.01 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 305,605 | 305,598 | 0.00 |
| Mental Hospital Services for the Aged | 161 | 161 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 0 | 0 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 3,206 | 3,206 | 0.00 |
| Nursing Facility Services | 79,730 | 79,724 | 0.01 |
| Physician Services | 1,245,365 | 1,245,278 | 0.01 |
| Dental Services | 342,055 | 342,055 | 0.00 |
| Other Practitioner Services | 204,811 | 204,809 | 0.00 |
| Outpatient Services | 617,200 | 617,180 | 0.00 |
| Clinic Services | 288,898 | 288,892 | 0.00 |
| Home Health Services | 27,563 | 27,559 | 0.01 |
| Lab/Xray Services | 935,467 | 935,413 | 0.01 |
| Drugs | 1,306,628 | 1,306,539 | 0.01 |
| Other Services | 580,820 | 580,791 | 0.00 |
| Sterilizations | 7,641 | 7,641 | 0.00 |
| Abortions | 63 | 63 | 0.00 |
| Transportation Services | 202,820 | 202,818 | 0.00 |
| Personal Care Services | 6,498 | 6,497 | 0.02 |
| Targeted Case Management | 84,023 | 84,013 | 0.01 |
| Rehabilitation Services | 0 | 0 | 0.00 |
| PT/OT/Hearing/Speech Services | 71,624 | 71,615 | 0.01 |
| Hospice Services | 16,612 | 16,612 | 0.00 |
| Nurse Midwife Services | 1,136 | 1,136 | 0.00 |
| Nurse Practitioner Services | 159,236 | 159,231 | 0.00 |
| Private Nursing Services | 0 | 0 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 282,353 | 282,341 | 0.00 |
| Residential Care Services | 8,611 | 8,610 | 0.01 |
| Psychiatric Services | 240,513 | 240,508 | 0.00 |
| Adult Day Care | 12,869 | 12,868 | 0.01 |
| Unknown Services | 220,747 | 220,731 | 0.01 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, Hawaii.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 237,736 | 237,569 | 0.07 |
| No enrollment | 5,949 | 5,949 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 231,787 | 231,620 | 0.07 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 22,271 | 22,266 | 0.02 |
| Disabled | 25,479 | 25,475 | 0.02 |
| Child | 107,745 | 107,620 | 0.12 |
| Adult | 76,292 | 76,259 | 0.04 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 21,939 | 21,933 | 0.03 |
| Disabled | 25,272 | 25,268 | 0.02 |
| Child | 107,745 | 107,620 | 0.12 |
| Adult | 76,288 | 76,255 | 0.04 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 181,610 | 181,481 | 0.07 |
| PHP | 9,340 | 9,339 | 0.01 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 23,593 | 23,591 | 0.01 |
| Mental Hospital Services for the Aged | 141 | 141 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 40 | 40 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 105 | 105 | 0.00 |
| Nursing Facility Services | 4,895 | 4,894 | 0.02 |
| Physician Services | 165,803 | 165,759 | 0.03 |
| Dental Services | 58,390 | 58,384 | 0.01 |
| Other Practitioner Services | 21,185 | 21,182 | 0.01 |
| Outpatient Services | 63,941 | 63,935 | 0.01 |
| Clinic Services | 24,157 | 24,154 | 0.01 |
| Home Health Services | 5,114 | 5,114 | 0.00 |
| Lab/Xray Services | 118,322 | 118,303 | 0.02 |
| Drugs | 152,883 | 152,849 | 0.02 |
| Other Services | 31,660 | 31,660 | 0.00 |
| Sterilizations | 986 | 986 | 0.00 |
| Abortions | 1,561 | 1,561 | 0.00 |
| Transportation Services | 15,355 | 15,355 | 0.00 |
| Personal Care Services | 0 | 0 | 0.00 |
| Targeted Case Management | 3,265 | 3,265 | 0.00 |
| Rehabilitation Services | 227 | 227 | 0.00 |
| PT/OT/Hearing/Speech Services | 3,295 | 3,295 | 0.00 |
| Hospice Services | 122 | 122 | 0.00 |
| Nurse Midwife Services | 0 | 0 | 0.00 |
| Nurse Practitioner Services | 11,768 | 11,766 | 0.02 |
| Private Nursing Services | 803 | 803 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 43,764 | 43,761 | 0.01 |
| Residential Care Services | 244 | 244 | 0.00 |
| Psychiatric Services | 33,060 | 33,055 | 0.02 |
| Adult Day Care | 1,427 | 1,427 | 0.00 |
| Unknown Services | 17,549 | 17,548 | 0.01 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, Idaho.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 233,765 | 233,746 | 0.01 |
| No enrollment | 413 | 413 | 0.00 |
| Enrollees with S-CHIP only | 2,082 | 2,082 | 0.00 |
| Total Medicaid Enrollees | 233,352 | 233,333 | 0.01 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 15,776 | 15,776 | 0.00 |
| Disabled | 33,563 | 33,559 | 0.01 |
| Child | 147,540 | 147,526 | 0.01 |
| Adult | 34,391 | 34,390 | 0.00 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 15,255 | 15,255 | 0.00 |
| Disabled | 33,039 | 33,034 | 0.02 |
| Child | 147,540 | 147,526 | 0.01 |
| Adult | 34,386 | 34,385 | 0.00 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 0 | 0 | 0.00 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 109,771 | 109,771 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 24,863 | 24,862 | 0.00 |
| Mental Hospital Services for the Aged | 841 | 841 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 1,024 | 1,024 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 624 | 624 | 0.00 |
| Nursing Facility Services | 4,665 | 4,665 | 0.00 |
| Physician Services | 147,303 | 147,298 | 0.00 |
| Dental Services | 72,994 | 72,993 | 0.00 |
| Other Practitioner Services | 46,559 | 46,558 | 0.00 |
| Outpatient Services | 73,827 | 73,826 | 0.00 |
| Clinic Services | 54,812 | 54,811 | 0.00 |
| Home Health Services | 1,832 | 1,831 | 0.05 |
| Lab/Xray Services | 101,337 | 101,334 | 0.00 |
| Drugs | 146,091 | 146,085 | 0.00 |
| Other Services | 26,732 | 26,729 | 0.01 |
| Sterilizations | 1,089 | 1,089 | 0.00 |
| Abortions | 0 | 0 | 0.00 |
| Transportation Services | 14,668 | 14,667 | 0.01 |
| Personal Care Services | 6,558 | 6,557 | 0.02 |
| Targeted Case Management | 7,996 | 7,992 | 0.05 |
| Rehabilitation Services | 2,012 | 2,012 | 0.00 |
| PT/OT/Hearing/Speech Services | 9,757 | 9,756 | 0.01 |
| Hospice Services | 230 | 230 | 0.00 |
| Nurse Midwife Services | 0 | 0 | 0.00 |
| Nurse Practitioner Services | 26,162 | 26,162 | 0.00 |
| Private Nursing Services | 1,203 | 1,203 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 41,415 | 41,413 | 0.00 |
| Residential Care Services | 4,613 | 4,613 | 0.00 |
| Psychiatric Services | 30,788 | 30,784 | 0.01 |
| Adult Day Care | 445 | 445 | 0.00 |
| Unknown Services | 8,250 | 8,250 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, Illinois.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 2,612,709 | 2,572,719 | 1.53 |
| No enrollment | 2,238 | 2,238 | 0.00 |
| Enrollees with S-CHIP only | 160,064 | 158,439 | 1.02 |
| Total Medicaid Enrollees | 2,610,471 | 2,570,481 | 1.53 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 355,652 | 337,254 | 5.17 |
| Disabled | 333,222 | 331,899 | 0.40 |
| Child | 1,302,965 | 1,287,146 | 1.21 |
| Adult | 458,568 | 455,743 | 0.62 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 346,404 | 316,180 | 8.73 |
| Disabled | 328,088 | 326,431 | 0.51 |
| Child | 1,302,185 | 1,286,215 | 1.23 |
| Adult | 404,526 | 401,513 | 0.74 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 222,497 | 222,379 | 0.05 |
| PHP | 27,402 | 27,393 | 0.03 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 190,860 | 190,691 | 0.09 |
| Mental Hospital Services for the Aged | 1,829 | 1,826 | 0.16 |
| Inpatient Psychiatric Facility Services (under Age 21) | 4,374 | 4,369 | 0.11 |
| Intermediate Care Facility Services for the Mentally Retarded | 9,636 | 9,633 | 0.03 |
| Nursing Facility Services | 77,097 | 77,057 | 0.05 |
| Physician Services | 1,309,917 | 1,307,072 | 0.22 |
| Dental Services | 542,540 | 542,200 | 0.06 |
| Other Practitioner Services | 220,118 | 220,083 | 0.02 |
| Outpatient Services | 682,154 | 681,156 | 0.15 |
| Clinic Services | 296,581 | 296,234 | 0.12 |
| Home Health Services | 12,729 | 12,713 | 0.13 |
| Lab/Xray Services | 1,067,685 | 1,065,464 | 0.21 |
| Drugs | 1,674,854 | 1,661,347 | 0.81 |
| Other Services | 108,481 | 108,427 | 0.05 |
| Sterilizations | 5,810 | 5,809 | 0.02 |
| Abortions | 64 | 64 | 0.00 |
| Transportation Services | 170,920 | 170,753 | 0.10 |
| Personal Care Services | 22,232 | 22,229 | 0.01 |
| Targeted Case Management | 770,451 | 769,000 | 0.19 |
| Rehabilitation Services | 13,277 | 13,274 | 0.02 |
| PT/OT/Hearing/Speech Services | 91,118 | 90,921 | 0.22 |
| Hospice Services | 6,939 | 6,938 | 0.01 |
| Nurse Midwife Services | 714 | 711 | 0.42 |
| Nurse Practitioner Services | 12,012 | 12,010 | 0.02 |
| Private Nursing Services | 13,965 | 13,965 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 397,705 | 397,498 | 0.05 |
| Residential Care Services | 9,015 | 9,007 | 0.09 |
| Psychiatric Services | 269,854 | 269,427 | 0.16 |
| Adult Day Care | 1,815 | 1,815 | 0.00 |
| Unknown Services | 130,999 | 130,941 | 0.04 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, Indiana.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 1,060,392 | 1,060,267 | 0.01 |
| No enrollment | 15,503 | 15,503 | 0.00 |
| Enrollees with S-CHIP only | 16,263 | 16,262 | 0.01 |
| Total Medicaid Enrollees | 1,044,889 | 1,044,764 | 0.01 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 80,935 | 80,932 | 0.00 |
| Disabled | 150,403 | 150,394 | 0.01 |
| Child | 607,504 | 607,398 | 0.02 |
| Adult | 189,784 | 189,778 | 0.00 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 72,449 | 72,446 | 0.00 |
| Disabled | 141,208 | 141,199 | 0.01 |
| Child | 607,496 | 607,390 | 0.02 |
| Adult | 189,750 | 189,744 | 0.00 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 679,654 | 679,634 | 0.00 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 295,194 | 295,194 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 113,794 | 113,794 | 0.00 |
| Mental Hospital Services for the Aged | 134 | 134 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 2,803 | 2,803 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 4,255 | 4,255 | 0.00 |
| Nursing Facility Services | 38,000 | 38,000 | 0.00 |
| Physician Services | 598,862 | 598,853 | 0.00 |
| Dental Services | 336,379 | 336,378 | 0.00 |
| Other Practitioner Services | 38,628 | 38,628 | 0.00 |
| Outpatient Services | 371,295 | 371,291 | 0.00 |
| Clinic Services | 334,782 | 334,779 | 0.00 |
| Home Health Services | 13,217 | 13,217 | 0.00 |
| Lab/Xray Services | 481,238 | 481,234 | 0.00 |
| Drugs | 626,806 | 626,797 | 0.00 |
| Other Services | 202,744 | 202,744 | 0.00 |
| Sterilizations | 2,321 | 2,321 | 0.00 |
| Abortions | 0 | 0 | 0.00 |
| Transportation Services | 82,399 | 82,399 | 0.00 |
| Personal Care Services | 0 | 0 | 0.00 |
| Targeted Case Management | 14,106 | 14,106 | 0.00 |
| Rehabilitation Services | 64,139 | 64,139 | 0.00 |
| PT/OT/Hearing/Speech Services | 24,564 | 24,564 | 0.00 |
| Hospice Services | 4,590 | 4,590 | 0.00 |
| Nurse Midwife Services | 925 | 925 | 0.00 |
| Nurse Practitioner Services | 2,443 | 2,443 | 0.00 |
| Private Nursing Services | 0 | 0 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 227,825 | 227,824 | 0.00 |
| Residential Care Services | 5,345 | 5,345 | 0.00 |
| Psychiatric Services | 142,649 | 142,648 | 0.00 |
| Adult Day Care | 209 | 209 | 0.00 |
| Unknown Services | 134,126 | 134,124 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, Iowa.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 430,985 | 430,450 | 0.12 |
| No enrollment | 2,171 | 2,171 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 428,814 | 428,279 | 0.12 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 41,247 | 41,245 | 0.00 |
| Disabled | 68,159 | 68,151 | 0.01 |
| Child | 222,651 | 222,133 | 0.23 |
| Adult | 96,757 | 96,750 | 0.01 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 39,384 | 39,382 | 0.01 |
| Disabled | 66,582 | 66,574 | 0.01 |
| Child | 222,646 | 222,128 | 0.23 |
| Adult | 96,314 | 96,307 | 0.01 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 30,621 | 30,621 | 0.00 |
| PHP | 351,401 | 350,890 | 0.15 |
| PCCM | 180,566 | 180,560 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 54,247 | 54,247 | 0.00 |
| Mental Hospital Services for the Aged | 12 | 12 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 954 | 954 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 2,343 | 2,343 | 0.00 |
| Nursing Facility Services | 19,332 | 19,332 | 0.00 |
| Physician Services | 279,947 | 279,815 | 0.05 |
| Dental Services | 128,681 | 128,623 | 0.05 |
| Other Practitioner Services | 105,153 | 105,140 | 0.01 |
| Outpatient Services | 164,507 | 164,481 | 0.02 |
| Clinic Services | 147,092 | 147,053 | 0.03 |
| Home Health Services | 24,946 | 24,946 | 0.00 |
| Lab/Xray Services | 223,290 | 223,243 | 0.02 |
| Drugs | 290,352 | 290,128 | 0.08 |
| Other Services | 45,551 | 45,540 | 0.02 |
| Sterilizations | 0 | 0 | 0.00 |
| Abortions | 0 | 0 | 0.00 |
| Transportation Services | 15,174 | 15,174 | 0.00 |
| Personal Care Services | 0 | 0 | 0.00 |
| Targeted Case Management | 10,747 | 10,740 | 0.07 |
| Rehabilitation Services | 2,234 | 2,226 | 0.36 |
| PT/OT/Hearing/Speech Services | 4,957 | 4,956 | 0.02 |
| Hospice Services | 0 | 0 | 0.00 |
| Nurse Midwife Services | 1,509 | 1,509 | 0.00 |
| Nurse Practitioner Services | 23,327 | 23,322 | 0.02 |
| Private Nursing Services | 0 | 0 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 132,611 | 132,588 | 0.02 |
| Residential Care Services | 11,580 | 11,574 | 0.05 |
| Psychiatric Services | 63,776 | 63,743 | 0.05 |
| Adult Day Care | 3,557 | 3,557 | 0.00 |
| Unknown Services | 37,323 | 37,322 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, Kansas.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 361,325 | 361,293 | 0.01 |
| No enrollment | 4,587 | 4,587 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 356,738 | 356,706 | 0.01 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 34,121 | 34,120 | 0.00 |
| Disabled | 59,892 | 59,888 | 0.01 |
| Child | 201,869 | 201,843 | 0.01 |
| Adult | 60,856 | 60,855 | 0.00 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 31,712 | 31,711 | 0.00 |
| Disabled | 56,915 | 56,911 | 0.01 |
| Child | 201,866 | 201,840 | 0.01 |
| Adult | 60,835 | 60,834 | 0.00 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 111,637 | 111,632 | 0.00 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 97,855 | 97,851 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 49,585 | 49,585 | 0.00 |
| Mental Hospital Services for the Aged | 184 | 184 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 409 | 409 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 649 | 649 | 0.00 |
| Nursing Facility Services | 15,104 | 15,104 | 0.00 |
| Physician Services | 232,940 | 232,932 | 0.00 |
| Dental Services | 75,426 | 75,424 | 0.00 |
| Other Practitioner Services | 40,002 | 40,002 | 0.00 |
| Outpatient Services | 107,921 | 107,917 | 0.00 |
| Clinic Services | 91,030 | 91,027 | 0.00 |
| Home Health Services | 5,448 | 5,448 | 0.00 |
| Lab/Xray Services | 168,847 | 168,842 | 0.00 |
| Drugs | 236,243 | 236,234 | 0.00 |
| Other Services | 52,696 | 52,694 | 0.00 |
| Sterilizations | 1,263 | 1,263 | 0.00 |
| Abortions | 5 | 5 | 0.00 |
| Transportation Services | 22,009 | 22,009 | 0.00 |
| Personal Care Services | 375 | 375 | 0.00 |
| Targeted Case Management | 23,760 | 23,760 | 0.00 |
| Rehabilitation Services | 3,871 | 3,871 | 0.00 |
| PT/OT/Hearing/Speech Services | 1,638 | 1,638 | 0.00 |
| Hospice Services | 2,510 | 2,510 | 0.00 |
| Nurse Midwife Services | 579 | 579 | 0.00 |
| Nurse Practitioner Services | 20,276 | 20,275 | 0.00 |
| Private Nursing Services | 0 | 0 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 65,074 | 65,073 | 0.00 |
| Residential Care Services | 4,261 | 4,261 | 0.00 |
| Psychiatric Services | 66,385 | 66,382 | 0.00 |
| Adult Day Care | 88 | 88 | 0.00 |
| Unknown Services | 31,670 | 31,670 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, Kentucky.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 894,282 | 881,254 | 1.46 |
| No enrollment | 7,322 | 7,322 | 0.00 |
| Enrollees with S-CHIP only | 12,760 | 12,463 | 2.33 |
| Total Medicaid Enrollees | 886,960 | 873,932 | 1.47 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 70,323 | 70,233 | 0.13 |
| Disabled | 232,951 | 232,459 | 0.21 |
| Child | 437,850 | 425,856 | 2.74 |
| Adult | 133,076 | 132,921 | 0.12 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 67,570 | 67,478 | 0.14 |
| Disabled | 229,993 | 229,498 | 0.22 |
| Child | 437,691 | 425,697 | 2.74 |
| Adult | 132,818 | 132,658 | 0.12 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 172,885 | 168,581 | 2.49 |
| PHP | 811,157 | 800,034 | 1.37 |
| PCCM | 444,099 | 438,325 | 1.30 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 79,896 | 79,748 | 0.19 |
| Mental Hospital Services for the Aged | 307 | 307 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 3,502 | 3,494 | 0.23 |
| Intermediate Care Facility Services for the Mentally Retarded | 769 | 769 | 0.00 |
| Nursing Facility Services | 27,705 | 27,693 | 0.04 |
| Physician Services | 617,420 | 611,333 | 0.99 |
| Dental Services | 235,862 | 235,359 | 0.21 |
| Other Practitioner Services | 206,268 | 206,116 | 0.07 |
| Outpatient Services | 399,789 | 398,456 | 0.33 |
| Clinic Services | 206,744 | 205,194 | 0.75 |
| Home Health Services | 19,765 | 19,718 | 0.24 |
| Lab/Xray Services | 467,523 | 465,471 | 0.44 |
| Drugs | 635,350 | 630,881 | 0.70 |
| Other Services | 244,125 | 242,134 | 0.82 |
| Sterilizations | 4,718 | 4,717 | 0.02 |
| Abortions | 1,180 | 1,180 | 0.00 |
| Transportation Services | 77,402 | 77,338 | 0.08 |
| Personal Care Services | 0 | 0 | 0.00 |
| Targeted Case Management | 15,956 | 15,882 | 0.46 |
| Rehabilitation Services | 129 | 129 | 0.00 |
| PT/OT/Hearing/Speech Services | 3,107 | 3,098 | 0.29 |
| Hospice Services | 3,069 | 3,069 | 0.00 |
| Nurse Midwife Services | 0 | 0 | 0.00 |
| Nurse Practitioner Services | 98,978 | 98,595 | 0.39 |
| Private Nursing Services | 0 | 0 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 189,519 | 189,198 | 0.17 |
| Residential Care Services | 2,214 | 2,212 | 0.09 |
| Psychiatric Services | 148,427 | 147,793 | 0.43 |
| Adult Day Care | 3,296 | 3,295 | 0.03 |
| Unknown Services | 123,105 | 120,661 | 1.99 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, Louisiana.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 1,244,886 | 1,244,852 | 0.00 |
| No enrollment | 78,733 | 78,733 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 1,166,153 | 1,166,119 | 0.00 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 111,175 | 111,162 | 0.01 |
| Disabled | 201,014 | 201,012 | 0.00 |
| Child | 710,679 | 710,661 | 0.00 |
| Adult | 143,285 | 143,284 | 0.00 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 106,639 | 106,624 | 0.01 |
| Disabled | 196,536 | 196,534 | 0.00 |
| Child | 710,677 | 710,659 | 0.00 |
| Adult | 143,203 | 143,202 | 0.00 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 0 | 0 | 0.00 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 831,977 | 831,967 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 144,990 | 144,990 | 0.00 |
| Mental Hospital Services for the Aged | 6,562 | 6,562 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 3,272 | 3,272 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 5,671 | 5,671 | 0.00 |
| Nursing Facility Services | 31,486 | 31,486 | 0.00 |
| Physician Services | 769,586 | 769,581 | 0.00 |
| Dental Services | 232,865 | 232,865 | 0.00 |
| Other Practitioner Services | 167,412 | 167,411 | 0.00 |
| Outpatient Services | 435,591 | 435,589 | 0.00 |
| Clinic Services | 141,026 | 141,026 | 0.00 |
| Home Health Services | 10,198 | 10,198 | 0.00 |
| Lab/Xray Services | 608,618 | 608,615 | 0.00 |
| Drugs | 767,987 | 767,983 | 0.00 |
| Other Services | 426,745 | 426,744 | 0.00 |
| Sterilizations | 5,727 | 5,727 | 0.00 |
| Abortions | 4 | 4 | 0.00 |
| Transportation Services | 102,726 | 102,726 | 0.00 |
| Personal Care Services | 7,293 | 7,293 | 0.00 |
| Targeted Case Management | 11,579 | 11,579 | 0.00 |
| Rehabilitation Services | 4,983 | 4,983 | 0.00 |
| PT/OT/Hearing/Speech Services | 70,628 | 70,627 | 0.00 |
| Hospice Services | 3,756 | 3,756 | 0.00 |
| Nurse Midwife Services | 76,297 | 76,297 | 0.00 |
| Nurse Practitioner Services | 6,163 | 6,163 | 0.00 |
| Private Nursing Services | 0 | 0 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 284,155 | 284,154 | 0.00 |
| Residential Care Services | 0 | 0 | 0.00 |
| Psychiatric Services | 69,918 | 69,918 | 0.00 |
| Adult Day Care | 0 | 0 | 0.00 |
| Unknown Services | 4,569 | 4,569 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, Maine.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 327,491 | 327,400 | 0.03 |
| No enrollment | 991 | 991 | 0.00 |
| Enrollees with S-CHIP only | 4,006 | 4,005 | 0.02 |
| Total Medicaid Enrollees | 326,500 | 326,409 | 0.03 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 35,471 | 35,460 | 0.03 |
| Disabled | 51,902 | 51,886 | 0.03 |
| Child | 127,231 | 127,178 | 0.04 |
| Adult | 107,890 | 107,880 | 0.01 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 33,589 | 33,575 | 0.04 |
| Disabled | 50,649 | 50,632 | 0.03 |
| Child | 127,212 | 127,159 | 0.04 |
| Adult | 107,680 | 107,670 | 0.01 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 0 | 0 | 0.00 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 0 | 0 | 0.00 |
| Mental Hospital Services for the Aged | 0 | 0 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 0 | 0 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 0 | 0 | 0.00 |
| Nursing Facility Services | 0 | 0 | 0.00 |
| Physician Services | 0 | 0 | 0.00 |
| Dental Services | 0 | 0 | 0.00 |
| Other Practitioner Services | 0 | 0 | 0.00 |
| Outpatient Services | 0 | 0 | 0.00 |
| Clinic Services | 0 | 0 | 0.00 |
| Home Health Services | 0 | 0 | 0.00 |
| Lab/Xray Services | 0 | 0 | 0.00 |
| Drugs | 226,209 | 226,194 | 0.01 |
| Other Services | 0 | 0 | 0.00 |
| Sterilizations | 0 | 0 | 0.00 |
| Abortions | 0 | 0 | 0.00 |
| Transportation Services | 0 | 0 | 0.00 |
| Personal Care Services | 0 | 0 | 0.00 |
| Targeted Case Management | 0 | 0 | 0.00 |
| Rehabilitation Services | 0 | 0 | 0.00 |
| PT/OT/Hearing/Speech Services | 0 | 0 | 0.00 |
| Hospice Services | 0 | 0 | 0.00 |
| Nurse Midwife Services | 0 | 0 | 0.00 |
| Nurse Practitioner Services | 0 | 0 | 0.00 |
| Private Nursing Services | 0 | 0 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 0 | 0 | 0.00 |
| Residential Care Services | 0 | 0 | 0.00 |
| Psychiatric Services | 0 | 0 | 0.00 |
| Adult Day Care | 0 | 0 | 0.00 |
| Unknown Services | 0 | 0 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, Maryland.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 868,686 | 868,665 | 0.00 |
| No enrollment | 1,765 | 1,765 | 0.00 |
| Enrollees with S-CHIP only | 7,820 | 7,817 | 0.04 |
| Total Medicaid Enrollees | 866,921 | 866,900 | 0.00 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 68,850 | 68,847 | 0.00 |
| Disabled | 137,688 | 137,686 | 0.00 |
| Child | 473,614 | 473,605 | 0.00 |
| Adult | 178,949 | 178,945 | 0.00 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 66,926 | 66,922 | 0.01 |
| Disabled | 132,506 | 132,504 | 0.00 |
| Child | 470,195 | 470,186 | 0.00 |
| Adult | 156,250 | 156,247 | 0.00 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 602,730 | 602,723 | 0.00 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 112,712 | 112,711 | 0.00 |
| Mental Hospital Services for the Aged | 53 | 53 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 2,624 | 2,624 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 381 | 381 | 0.00 |
| Nursing Facility Services | 24,735 | 24,735 | 0.00 |
| Physician Services | 529,630 | 529,625 | 0.00 |
| Dental Services | 127,566 | 127,566 | 0.00 |
| Other Practitioner Services | 20,196 | 20,196 | 0.00 |
| Outpatient Services | 281,618 | 281,616 | 0.00 |
| Clinic Services | 32,526 | 32,526 | 0.00 |
| Home Health Services | 19,267 | 19,267 | 0.00 |
| Lab/Xray Services | 214,746 | 214,745 | 0.00 |
| Drugs | 487,844 | 487,841 | 0.00 |
| Other Services | 55,561 | 55,561 | 0.00 |
| Sterilizations | 1,048 | 1,048 | 0.00 |
| Abortions | 3,340 | 3,340 | 0.00 |
| Transportation Services | 26,806 | 26,806 | 0.00 |
| Personal Care Services | 4,976 | 4,976 | 0.00 |
| Targeted Case Management | 16,105 | 16,105 | 0.00 |
| Rehabilitation Services | 3,571 | 3,571 | 0.00 |
| PT/OT/Hearing/Speech Services | 59,340 | 59,340 | 0.00 |
| Hospice Services | 1,604 | 1,604 | 0.00 |
| Nurse Midwife Services | 7,119 | 7,119 | 0.00 |
| Nurse Practitioner Services | 33,841 | 33,841 | 0.00 |
| Private Nursing Services | 677 | 677 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 152,442 | 152,442 | 0.00 |
| Residential Care Services | 54,493 | 54,493 | 0.00 |
| Psychiatric Services | 152,633 | 152,632 | 0.00 |
| Adult Day Care | 85,617 | 85,617 | 0.00 |
| Unknown Services | 16,098 | 16,098 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, Massachusetts.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 1,255,313 | 1,255,261 | 0.00 |
| No enrollment | 9,418 | 9,418 | 0.00 |
| Enrollees with S-CHIP only | 24,134 | 24,133 | 0.00 |
| Total Medicaid Enrollees | 1,245,895 | 1,245,843 | 0.00 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 145,040 | 145,035 | 0.00 |
| Disabled | 239,917 | 239,912 | 0.00 |
| Child | 484,330 | 484,312 | 0.00 |
| Adult | 352,474 | 352,451 | 0.01 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 142,698 | 142,692 | 0.00 |
| Disabled | 239,763 | 239,758 | 0.00 |
| Child | 484,330 | 484,312 | 0.00 |
| Adult | 352,426 | 352,403 | 0.01 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 449,640 | 449,631 | 0.00 |
| PHP | 424,297 | 424,287 | 0.00 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 73,741 | 73,740 | 0.00 |
| Mental Hospital Services for the Aged | 31 | 31 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 3,649 | 3,649 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 1,062 | 1,062 | 0.00 |
| Nursing Facility Services | 51,536 | 51,536 | 0.00 |
| Physician Services | 485,649 | 485,643 | 0.00 |
| Dental Services | 266,436 | 266,433 | 0.00 |
| Other Practitioner Services | 84,203 | 84,203 | 0.00 |
| Outpatient Services | 389,695 | 389,687 | 0.00 |
| Clinic Services | 88,411 | 88,410 | 0.00 |
| Home Health Services | 34,237 | 34,237 | 0.00 |
| Lab/Xray Services | 391,853 | 391,848 | 0.00 |
| Drugs | 576,344 | 576,338 | 0.00 |
| Other Services | 95,217 | 95,216 | 0.00 |
| Sterilizations | 1,547 | 1,547 | 0.00 |
| Abortions | 0 | 0 | 0.00 |
| Transportation Services | 101,443 | 101,441 | 0.00 |
| Personal Care Services | 8,980 | 8,980 | 0.00 |
| Targeted Case Management | 32,131 | 32,130 | 0.00 |
| Rehabilitation Services | 69,588 | 69,588 | 0.00 |
| PT/OT/Hearing/Speech Services | 7,672 | 7,672 | 0.00 |
| Hospice Services | 3,962 | 3,962 | 0.00 |
| Nurse Midwife Services | 2,190 | 2,190 | 0.00 |
| Nurse Practitioner Services | 24,387 | 24,387 | 0.00 |
| Private Nursing Services | 0 | 0 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 117,849 | 117,848 | 0.00 |
| Residential Care Services | 12,794 | 12,794 | 0.00 |
| Psychiatric Services | 137,688 | 137,687 | 0.00 |
| Adult Day Care | 6,513 | 6,513 | 0.00 |
| Unknown Services | 19,889 | 19,888 | 0.01 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, Michigan.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 1,878,812 | 1,878,738 | 0.00 |
| No enrollment | 21,037 | 21,037 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 1,857,775 | 1,857,701 | 0.00 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 135,204 | 135,183 | 0.02 |
| Disabled | 293,117 | 293,104 | 0.00 |
| Child | 990,757 | 990,725 | 0.00 |
| Adult | 438,697 | 438,689 | 0.00 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 129,904 | 129,882 | 0.02 |
| Disabled | 286,890 | 286,876 | 0.00 |
| Child | 989,741 | 989,709 | 0.00 |
| Adult | 437,941 | 437,933 | 0.00 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 1,191,467 | 1,191,456 | 0.00 |
| PHP | 1,628,886 | 1,628,823 | 0.00 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 92,537 | 92,536 | 0.00 |
| Mental Hospital Services for the Aged | 68 | 68 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 312 | 312 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 175 | 175 | 0.00 |
| Nursing Facility Services | 44,631 | 44,625 | 0.01 |
| Physician Services | 465,473 | 465,460 | 0.00 |
| Dental Services | 333,143 | 333,142 | 0.00 |
| Other Practitioner Services | 89,937 | 89,937 | 0.00 |
| Outpatient Services | 280,782 | 280,779 | 0.00 |
| Clinic Services | 137,350 | 137,349 | 0.00 |
| Home Health Services | 6,973 | 6,973 | 0.00 |
| Lab/Xray Services | 225,343 | 225,339 | 0.00 |
| Drugs | 661,304 | 661,283 | 0.00 |
| Other Services | 34,858 | 34,857 | 0.00 |
| Sterilizations | 2,795 | 2,795 | 0.00 |
| Abortions | 23 | 23 | 0.00 |
| Transportation Services | 28,236 | 28,236 | 0.00 |
| Personal Care Services | 0 | 0 | 0.00 |
| Targeted Case Management | 52,426 | 52,426 | 0.00 |
| Rehabilitation Services | 12 | 12 | 0.00 |
| PT/OT/Hearing/Speech Services | 76 | 76 | 0.00 |
| Hospice Services | 828 | 828 | 0.00 |
| Nurse Midwife Services | 3,150 | 3,150 | 0.00 |
| Nurse Practitioner Services | 19,488 | 19,488 | 0.00 |
| Private Nursing Services | 0 | 0 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 137,297 | 137,296 | 0.00 |
| Residential Care Services | 5,356 | 5,356 | 0.00 |
| Psychiatric Services | 64,111 | 64,111 | 0.00 |
| Adult Day Care | 407 | 407 | 0.00 |
| Unknown Services | 16,625 | 16,625 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, Minnesota.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 792,366 | 792,269 | 0.01 |
| No enrollment | 1,654 | 1,654 | 0.00 |
| Enrollees with S-CHIP only | 26,499 | 26,499 | 0.00 |
| Total Medicaid Enrollees | 790,712 | 790,615 | 0.01 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 91,881 | 91,794 | 0.09 |
| Disabled | 108,700 | 108,692 | 0.01 |
| Child | 388,219 | 388,217 | 0.00 |
| Adult | 175,413 | 175,413 | 0.00 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 89,915 | 89,828 | 0.10 |
| Disabled | 107,447 | 107,439 | 0.01 |
| Child | 387,969 | 387,967 | 0.00 |
| Adult | 175,060 | 175,060 | 0.00 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 529,268 | 529,246 | 0.00 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 66,815 | 66,814 | 0.00 |
| Mental Hospital Services for the Aged | 156 | 156 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 684 | 684 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 3,127 | 3,126 | 0.03 |
| Nursing Facility Services | 32,114 | 32,096 | 0.06 |
| Physician Services | 520,555 | 520,536 | 0.00 |
| Dental Services | 230,310 | 230,306 | 0.00 |
| Other Practitioner Services | 152,080 | 152,078 | 0.00 |
| Outpatient Services | 260,842 | 260,837 | 0.00 |
| Clinic Services | 44,742 | 44,742 | 0.00 |
| Home Health Services | 62,163 | 62,158 | 0.01 |
| Lab/Xray Services | 397,181 | 397,171 | 0.00 |
| Drugs | 483,947 | 483,917 | 0.01 |
| Other Services | 108,724 | 108,721 | 0.00 |
| Sterilizations | 1,804 | 1,804 | 0.00 |
| Abortions | 8 | 8 | 0.00 |
| Transportation Services | 64,670 | 64,668 | 0.00 |
| Personal Care Services | 40,295 | 40,283 | 0.03 |
| Targeted Case Management | 103,745 | 103,731 | 0.01 |
| Rehabilitation Services | 9,857 | 9,857 | 0.00 |
| PT/OT/Hearing/Speech Services | 24,897 | 24,897 | 0.00 |
| Hospice Services | 2,621 | 2,620 | 0.04 |
| Nurse Midwife Services | 7,796 | 7,796 | 0.00 |
| Nurse Practitioner Services | 101,669 | 101,663 | 0.01 |
| Private Nursing Services | 1,532 | 1,532 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 184,937 | 184,926 | 0.01 |
| Residential Care Services | 9,158 | 9,157 | 0.01 |
| Psychiatric Services | 131,169 | 131,169 | 0.00 |
| Adult Day Care | 12,204 | 12,204 | 0.00 |
| Unknown Services | 103,948 | 103,947 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, Mississippi.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 787,537 | 785,813 | 0.22 |
| No enrollment | 7,291 | 7,291 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 780,246 | 778,522 | 0.22 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 84,787 | 84,728 | 0.07 |
| Disabled | 170,455 | 169,499 | 0.56 |
| Child | 394,240 | 393,804 | 0.11 |
| Adult | 130,764 | 130,491 | 0.21 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 81,963 | 81,898 | 0.08 |
| Disabled | 168,372 | 167,400 | 0.58 |
| Child | 394,043 | 393,607 | 0.11 |
| Adult | 112,733 | 112,396 | 0.30 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 0 | 0 | 0.00 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 100,188 | 100,163 | 0.02 |
| Mental Hospital Services for the Aged | 247 | 247 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 2,377 | 2,377 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 2,879 | 2,879 | 0.00 |
| Nursing Facility Services | 20,263 | 20,262 | 0.00 |
| Physician Services | 473,263 | 473,070 | 0.04 |
| Dental Services | 159,998 | 159,990 | 0.01 |
| Other Practitioner Services | 211,407 | 211,372 | 0.02 |
| Outpatient Services | 339,737 | 339,652 | 0.03 |
| Clinic Services | 205,595 | 205,555 | 0.02 |
| Home Health Services | 8,223 | 8,222 | 0.01 |
| Lab/Xray Services | 423,539 | 423,384 | 0.04 |
| Drugs | 543,865 | 543,667 | 0.04 |
| Other Services | 120,573 | 120,554 | 0.02 |
| Sterilizations | 4,937 | 4,937 | 0.00 |
| Abortions | 2 | 2 | 0.00 |
| Transportation Services | 70,939 | 70,921 | 0.03 |
| Personal Care Services | 360 | 360 | 0.00 |
| Targeted Case Management | 39,172 | 39,157 | 0.04 |
| Rehabilitation Services | 125 | 125 | 0.00 |
| PT/OT/Hearing/Speech Services | 7,343 | 7,342 | 0.01 |
| Hospice Services | 2,339 | 2,339 | 0.00 |
| Nurse Midwife Services | 0 | 0 | 0.00 |
| Nurse Practitioner Services | 116,620 | 116,602 | 0.02 |
| Private Nursing Services | 0 | 0 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 224,834 | 224,803 | 0.01 |
| Residential Care Services | 100 | 100 | 0.00 |
| Psychiatric Services | 89,919 | 89,891 | 0.03 |
| Adult Day Care | 734 | 734 | 0.00 |
| Unknown Services | 19,353 | 19,352 | 0.01 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, Missouri.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 1,219,756 | 1,219,327 | 0.04 |
| No enrollment | 1,827 | 1,827 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 1,217,929 | 1,217,500 | 0.04 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 100,849 | 100,837 | 0.01 |
| Disabled | 194,214 | 194,207 | 0.00 |
| Child | 658,177 | 657,823 | 0.05 |
| Adult | 264,689 | 264,633 | 0.02 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 98,170 | 98,157 | 0.01 |
| Disabled | 190,272 | 190,265 | 0.00 |
| Child | 658,137 | 657,783 | 0.05 |
| Adult | 248,597 | 248,542 | 0.02 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 777,628 | 777,426 | 0.03 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 135,371 | 135,369 | 0.00 |
| Mental Hospital Services for the Aged | 14 | 14 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 364 | 364 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 1,168 | 1,168 | 0.00 |
| Nursing Facility Services | 38,472 | 38,471 | 0.00 |
| Physician Services | 630,463 | 630,399 | 0.01 |
| Dental Services | 199,248 | 199,241 | 0.00 |
| Other Practitioner Services | 158,535 | 158,535 | 0.00 |
| Outpatient Services | 558,425 | 558,374 | 0.01 |
| Clinic Services | 506,537 | 506,481 | 0.01 |
| Home Health Services | 6,648 | 6,647 | 0.02 |
| Lab/Xray Services | 628,802 | 628,740 | 0.01 |
| Drugs | 856,035 | 855,924 | 0.01 |
| Other Services | 309,908 | 309,866 | 0.01 |
| Sterilizations | 2,109 | 2,109 | 0.00 |
| Abortions | 33 | 33 | 0.00 |
| Transportation Services | 81,564 | 81,559 | 0.01 |
| Personal Care Services | 47,719 | 47,719 | 0.00 |
| Targeted Case Management | 39,027 | 39,022 | 0.01 |
| Rehabilitation Services | 13,524 | 13,524 | 0.00 |
| PT/OT/Hearing/Speech Services | 5,021 | 5,021 | 0.00 |
| Hospice Services | 1,057 | 1,057 | 0.00 |
| Nurse Midwife Services | 1,208 | 1,208 | 0.00 |
| Nurse Practitioner Services | 20,810 | 20,810 | 0.00 |
| Private Nursing Services | 53 | 53 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 267,495 | 267,485 | 0.00 |
| Residential Care Services | 10,690 | 10,690 | 0.00 |
| Psychiatric Services | 139,028 | 139,021 | 0.01 |
| Adult Day Care | 1,449 | 1,449 | 0.00 |
| Unknown Services | 154,967 | 154,934 | 0.02 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, Montana.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 129,052 | 129,052 | 0.00 |
| No enrollment | 1,048 | 1,048 | 0.00 |
| Enrollees with S-CHIP only | 12,723 | 12,723 | 0.00 |
| Total Medicaid Enrollees | 128,004 | 128,004 | 0.00 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 10,117 | 10,117 | 0.00 |
| Disabled | 19,450 | 19,450 | 0.00 |
| Child | 62,248 | 62,248 | 0.00 |
| Adult | 23,466 | 23,466 | 0.00 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 10,117 | 10,117 | 0.00 |
| Disabled | 19,450 | 19,450 | 0.00 |
| Child | 62,248 | 62,248 | 0.00 |
| Adult | 23,466 | 23,466 | 0.00 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 0 | 0 | 0.00 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 77,170 | 77,170 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 16,829 | 16,829 | 0.00 |
| Mental Hospital Services for the Aged | 55 | 55 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 424 | 424 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 95 | 95 | 0.00 |
| Nursing Facility Services | 5,228 | 5,228 | 0.00 |
| Physician Services | 71,668 | 71,668 | 0.00 |
| Dental Services | 21,989 | 21,989 | 0.00 |
| Other Practitioner Services | 20,708 | 20,708 | 0.00 |
| Outpatient Services | 41,858 | 41,858 | 0.00 |
| Clinic Services | 17,275 | 17,275 | 0.00 |
| Home Health Services | 416 | 416 | 0.00 |
| Lab/Xray Services | 51,341 | 51,341 | 0.00 |
| Drugs | 70,760 | 70,760 | 0.00 |
| Other Services | 99,569 | 99,569 | 0.00 |
| Sterilizations | 3 | 3 | 0.00 |
| Abortions | 1,221 | 1,221 | 0.00 |
| Transportation Services | 6,324 | 6,324 | 0.00 |
| Personal Care Services | 3,119 | 3,119 | 0.00 |
| Targeted Case Management | 11,031 | 11,031 | 0.00 |
| Rehabilitation Services | 339 | 339 | 0.00 |
| PT/OT/Hearing/Speech Services | 3 | 3 | 0.00 |
| Hospice Services | 218 | 218 | 0.00 |
| Nurse Midwife Services | 0 | 0 | 0.00 |
| Nurse Practitioner Services | 27,743 | 27,743 | 0.00 |
| Private Nursing Services | 0 | 0 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 29,944 | 29,944 | 0.00 |
| Residential Care Services | 91 | 91 | 0.00 |
| Psychiatric Services | 17,824 | 17,824 | 0.00 |
| Adult Day Care | 281 | 281 | 0.00 |
| Unknown Services | 3,146 | 3,146 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, Nebraska.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 261,841 | 261,840 | 0.00 |
| No enrollment | 469 | 469 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 261,372 | 261,371 | 0.00 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 23,808 | 23,808 | 0.00 |
| Disabled | 33,876 | 33,876 | 0.00 |
| Child | 156,743 | 156,742 | 0.00 |
| Adult | 46,945 | 46,945 | 0.00 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 23,341 | 23,341 | 0.00 |
| Disabled | 33,489 | 33,489 | 0.00 |
| Child | 156,743 | 156,742 | 0.00 |
| Adult | 46,945 | 46,945 | 0.00 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 41,832 | 41,832 | 0.00 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 54,144 | 54,144 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 32,101 | 32,101 | 0.00 |
| Mental Hospital Services for the Aged | 1 | 1 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 1,645 | 1,645 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 641 | 641 | 0.00 |
| Nursing Facility Services | 11,320 | 11,320 | 0.00 |
| Physician Services | 190,973 | 190,973 | 0.00 |
| Dental Services | 100,870 | 100,870 | 0.00 |
| Other Practitioner Services | 68,136 | 68,136 | 0.00 |
| Outpatient Services | 95,983 | 95,983 | 0.00 |
| Clinic Services | 38,517 | 38,517 | 0.00 |
| Home Health Services | 5,351 | 5,351 | 0.00 |
| Lab/Xray Services | 148,632 | 148,632 | 0.00 |
| Drugs | 194,251 | 194,251 | 0.00 |
| Other Services | 33,189 | 33,189 | 0.00 |
| Sterilizations | 1,479 | 1,479 | 0.00 |
| Abortions | 0 | 0 | 0.00 |
| Transportation Services | 23,078 | 23,078 | 0.00 |
| Personal Care Services | 1,574 | 1,574 | 0.00 |
| Targeted Case Management | 0 | 0 | 0.00 |
| Rehabilitation Services | 0 | 0 | 0.00 |
| PT/OT/Hearing/Speech Services | 13,757 | 13,757 | 0.00 |
| Hospice Services | 1,097 | 1,097 | 0.00 |
| Nurse Midwife Services | 0 | 0 | 0.00 |
| Nurse Practitioner Services | 8,486 | 8,486 | 0.00 |
| Private Nursing Services | 233 | 233 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 93,937 | 93,937 | 0.00 |
| Residential Care Services | 2,783 | 2,783 | 0.00 |
| Psychiatric Services | 48,217 | 48,217 | 0.00 |
| Adult Day Care | 371 | 371 | 0.00 |
| Unknown Services | 47,350 | 47,350 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, Nevada.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 272,739 | 272,692 | 0.02 |
| No enrollment | 4,859 | 4,859 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 267,880 | 267,833 | 0.02 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 22,514 | 22,513 | 0.00 |
| Disabled | 37,700 | 37,699 | 0.00 |
| Child | 154,446 | 154,402 | 0.03 |
| Adult | 53,220 | 53,219 | 0.00 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 21,728 | 21,727 | 0.00 |
| Disabled | 36,975 | 36,974 | 0.00 |
| Child | 154,436 | 154,392 | 0.03 |
| Adult | 53,152 | 53,151 | 0.00 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 146,433 | 146,431 | 0.00 |
| PHP | 234,838 | 234,832 | 0.00 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 35,624 | 35,624 | 0.00 |
| Mental Hospital Services for the Aged | 8 | 8 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 880 | 880 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 225 | 225 | 0.00 |
| Nursing Facility Services | 4,801 | 4,801 | 0.00 |
| Physician Services | 139,642 | 139,637 | 0.00 |
| Dental Services | 40,401 | 40,400 | 0.00 |
| Other Practitioner Services | 15,889 | 15,889 | 0.00 |
| Outpatient Services | 45,223 | 45,223 | 0.00 |
| Clinic Services | 21,512 | 21,512 | 0.00 |
| Home Health Services | 799 | 799 | 0.00 |
| Lab/Xray Services | 92,123 | 92,122 | 0.00 |
| Drugs | 76,812 | 76,811 | 0.00 |
| Other Services | 14,609 | 14,609 | 0.00 |
| Sterilizations | 4,269 | 4,269 | 0.00 |
| Abortions | 0 | 0 | 0.00 |
| Transportation Services | 17,450 | 17,450 | 0.00 |
| Personal Care Services | 4,858 | 4,858 | 0.00 |
| Targeted Case Management | 9,519 | 9,519 | 0.00 |
| Rehabilitation Services | 7,295 | 7,295 | 0.00 |
| PT/OT/Hearing/Speech Services | 3,460 | 3,460 | 0.00 |
| Hospice Services | 779 | 779 | 0.00 |
| Nurse Midwife Services | 269 | 269 | 0.00 |
| Nurse Practitioner Services | 19,387 | 19,387 | 0.00 |
| Private Nursing Services | 0 | 0 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 33,531 | 33,531 | 0.00 |
| Residential Care Services | 1,536 | 1,536 | 0.00 |
| Psychiatric Services | 17,328 | 17,328 | 0.00 |
| Adult Day Care | 286 | 286 | 0.00 |
| Unknown Services | 16,996 | 16,996 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, New Hampshire.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 145,834 | 145,825 | 0.01 |
| No enrollment | 97 | 97 | 0.00 |
| Enrollees with S-CHIP only | 6,091 | 6,090 | 0.02 |
| Total Medicaid Enrollees | 145,737 | 145,728 | 0.01 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 14,230 | 14,230 | 0.00 |
| Disabled | 20,199 | 20,199 | 0.00 |
| Child | 85,379 | 85,373 | 0.01 |
| Adult | 19,838 | 19,836 | 0.01 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 13,326 | 13,326 | 0.00 |
| Disabled | 18,886 | 18,886 | 0.00 |
| Child | 85,379 | 85,373 | 0.01 |
| Adult | 19,737 | 19,735 | 0.01 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 0 | 0 | 0.00 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 14,454 | 14,454 | 0.00 |
| Mental Hospital Services for the Aged | 0 | 0 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 313 | 313 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 34 | 34 | 0.00 |
| Nursing Facility Services | 7,190 | 7,190 | 0.00 |
| Physician Services | 84,756 | 84,754 | 0.00 |
| Dental Services | 35,925 | 35,925 | 0.00 |
| Other Practitioner Services | 22,048 | 22,048 | 0.00 |
| Outpatient Services | 48,415 | 48,412 | 0.01 |
| Clinic Services | 35,056 | 35,056 | 0.00 |
| Home Health Services | 2,814 | 2,814 | 0.00 |
| Lab/Xray Services | 55,810 | 55,806 | 0.01 |
| Drugs | 92,805 | 92,801 | 0.00 |
| Other Services | 10,743 | 10,743 | 0.00 |
| Sterilizations | 717 | 717 | 0.00 |
| Abortions | 1 | 1 | 0.00 |
| Transportation Services | 6,616 | 6,616 | 0.00 |
| Personal Care Services | 189 | 189 | 0.00 |
| Targeted Case Management | 0 | 0 | 0.00 |
| Rehabilitation Services | 2,119 | 2,119 | 0.00 |
| PT/OT/Hearing/Speech Services | 1,562 | 1,562 | 0.00 |
| Hospice Services | 0 | 0 | 0.00 |
| Nurse Midwife Services | 0 | 0 | 0.00 |
| Nurse Practitioner Services | 1,168 | 1,168 | 0.00 |
| Private Nursing Services | 136 | 136 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 32,789 | 32,788 | 0.00 |
| Residential Care Services | 459 | 459 | 0.00 |
| Psychiatric Services | 27,904 | 27,903 | 0.00 |
| Adult Day Care | 480 | 480 | 0.00 |
| Unknown Services | 4,978 | 4,978 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, New Jersey.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 1,134,761 | 1,130,753 | 0.35 |
| No enrollment | 8,991 | 8,991 | 0.00 |
| Enrollees with S-CHIP only | 88,862 | 88,384 | 0.54 |
| Total Medicaid Enrollees | 1,125,770 | 1,121,762 | 0.36 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 117,720 | 117,017 | 0.60 |
| Disabled | 197,672 | 197,145 | 0.27 |
| Child | 536,292 | 534,340 | 0.36 |
| Adult | 185,224 | 184,876 | 0.19 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 116,406 | 115,415 | 0.85 |
| Disabled | 197,150 | 196,418 | 0.37 |
| Child | 536,253 | 534,296 | 0.36 |
| Adult | 184,832 | 184,482 | 0.19 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 687,111 | 686,260 | 0.12 |
| PHP | 41,854 | 41,712 | 0.34 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 115,787 | 115,772 | 0.01 |
| Mental Hospital Services for the Aged | 394 | 393 | 0.25 |
| Inpatient Psychiatric Facility Services (under Age 21) | 1,659 | 1,656 | 0.18 |
| Intermediate Care Facility Services for the Mentally Retarded | 3,110 | 3,109 | 0.03 |
| Nursing Facility Services | 42,649 | 42,505 | 0.34 |
| Physician Services | 630,984 | 630,446 | 0.09 |
| Dental Services | 218,737 | 218,694 | 0.02 |
| Other Practitioner Services | 129,617 | 129,610 | 0.01 |
| Outpatient Services | 362,171 | 361,949 | 0.06 |
| Clinic Services | 67,555 | 67,512 | 0.06 |
| Home Health Services | 15,002 | 15,000 | 0.01 |
| Lab/Xray Services | 508,238 | 507,935 | 0.06 |
| Drugs | 702,430 | 701,830 | 0.09 |
| Other Services | 133,913 | 133,885 | 0.02 |
| Sterilizations | 406 | 406 | 0.00 |
| Abortions | 0 | 0 | 0.00 |
| Transportation Services | 85,470 | 85,411 | 0.07 |
| Personal Care Services | 27,369 | 27,363 | 0.02 |
| Targeted Case Management | 2,752 | 2,750 | 0.07 |
| Rehabilitation Services | 20,280 | 20,269 | 0.05 |
| PT/OT/Hearing/Speech Services | 0 | 0 | 0.00 |
| Hospice Services | 3,532 | 3,532 | 0.00 |
| Nurse Midwife Services | 1,221 | 1,221 | 0.00 |
| Nurse Practitioner Services | 7,335 | 7,335 | 0.00 |
| Private Nursing Services | 234 | 234 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 221,359 | 221,292 | 0.03 |
| Residential Care Services | 8,374 | 8,372 | 0.02 |
| Psychiatric Services | 114,797 | 114,743 | 0.05 |
| Adult Day Care | 14,692 | 14,689 | 0.02 |
| Unknown Services | 156,521 | 156,430 | 0.06 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, New Mexico.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 530,733 | 530,725 | 0.00 |
| No enrollment | 3,031 | 3,031 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 527,702 | 527,694 | 0.00 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 25,472 | 25,468 | 0.02 |
| Disabled | 63,308 | 63,304 | 0.01 |
| Child | 311,944 | 311,944 | 0.00 |
| Adult | 126,978 | 126,978 | 0.00 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 24,861 | 24,855 | 0.02 |
| Disabled | 62,547 | 62,543 | 0.01 |
| Child | 311,845 | 311,845 | 0.00 |
| Adult | 108,814 | 108,814 | 0.00 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 466,244 | 466,242 | 0.00 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 47,295 | 47,295 | 0.00 |
| Mental Hospital Services for the Aged | 45 | 45 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 5,687 | 5,687 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 274 | 274 | 0.00 |
| Nursing Facility Services | 6,718 | 6,717 | 0.01 |
| Physician Services | 312,167 | 312,166 | 0.00 |
| Dental Services | 153,947 | 153,947 | 0.00 |
| Other Practitioner Services | 66,411 | 66,411 | 0.00 |
| Outpatient Services | 170,644 | 170,644 | 0.00 |
| Clinic Services | 45,835 | 45,835 | 0.00 |
| Home Health Services | 3,072 | 3,072 | 0.00 |
| Lab/Xray Services | 219,649 | 219,649 | 0.00 |
| Drugs | 305,061 | 305,061 | 0.00 |
| Other Services | 82,820 | 82,819 | 0.00 |
| Sterilizations | 795 | 795 | 0.00 |
| Abortions | 287 | 287 | 0.00 |
| Transportation Services | 28,975 | 28,975 | 0.00 |
| Personal Care Services | 10,217 | 10,217 | 0.00 |
| Targeted Case Management | 19,042 | 19,042 | 0.00 |
| Rehabilitation Services | 960 | 960 | 0.00 |
| PT/OT/Hearing/Speech Services | 22,230 | 22,230 | 0.00 |
| Hospice Services | 1,051 | 1,051 | 0.00 |
| Nurse Midwife Services | 10,561 | 10,561 | 0.00 |
| Nurse Practitioner Services | 47,220 | 47,220 | 0.00 |
| Private Nursing Services | 3 | 3 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 119,281 | 119,281 | 0.00 |
| Residential Care Services | 2,527 | 2,527 | 0.00 |
| Psychiatric Services | 57,142 | 57,142 | 0.00 |
| Adult Day Care | 31 | 31 | 0.00 |
| Unknown Services | 92,119 | 92,119 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, New York.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 5,118,695 | 5,043,983 | 1.46 |
| No enrollment | 30,861 | 30,861 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 5,087,834 | 5,013,122 | 1.47 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 436,330 | 432,271 | 0.93 |
| Disabled | 735,576 | 721,935 | 1.85 |
| Child | 2,079,846 | 2,041,295 | 1.85 |
| Adult | 1,836,082 | 1,817,621 | 1.01 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 433,514 | 429,328 | 0.97 |
| Disabled | 733,900 | 720,218 | 1.86 |
| Child | 2,074,386 | 2,035,686 | 1.87 |
| Adult | 1,814,738 | 1,795,982 | 1.03 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 2,974,787 | 2,950,930 | 0.80 |
| PHP | 255,635 | 254,707 | 0.36 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 625,670 | 624,162 | 0.24 |
| Mental Hospital Services for the Aged | 4,319 | 4,286 | 0.76 |
| Inpatient Psychiatric Facility Services (under Age 21) | 11,409 | 11,183 | 1.98 |
| Intermediate Care Facility Services for the Mentally Retarded | 9,704 | 9,691 | 0.13 |
| Nursing Facility Services | 150,925 | 150,823 | 0.07 |
| Physician Services | 2,718,635 | 2,710,130 | 0.31 |
| Dental Services | 1,158,054 | 1,156,790 | 0.11 |
| Other Practitioner Services | 282,453 | 282,321 | 0.05 |
| Outpatient Services | 1,937,742 | 1,930,893 | 0.35 |
| Clinic Services | 857,576 | 855,500 | 0.24 |
| Home Health Services | 274,200 | 273,737 | 0.17 |
| Lab/Xray Services | 2,144,854 | 2,139,603 | 0.24 |
| Drugs | 3,101,220 | 3,087,943 | 0.43 |
| Other Services | 931,513 | 929,606 | 0.20 |
| Sterilizations | 4,313 | 4,313 | 0.00 |
| Abortions | 540 | 540 | 0.00 |
| Transportation Services | 419,864 | 418,943 | 0.22 |
| Personal Care Services | 100,315 | 100,227 | 0.09 |
| Targeted Case Management | 32,417 | 32,370 | 0.14 |
| Rehabilitation Services | 119,832 | 119,642 | 0.16 |
| PT/OT/Hearing/Speech Services | 24,298 | 24,296 | 0.01 |
| Hospice Services | 6,872 | 6,870 | 0.03 |
| Nurse Midwife Services | 7,088 | 7,088 | 0.00 |
| Nurse Practitioner Services | 106,548 | 106,519 | 0.03 |
| Private Nursing Services | 6,860 | 6,849 | 0.16 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 633,627 | 633,149 | 0.08 |
| Residential Care Services | 47,061 | 47,003 | 0.12 |
| Psychiatric Services | 780,227 | 777,450 | 0.36 |
| Adult Day Care | 62,751 | 62,595 | 0.25 |
| Unknown Services | 498,890 | 498,453 | 0.09 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, North Carolina.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 1,729,575 | 1,728,885 | 0.04 |
| No enrollment | 967 | 967 | 0.00 |
| Enrollees with S-CHIP only | 126,721 | 126,694 | 0.02 |
| Total Medicaid Enrollees | 1,728,608 | 1,727,918 | 0.04 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 182,568 | 182,549 | 0.01 |
| Disabled | 283,799 | 283,423 | 0.13 |
| Child | 833,090 | 832,868 | 0.03 |
| Adult | 302,430 | 302,384 | 0.02 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 177,592 | 177,573 | 0.01 |
| Disabled | 279,160 | 278,784 | 0.13 |
| Child | 833,017 | 832,795 | 0.03 |
| Adult | 294,830 | 294,784 | 0.02 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 17,756 | 17,755 | 0.01 |
| PHP | 78,815 | 78,811 | 0.01 |
| PCCM | 1,093,255 | 1,093,052 | 0.02 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 207,627 | 207,592 | 0.02 |
| Mental Hospital Services for the Aged | 176 | 176 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 2,226 | 2,226 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 4,413 | 4,413 | 0.00 |
| Nursing Facility Services | 42,003 | 42,003 | 0.00 |
| Physician Services | 1,170,789 | 1,170,475 | 0.03 |
| Dental Services | 458,590 | 458,575 | 0.00 |
| Other Practitioner Services | 231,009 | 231,006 | 0.00 |
| Outpatient Services | 626,129 | 626,010 | 0.02 |
| Clinic Services | 480,388 | 480,291 | 0.02 |
| Home Health Services | 37,855 | 37,834 | 0.06 |
| Lab/Xray Services | 913,181 | 912,990 | 0.02 |
| Drugs | 1,107,208 | 1,106,959 | 0.02 |
| Other Services | 212,366 | 212,335 | 0.01 |
| Sterilizations | 7,517 | 7,517 | 0.00 |
| Abortions | 19 | 19 | 0.00 |
| Transportation Services | 126,004 | 125,992 | 0.01 |
| Personal Care Services | 81,549 | 81,546 | 0.00 |
| Targeted Case Management | 145,680 | 145,587 | 0.06 |
| Rehabilitation Services | 0 | 0 | 0.00 |
| PT/OT/Hearing/Speech Services | 24,299 | 24,293 | 0.02 |
| Hospice Services | 5,132 | 5,132 | 0.00 |
| Nurse Midwife Services | 1,501 | 1,501 | 0.00 |
| Nurse Practitioner Services | 0 | 0 | 0.00 |
| Private Nursing Services | 0 | 0 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 451,068 | 450,997 | 0.02 |
| Residential Care Services | 31 | 31 | 0.00 |
| Psychiatric Services | 198,205 | 198,149 | 0.03 |
| Adult Day Care | 467 | 467 | 0.00 |
| Unknown Services | 27,809 | 27,809 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, North Dakota.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 79,961 | 78,448 | 1.89 |
| No enrollment | 1,336 | 1,336 | 0.00 |
| Enrollees with S-CHIP only | 3,639 | 2,495 | 31.44 |
| Total Medicaid Enrollees | 78,625 | 77,112 | 1.92 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 9,718 | 9,474 | 2.51 |
| Disabled | 10,480 | 10,360 | 1.15 |
| Child | 38,137 | 38,133 | 0.01 |
| Adult | 16,651 | 16,650 | 0.01 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 9,237 | 8,989 | 2.68 |
| Disabled | 10,119 | 9,992 | 1.26 |
| Child | 38,137 | 38,133 | 0.01 |
| Adult | 16,649 | 16,648 | 0.01 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 1,459 | 1,459 | 0.00 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 38,605 | 38,605 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 9,189 | 9,189 | 0.00 |
| Mental Hospital Services for the Aged | 11 | 11 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 52 | 52 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 646 | 646 | 0.00 |
| Nursing Facility Services | 5,176 | 5,176 | 0.00 |
| Physician Services | 45,658 | 45,645 | 0.03 |
| Dental Services | 19,397 | 19,397 | 0.00 |
| Other Practitioner Services | 19,569 | 19,567 | 0.01 |
| Outpatient Services | 25,485 | 25,479 | 0.02 |
| Clinic Services | 23,451 | 23,447 | 0.02 |
| Home Health Services | 1,496 | 1,496 | 0.00 |
| Lab/Xray Services | 32,612 | 32,612 | 0.00 |
| Drugs | 47,219 | 47,218 | 0.00 |
| Other Services | 8,413 | 8,412 | 0.01 |
| Sterilizations | 296 | 296 | 0.00 |
| Abortions | 57 | 57 | 0.00 |
| Transportation Services | 5,944 | 5,944 | 0.00 |
| Personal Care Services | 1,387 | 1,387 | 0.00 |
| Targeted Case Management | 3,723 | 3,723 | 0.00 |
| Rehabilitation Services | 9,207 | 9,206 | 0.01 |
| PT/OT/Hearing/Speech Services | 1,807 | 1,807 | 0.00 |
| Hospice Services | 328 | 328 | 0.00 |
| Nurse Midwife Services | 347 | 347 | 0.00 |
| Nurse Practitioner Services | 5,367 | 5,367 | 0.00 |
| Private Nursing Services | 0 | 0 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 21,190 | 21,188 | 0.01 |
| Residential Care Services | 659 | 659 | 0.00 |
| Psychiatric Services | 11,017 | 11,016 | 0.01 |
| Adult Day Care | 1,045 | 1,045 | 0.00 |
| Unknown Services | 2,540 | 2,540 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, Ohio.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 2,127,176 | 2,113,998 | 0.62 |
| No enrollment | 550 | 550 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 2,126,626 | 2,113,448 | 0.62 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 173,471 | 173,428 | 0.02 |
| Disabled | 338,623 | 338,238 | 0.11 |
| Child | 1,124,213 | 1,111,855 | 1.10 |
| Adult | 490,319 | 489,927 | 0.08 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 148,805 | 148,763 | 0.03 |
| Disabled | 317,319 | 316,931 | 0.12 |
| Child | 1,124,212 | 1,111,854 | 1.10 |
| Adult | 489,824 | 489,431 | 0.08 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 790,169 | 790,072 | 0.01 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 216,842 | 216,766 | 0.04 |
| Mental Hospital Services for the Aged | 17 | 17 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 1,660 | 1,651 | 0.54 |
| Intermediate Care Facility Services for the Mentally Retarded | 7,840 | 7,839 | 0.01 |
| Nursing Facility Services | 85,099 | 85,093 | 0.01 |
| Physician Services | 1,143,138 | 1,140,243 | 0.25 |
| Dental Services | 452,398 | 451,719 | 0.15 |
| Other Practitioner Services | 335,039 | 334,930 | 0.03 |
| Outpatient Services | 824,155 | 822,518 | 0.20 |
| Clinic Services | 248,441 | 248,126 | 0.13 |
| Home Health Services | 43,204 | 43,166 | 0.09 |
| Lab/Xray Services | 780,435 | 778,640 | 0.23 |
| Drugs | 1,115,961 | 1,112,952 | 0.27 |
| Other Services | 271,523 | 271,323 | 0.07 |
| Sterilizations | 7,174 | 7,174 | 0.00 |
| Abortions | 18 | 18 | 0.00 |
| Transportation Services | 160,921 | 160,872 | 0.03 |
| Personal Care Services | 0 | 0 | 0.00 |
| Targeted Case Management | 0 | 0 | 0.00 |
| Rehabilitation Services | 107,451 | 107,363 | 0.08 |
| PT/OT/Hearing/Speech Services | 15,000 | 14,995 | 0.03 |
| Hospice Services | 2,007 | 2,007 | 0.00 |
| Nurse Midwife Services | 0 | 0 | 0.00 |
| Nurse Practitioner Services | 148,841 | 148,749 | 0.06 |
| Private Nursing Services | 16,679 | 16,644 | 0.21 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 320,531 | 320,324 | 0.06 |
| Residential Care Services | 16,498 | 16,498 | 0.00 |
| Psychiatric Services | 340,653 | 338,617 | 0.60 |
| Adult Day Care | 2,894 | 2,894 | 0.00 |
| Unknown Services | 184,244 | 184,013 | 0.13 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, Oklahoma.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 730,873 | 728,101 | 0.38 |
| No enrollment | 2,264 | 2,264 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 728,609 | 725,837 | 0.38 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 64,738 | 64,634 | 0.16 |
| Disabled | 101,506 | 101,235 | 0.27 |
| Child | 456,522 | 454,511 | 0.44 |
| Adult | 105,843 | 105,457 | 0.36 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 60,007 | 59,899 | 0.18 |
| Disabled | 98,515 | 98,238 | 0.28 |
| Child | 456,421 | 454,410 | 0.44 |
| Adult | 101,091 | 100,681 | 0.41 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 0 | 0 | 0.00 |
| PHP | 654,809 | 653,109 | 0.26 |
| PCCM | 13,008 | 13,004 | 0.03 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 109,716 | 109,688 | 0.03 |
| Mental Hospital Services for the Aged | 110 | 110 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 3,639 | 3,633 | 0.16 |
| Intermediate Care Facility Services for the Mentally Retarded | 1,843 | 1,841 | 0.11 |
| Nursing Facility Services | 22,052 | 22,037 | 0.07 |
| Physician Services | 437,857 | 437,236 | 0.14 |
| Dental Services | 181,319 | 181,226 | 0.05 |
| Other Practitioner Services | 69,905 | 69,898 | 0.01 |
| Outpatient Services | 285,277 | 285,007 | 0.09 |
| Clinic Services | 126,734 | 126,682 | 0.04 |
| Home Health Services | 6,252 | 6,250 | 0.03 |
| Lab/Xray Services | 341,621 | 341,305 | 0.09 |
| Drugs | 469,250 | 468,565 | 0.15 |
| Other Services | 56,937 | 56,920 | 0.03 |
| Sterilizations | 5,463 | 5,461 | 0.04 |
| Abortions | 55 | 55 | 0.00 |
| Transportation Services | 36,602 | 36,595 | 0.02 |
| Personal Care Services | 5,259 | 5,257 | 0.04 |
| Targeted Case Management | 38,816 | 38,731 | 0.22 |
| Rehabilitation Services | 0 | 0 | 0.00 |
| PT/OT/Hearing/Speech Services | 2,192 | 2,192 | 0.00 |
| Hospice Services | 50 | 50 | 0.00 |
| Nurse Midwife Services | 130 | 130 | 0.00 |
| Nurse Practitioner Services | 13,062 | 13,061 | 0.01 |
| Private Nursing Services | 0 | 0 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 167,905 | 167,834 | 0.04 |
| Residential Care Services | 3,863 | 3,860 | 0.08 |
| Psychiatric Services | 76,922 | 76,813 | 0.14 |
| Adult Day Care | 516 | 516 | 0.00 |
| Unknown Services | 31,446 | 31,437 | 0.03 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, Oregon.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 565,361 | 564,481 | 0.16 |
| No enrollment | 1,916 | 1,916 | 0.00 |
| Enrollees with S-CHIP only | 24,855 | 24,810 | 0.18 |
| Total Medicaid Enrollees | 563,445 | 562,565 | 0.16 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 48,516 | 48,508 | 0.02 |
| Disabled | 78,905 | 78,854 | 0.06 |
| Child | 273,095 | 272,446 | 0.24 |
| Adult | 138,074 | 137,947 | 0.09 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 47,098 | 47,089 | 0.02 |
| Disabled | 77,225 | 77,174 | 0.07 |
| Child | 272,698 | 272,049 | 0.24 |
| Adult | 137,557 | 137,429 | 0.09 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 364,898 | 364,602 | 0.08 |
| PHP | 445,010 | 444,586 | 0.10 |
| PCCM | 10,841 | 10,833 | 0.07 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 58,051 | 58,046 | 0.01 |
| Mental Hospital Services for the Aged | 87 | 87 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 878 | 876 | 0.23 |
| Intermediate Care Facility Services for the Mentally Retarded | 45 | 45 | 0.00 |
| Nursing Facility Services | 9,910 | 9,910 | 0.00 |
| Physician Services | 309,411 | 309,264 | 0.05 |
| Dental Services | 131,785 | 131,768 | 0.01 |
| Other Practitioner Services | 63,447 | 63,441 | 0.01 |
| Outpatient Services | 181,181 | 181,136 | 0.02 |
| Clinic Services | 68,520 | 68,500 | 0.03 |
| Home Health Services | 2,003 | 2,003 | 0.00 |
| Lab/Xray Services | 239,879 | 239,816 | 0.03 |
| Drugs | 173,726 | 173,663 | 0.04 |
| Other Services | 35,060 | 35,055 | 0.01 |
| Sterilizations | 1,888 | 1,888 | 0.00 |
| Abortions | 3,338 | 3,338 | 0.00 |
| Transportation Services | 45,390 | 45,383 | 0.02 |
| Personal Care Services | 8,777 | 8,777 | 0.00 |
| Targeted Case Management | 45,976 | 45,935 | 0.09 |
| Rehabilitation Services | 41,517 | 41,506 | 0.03 |
| PT/OT/Hearing/Speech Services | 5,840 | 5,839 | 0.02 |
| Hospice Services | 555 | 555 | 0.00 |
| Nurse Midwife Services | 1,597 | 1,597 | 0.00 |
| Nurse Practitioner Services | 60,452 | 60,441 | 0.02 |
| Private Nursing Services | 254 | 254 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 125,526 | 125,514 | 0.01 |
| Residential Care Services | 9,443 | 9,443 | 0.00 |
| Psychiatric Services | 82,404 | 82,376 | 0.03 |
| Adult Day Care | 204 | 204 | 0.00 |
| Unknown Services | 159,353 | 159,306 | 0.03 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, Pennsylvania.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 2,038,176 | 2,038,014 | 0.01 |
| No enrollment | 8,282 | 8,282 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 2,029,894 | 2,029,732 | 0.01 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 231,063 | 231,015 | 0.02 |
| Disabled | 473,531 | 473,455 | 0.02 |
| Child | 959,344 | 959,314 | 0.00 |
| Adult | 365,956 | 365,948 | 0.00 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 226,299 | 226,248 | 0.02 |
| Disabled | 469,549 | 469,473 | 0.02 |
| Child | 958,703 | 958,673 | 0.00 |
| Adult | 365,796 | 365,788 | 0.00 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 1,435,826 | 1,435,736 | 0.01 |
| PHP | 1,333,902 | 1,333,800 | 0.01 |
| PCCM | 342,462 | 342,455 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 84,584 | 84,584 | 0.00 |
| Mental Hospital Services for the Aged | 7,193 | 7,193 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 5,608 | 5,608 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 4,146 | 4,146 | 0.00 |
| Nursing Facility Services | 80,102 | 80,101 | 0.00 |
| Physician Services | 367,935 | 367,931 | 0.00 |
| Dental Services | 129,037 | 129,037 | 0.00 |
| Other Practitioner Services | 72,246 | 72,246 | 0.00 |
| Outpatient Services | 195,339 | 195,339 | 0.00 |
| Clinic Services | 69,850 | 69,848 | 0.00 |
| Home Health Services | 17,047 | 17,046 | 0.01 |
| Lab/Xray Services | 277,035 | 277,033 | 0.00 |
| Drugs | 449,244 | 449,234 | 0.00 |
| Other Services | 111,815 | 111,813 | 0.00 |
| Sterilizations | 1,570 | 1,570 | 0.00 |
| Abortions | 0 | 0 | 0.00 |
| Transportation Services | 26,366 | 26,366 | 0.00 |
| Personal Care Services | 0 | 0 | 0.00 |
| Targeted Case Management | 56,186 | 56,183 | 0.01 |
| Rehabilitation Services | 1,284 | 1,284 | 0.00 |
| PT/OT/Hearing/Speech Services | 11,641 | 11,640 | 0.01 |
| Hospice Services | 895 | 895 | 0.00 |
| Nurse Midwife Services | 2,265 | 2,265 | 0.00 |
| Nurse Practitioner Services | 452 | 452 | 0.00 |
| Private Nursing Services | 287 | 287 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 79,432 | 79,431 | 0.00 |
| Residential Care Services | 1,044 | 1,044 | 0.00 |
| Psychiatric Services | 143,525 | 143,521 | 0.00 |
| Adult Day Care | 2,222 | 2,222 | 0.00 |
| Unknown Services | 61,963 | 61,962 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, Rhode Island.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 224,884 | 224,883 | 0.00 |
| No enrollment | 5,100 | 5,100 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 219,784 | 219,783 | 0.00 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 21,060 | 21,060 | 0.00 |
| Disabled | 43,159 | 43,159 | 0.00 |
| Child | 99,441 | 99,441 | 0.00 |
| Adult | 56,124 | 56,123 | 0.00 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 20,569 | 20,569 | 0.00 |
| Disabled | 42,766 | 42,766 | 0.00 |
| Child | 99,440 | 99,440 | 0.00 |
| Adult | 54,871 | 54,870 | 0.00 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 151,891 | 151,891 | 0.00 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 31,227 | 31,227 | 0.00 |
| Mental Hospital Services for the Aged | 167 | 167 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 176 | 176 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 45 | 45 | 0.00 |
| Nursing Facility Services | 10,681 | 10,681 | 0.00 |
| Physician Services | 94,497 | 94,497 | 0.00 |
| Dental Services | 58,912 | 58,912 | 0.00 |
| Other Practitioner Services | 44,173 | 44,173 | 0.00 |
| Outpatient Services | 88,000 | 87,999 | 0.00 |
| Clinic Services | 31,191 | 31,191 | 0.00 |
| Home Health Services | 8,881 | 8,881 | 0.00 |
| Lab/Xray Services | 131,869 | 131,869 | 0.00 |
| Drugs | 150,776 | 150,775 | 0.00 |
| Other Services | 42,165 | 42,165 | 0.00 |
| Sterilizations | 527 | 527 | 0.00 |
| Abortions | 456 | 456 | 0.00 |
| Transportation Services | 11,789 | 11,789 | 0.00 |
| Personal Care Services | 1,768 | 1,768 | 0.00 |
| Targeted Case Management | 9,535 | 9,535 | 0.00 |
| Rehabilitation Services | 6,842 | 6,842 | 0.00 |
| PT/OT/Hearing/Speech Services | 422 | 422 | 0.00 |
| Hospice Services | 99 | 99 | 0.00 |
| Nurse Midwife Services | 0 | 0 | 0.00 |
| Nurse Practitioner Services | 365 | 365 | 0.00 |
| Private Nursing Services | 0 | 0 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 31,154 | 31,154 | 0.00 |
| Residential Care Services | 3,070 | 3,070 | 0.00 |
| Psychiatric Services | 40,384 | 40,384 | 0.00 |
| Adult Day Care | 4,463 | 4,463 | 0.00 |
| Unknown Services | 16,803 | 16,803 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, South Carolina.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 1,012,763 | 1,012,647 | 0.01 |
| No enrollment | 476 | 476 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 1,012,287 | 1,012,171 | 0.01 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 130,497 | 130,432 | 0.05 |
| Disabled | 155,070 | 155,050 | 0.01 |
| Child | 490,420 | 490,396 | 0.00 |
| Adult | 236,300 | 236,293 | 0.00 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 128,215 | 128,134 | 0.06 |
| Disabled | 153,970 | 153,949 | 0.01 |
| Child | 489,691 | 489,667 | 0.00 |
| Adult | 201,061 | 201,054 | 0.00 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 89,046 | 89,046 | 0.00 |
| PHP | 39,334 | 39,333 | 0.00 |
| PCCM | 50,799 | 50,799 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 105,656 | 105,656 | 0.00 |
| Mental Hospital Services for the Aged | 247 | 247 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 1,038 | 1,038 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 1,831 | 1,831 | 0.00 |
| Nursing Facility Services | 17,049 | 17,049 | 0.00 |
| Physician Services | 538,860 | 538,857 | 0.00 |
| Dental Services | 264,977 | 264,977 | 0.00 |
| Other Practitioner Services | 135,850 | 135,850 | 0.00 |
| Outpatient Services | 291,687 | 291,687 | 0.00 |
| Clinic Services | 361,993 | 361,989 | 0.00 |
| Home Health Services | 3,411 | 3,411 | 0.00 |
| Lab/Xray Services | 421,662 | 421,659 | 0.00 |
| Drugs | 622,254 | 622,243 | 0.00 |
| Other Services | 9,222 | 9,222 | 0.00 |
| Sterilizations | 5,302 | 5,302 | 0.00 |
| Abortions | 12 | 12 | 0.00 |
| Transportation Services | 58,028 | 58,028 | 0.00 |
| Personal Care Services | 17,112 | 17,112 | 0.00 |
| Targeted Case Management | 46,653 | 46,652 | 0.00 |
| Rehabilitation Services | 6,168 | 6,168 | 0.00 |
| PT/OT/Hearing/Speech Services | 8,155 | 8,155 | 0.00 |
| Hospice Services | 1,821 | 1,821 | 0.00 |
| Nurse Midwife Services | 7,235 | 7,235 | 0.00 |
| Nurse Practitioner Services | 20,920 | 20,920 | 0.00 |
| Private Nursing Services | 13 | 13 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 187,780 | 187,778 | 0.00 |
| Residential Care Services | 383 | 383 | 0.00 |
| Psychiatric Services | 111,931 | 111,930 | 0.00 |
| Adult Day Care | 9,029 | 9,028 | 0.01 |
| Unknown Services | 19,289 | 19,289 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, South Dakota.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 130,988 | 128,932 | 1.57 |
| No enrollment | 94 | 94 | 0.00 |
| Enrollees with S-CHIP only | 1,810 | 1,790 | 1.10 |
| Total Medicaid Enrollees | 130,894 | 128,838 | 1.57 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 10,160 | 10,158 | 0.02 |
| Disabled | 18,186 | 18,155 | 0.17 |
| Child | 79,442 | 77,441 | 2.52 |
| Adult | 21,296 | 21,294 | 0.01 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 9,851 | 9,849 | 0.02 |
| Disabled | 17,956 | 17,925 | 0.17 |
| Child | 79,442 | 77,441 | 2.52 |
| Adult | 21,285 | 21,283 | 0.01 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 0 | 0 | 0.00 |
| PHP | 129,084 | 127,048 | 1.58 |
| PCCM | 61,504 | 61,503 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 15,822 | 15,801 | 0.13 |
| Mental Hospital Services for the Aged | 45 | 45 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 489 | 481 | 1.64 |
| Intermediate Care Facility Services for the Mentally Retarded | 198 | 198 | 0.00 |
| Nursing Facility Services | 5,737 | 5,737 | 0.00 |
| Physician Services | 72,854 | 72,392 | 0.63 |
| Dental Services | 17,032 | 16,996 | 0.21 |
| Other Practitioner Services | 44,551 | 44,382 | 0.38 |
| Outpatient Services | 37,750 | 37,689 | 0.16 |
| Clinic Services | 40,298 | 40,131 | 0.41 |
| Home Health Services | 432 | 432 | 0.00 |
| Lab/Xray Services | 58,925 | 58,604 | 0.54 |
| Drugs | 75,234 | 74,709 | 0.70 |
| Other Services | 12,340 | 12,328 | 0.10 |
| Sterilizations | 0 | 0 | 0.00 |
| Abortions | 0 | 0 | 0.00 |
| Transportation Services | 11,286 | 11,258 | 0.25 |
| Personal Care Services | 2,343 | 2,343 | 0.00 |
| Targeted Case Management | 0 | 0 | 0.00 |
| Rehabilitation Services | 895 | 895 | 0.00 |
| PT/OT/Hearing/Speech Services | 5,142 | 5,120 | 0.43 |
| Hospice Services | 259 | 259 | 0.00 |
| Nurse Midwife Services | 776 | 775 | 0.13 |
| Nurse Practitioner Services | 0 | 0 | 0.00 |
| Private Nursing Services | 5 | 5 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 30,016 | 29,937 | 0.26 |
| Residential Care Services | 1,268 | 1,258 | 0.79 |
| Psychiatric Services | 14,364 | 14,052 | 2.17 |
| Adult Day Care | 3 | 3 | 0.00 |
| Unknown Services | 13,675 | 13,659 | 0.12 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, Tennessee.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 1,607,615 | 1,607,239 | 0.02 |
| No enrollment | 13,370 | 13,370 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 1,594,245 | 1,593,869 | 0.02 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 124,231 | 124,197 | 0.03 |
| Disabled | 359,437 | 359,336 | 0.03 |
| Child | 705,980 | 705,797 | 0.03 |
| Adult | 404,597 | 404,539 | 0.01 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 109,041 | 109,004 | 0.03 |
| Disabled | 351,987 | 351,886 | 0.03 |
| Child | 705,701 | 705,517 | 0.03 |
| Adult | 403,872 | 403,813 | 0.01 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 1,565,493 | 1,565,275 | 0.01 |
| PHP | 1,561,520 | 1,561,301 | 0.01 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 78,995 | 78,995 | 0.00 |
| Mental Hospital Services for the Aged | 34 | 34 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 2,466 | 2,466 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 1,335 | 1,335 | 0.00 |
| Nursing Facility Services | 33,681 | 33,681 | 0.00 |
| Physician Services | 965,674 | 965,629 | 0.00 |
| Dental Services | 279,994 | 279,986 | 0.00 |
| Other Practitioner Services | 213,481 | 213,475 | 0.00 |
| Outpatient Services | 315,911 | 315,906 | 0.00 |
| Clinic Services | 183,965 | 183,960 | 0.00 |
| Home Health Services | 20,164 | 20,162 | 0.01 |
| Lab/Xray Services | 823,427 | 823,391 | 0.00 |
| Drugs | 1,179,088 | 1,179,024 | 0.01 |
| Other Services | 15,902 | 15,902 | 0.00 |
| Sterilizations | 11,843 | 11,843 | 0.00 |
| Abortions | 7,681 | 7,681 | 0.00 |
| Transportation Services | 121,845 | 121,844 | 0.00 |
| Personal Care Services | 0 | 0 | 0.00 |
| Targeted Case Management | 0 | 0 | 0.00 |
| Rehabilitation Services | 5,917 | 5,916 | 0.02 |
| PT/OT/Hearing/Speech Services | 15,050 | 15,049 | 0.01 |
| Hospice Services | 3,542 | 3,542 | 0.00 |
| Nurse Midwife Services | 2,343 | 2,343 | 0.00 |
| Nurse Practitioner Services | 93,055 | 93,052 | 0.00 |
| Private Nursing Services | 0 | 0 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 204,848 | 204,842 | 0.00 |
| Residential Care Services | 3,841 | 3,841 | 0.00 |
| Psychiatric Services | 306,782 | 306,763 | 0.01 |
| Adult Day Care | 56 | 56 | 0.00 |
| Unknown Services | 168,420 | 168,418 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, Texas.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 4,164,091 | 4,156,996 | 0.17 |
| No enrollment | 60,821 | 60,821 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 4,103,270 | 4,096,175 | 0.17 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 418,277 | 418,088 | 0.05 |
| Disabled | 502,985 | 502,544 | 0.09 |
| Child | 2,625,173 | 2,619,279 | 0.22 |
| Adult | 556,835 | 556,264 | 0.10 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 406,260 | 406,053 | 0.05 |
| Disabled | 497,665 | 497,215 | 0.09 |
| Child | 2,625,077 | 2,619,181 | 0.22 |
| Adult | 556,447 | 555,872 | 0.10 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 1,365,977 | 1,364,216 | 0.13 |
| PHP | 439,099 | 438,505 | 0.14 |
| PCCM | 1,299,319 | 1,299,059 | 0.02 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 496,863 | 496,804 | 0.01 |
| Mental Hospital Services for the Aged | 556 | 556 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 6,606 | 6,604 | 0.03 |
| Intermediate Care Facility Services for the Mentally Retarded | 12,812 | 12,810 | 0.02 |
| Nursing Facility Services | 93,921 | 93,905 | 0.02 |
| Physician Services | 1,975,204 | 1,974,197 | 0.05 |
| Dental Services | 1,195,153 | 1,194,877 | 0.02 |
| Other Practitioner Services | 447,677 | 447,596 | 0.02 |
| Outpatient Services | 842,369 | 842,116 | 0.03 |
| Clinic Services | 305,353 | 305,266 | 0.03 |
| Home Health Services | 22,527 | 22,521 | 0.03 |
| Lab/Xray Services | 1,727,345 | 1,726,612 | 0.04 |
| Drugs | 2,760,015 | 2,758,679 | 0.05 |
| Other Services | 546,739 | 546,630 | 0.02 |
| Sterilizations | 21,480 | 21,477 | 0.01 |
| Abortions | 5,976 | 5,975 | 0.02 |
| Transportation Services | 169,999 | 169,974 | 0.01 |
| Personal Care Services | 1,497 | 1,496 | 0.07 |
| Targeted Case Management | 161,336 | 161,268 | 0.04 |
| Rehabilitation Services | 39,880 | 39,866 | 0.04 |
| PT/OT/Hearing/Speech Services | 8,875 | 8,875 | 0.00 |
| Hospice Services | 15,769 | 15,768 | 0.01 |
| Nurse Midwife Services | 9,855 | 9,852 | 0.03 |
| Nurse Practitioner Services | 108,142 | 108,115 | 0.02 |
| Private Nursing Services | 41 | 41 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 698,347 | 698,218 | 0.02 |
| Residential Care Services | 3,173 | 3,173 | 0.00 |
| Psychiatric Services | 251,733 | 251,664 | 0.03 |
| Adult Day Care | 22,673 | 22,670 | 0.01 |
| Unknown Services | 47,800 | 47,791 | 0.02 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, Utah.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 359,506 | 359,493 | 0.00 |
| No enrollment | 14,055 | 14,055 | 0.00 |
| Enrollees with S-CHIP only | 36,166 | 36,166 | 0.00 |
| Total Medicaid Enrollees | 345,451 | 345,438 | 0.00 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 14,304 | 14,303 | 0.01 |
| Disabled | 35,040 | 35,039 | 0.00 |
| Child | 172,151 | 172,145 | 0.00 |
| Adult | 87,790 | 87,785 | 0.01 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 13,159 | 13,158 | 0.01 |
| Disabled | 33,466 | 33,465 | 0.00 |
| Child | 172,108 | 172,102 | 0.00 |
| Adult | 87,550 | 87,545 | 0.01 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 1,076 | 1,076 | 0.00 |
| PHP | 225,512 | 225,506 | 0.00 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 30,878 | 30,878 | 0.00 |
| Mental Hospital Services for the Aged | 5 | 5 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 109 | 109 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 837 | 837 | 0.00 |
| Nursing Facility Services | 5,559 | 5,559 | 0.00 |
| Physician Services | 86,298 | 86,297 | 0.00 |
| Dental Services | 83,030 | 83,030 | 0.00 |
| Other Practitioner Services | 22,648 | 22,648 | 0.00 |
| Outpatient Services | 50,138 | 50,136 | 0.00 |
| Clinic Services | 123,984 | 123,981 | 0.00 |
| Home Health Services | 1,985 | 1,985 | 0.00 |
| Lab/Xray Services | 102,861 | 102,859 | 0.00 |
| Drugs | 201,158 | 201,154 | 0.00 |
| Other Services | 10,974 | 10,974 | 0.00 |
| Sterilizations | 1,050 | 1,050 | 0.00 |
| Abortions | 0 | 0 | 0.00 |
| Transportation Services | 12,990 | 12,990 | 0.00 |
| Personal Care Services | 483 | 483 | 0.00 |
| Targeted Case Management | 7,317 | 7,317 | 0.00 |
| Rehabilitation Services | 488 | 488 | 0.00 |
| PT/OT/Hearing/Speech Services | 6,089 | 6,089 | 0.00 |
| Hospice Services | 1,030 | 1,030 | 0.00 |
| Nurse Midwife Services | 0 | 0 | 0.00 |
| Nurse Practitioner Services | 13,462 | 13,462 | 0.00 |
| Private Nursing Services | 21 | 21 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 40,663 | 40,663 | 0.00 |
| Residential Care Services | 1,053 | 1,053 | 0.00 |
| Psychiatric Services | 16,372 | 16,371 | 0.01 |
| Adult Day Care | 60 | 60 | 0.00 |
| Unknown Services | 7,930 | 7,930 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, Vermont.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 165,860 | 165,841 | 0.01 |
| No enrollment | 3,098 | 3,098 | 0.00 |
| Enrollees with S-CHIP only | 2,111 | 2,111 | 0.00 |
| Total Medicaid Enrollees | 162,762 | 162,743 | 0.01 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 18,918 | 18,915 | 0.02 |
| Disabled | 21,434 | 21,433 | 0.00 |
| Child | 67,524 | 67,510 | 0.02 |
| Adult | 52,775 | 52,774 | 0.00 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 17,943 | 17,940 | 0.02 |
| Disabled | 20,659 | 20,658 | 0.00 |
| Child | 67,524 | 67,510 | 0.02 |
| Adult | 52,751 | 52,750 | 0.00 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 0 | 0 | 0.00 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 10,677 | 10,677 | 0.00 |
| Mental Hospital Services for the Aged | 86 | 86 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 0 | 0 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 7 | 7 | 0.00 |
| Nursing Facility Services | 3,539 | 3,539 | 0.00 |
| Physician Services | 107,553 | 107,553 | 0.00 |
| Dental Services | 46,370 | 46,370 | 0.00 |
| Other Practitioner Services | 14,513 | 14,513 | 0.00 |
| Outpatient Services | 56,030 | 56,030 | 0.00 |
| Clinic Services | 26,605 | 26,605 | 0.00 |
| Home Health Services | 3,758 | 3,758 | 0.00 |
| Lab/Xray Services | 79,605 | 79,605 | 0.00 |
| Drugs | 116,408 | 116,408 | 0.00 |
| Other Services | 24,336 | 24,336 | 0.00 |
| Sterilizations | 706 | 706 | 0.00 |
| Abortions | 142 | 142 | 0.00 |
| Transportation Services | 15,435 | 15,435 | 0.00 |
| Personal Care Services | 1,938 | 1,938 | 0.00 |
| Targeted Case Management | 6,385 | 6,385 | 0.00 |
| Rehabilitation Services | 0 | 0 | 0.00 |
| PT/OT/Hearing/Speech Services | 3,708 | 3,708 | 0.00 |
| Hospice Services | 77 | 77 | 0.00 |
| Nurse Midwife Services | 0 | 0 | 0.00 |
| Nurse Practitioner Services | 2,358 | 2,358 | 0.00 |
| Private Nursing Services | 0 | 0 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 19,295 | 19,295 | 0.00 |
| Residential Care Services | 62 | 62 | 0.00 |
| Psychiatric Services | 34,562 | 34,562 | 0.00 |
| Adult Day Care | 0 | 0 | 0.00 |
| Unknown Services | 9,271 | 9,271 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, Virginia.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 928,642 | 927,841 | 0.09 |
| No enrollment | 957 | 957 | 0.00 |
| Enrollees with S-CHIP only | 43,186 | 43,018 | 0.39 |
| Total Medicaid Enrollees | 927,685 | 926,884 | 0.09 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 99,217 | 99,211 | 0.01 |
| Disabled | 155,084 | 155,023 | 0.04 |
| Child | 495,825 | 495,293 | 0.11 |
| Adult | 134,373 | 134,339 | 0.03 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 95,918 | 95,911 | 0.01 |
| Disabled | 151,960 | 151,898 | 0.04 |
| Child | 495,796 | 495,264 | 0.11 |
| Adult | 121,904 | 121,869 | 0.03 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 472,719 | 472,445 | 0.06 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 113,987 | 113,948 | 0.03 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 152,545 | 152,540 | 0.00 |
| Mental Hospital Services for the Aged | 831 | 831 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 714 | 714 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 1,992 | 1,992 | 0.00 |
| Nursing Facility Services | 28,080 | 28,079 | 0.00 |
| Physician Services | 601,519 | 601,369 | 0.02 |
| Dental Services | 139,783 | 139,773 | 0.01 |
| Other Practitioner Services | 44,131 | 44,130 | 0.00 |
| Outpatient Services | 31,134 | 31,132 | 0.01 |
| Clinic Services | 91,941 | 91,930 | 0.01 |
| Home Health Services | 6,276 | 6,276 | 0.00 |
| Lab/Xray Services | 429,729 | 429,625 | 0.02 |
| Drugs | 516,958 | 516,823 | 0.03 |
| Other Services | 58,316 | 58,312 | 0.01 |
| Sterilizations | 4,358 | 4,358 | 0.00 |
| Abortions | 103 | 103 | 0.00 |
| Transportation Services | 88,050 | 88,041 | 0.01 |
| Personal Care Services | 12,370 | 12,370 | 0.00 |
| Targeted Case Management | 4,474 | 4,474 | 0.00 |
| Rehabilitation Services | 3,290 | 3,290 | 0.00 |
| PT/OT/Hearing/Speech Services | 4,460 | 4,458 | 0.04 |
| Hospice Services | 1,762 | 1,762 | 0.00 |
| Nurse Midwife Services | 1,807 | 1,807 | 0.00 |
| Nurse Practitioner Services | 16,344 | 16,343 | 0.01 |
| Private Nursing Services | 464 | 463 | 0.22 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 81,860 | 81,854 | 0.01 |
| Residential Care Services | 0 | 0 | 0.00 |
| Psychiatric Services | 95,748 | 95,714 | 0.04 |
| Adult Day Care | 620 | 620 | 0.00 |
| Unknown Services | 139,927 | 139,904 | 0.02 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, Washington.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 1,285,090 | 1,284,959 | 0.01 |
| No enrollment | 85,518 | 85,518 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 1,199,572 | 1,199,441 | 0.01 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 86,812 | 86,804 | 0.01 |
| Disabled | 167,232 | 167,193 | 0.02 |
| Child | 606,371 | 606,321 | 0.01 |
| Adult | 339,157 | 339,123 | 0.01 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 82,112 | 82,104 | 0.01 |
| Disabled | 160,192 | 160,153 | 0.02 |
| Child | 605,063 | 605,007 | 0.01 |
| Adult | 323,181 | 323,134 | 0.01 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 677,936 | 677,900 | 0.01 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 5,386 | 5,386 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 90,863 | 90,862 | 0.00 |
| Mental Hospital Services for the Aged | 1,009 | 1,009 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 0 | 0 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 59 | 59 | 0.00 |
| Nursing Facility Services | 24,900 | 24,900 | 0.00 |
| Physician Services | 385,904 | 385,877 | 0.01 |
| Dental Services | 384,271 | 384,268 | 0.00 |
| Other Practitioner Services | 125,403 | 125,402 | 0.00 |
| Outpatient Services | 210,388 | 210,379 | 0.00 |
| Clinic Services | 125,115 | 125,111 | 0.00 |
| Home Health Services | 21 | 21 | 0.00 |
| Lab/Xray Services | 525,753 | 525,726 | 0.01 |
| Drugs | 483,474 | 483,453 | 0.00 |
| Other Services | 168,064 | 168,056 | 0.00 |
| Sterilizations | 1,235 | 1,235 | 0.00 |
| Abortions | 133 | 133 | 0.00 |
| Transportation Services | 30,621 | 30,620 | 0.00 |
| Personal Care Services | 42,071 | 42,070 | 0.00 |
| Targeted Case Management | 2,542 | 2,542 | 0.00 |
| Rehabilitation Services | 4,820 | 4,820 | 0.00 |
| PT/OT/Hearing/Speech Services | 16,113 | 16,111 | 0.01 |
| Hospice Services | 2,279 | 2,279 | 0.00 |
| Nurse Midwife Services | 2,136 | 2,136 | 0.00 |
| Nurse Practitioner Services | 11,323 | 11,323 | 0.00 |
| Private Nursing Services | 533 | 533 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 282,802 | 282,793 | 0.00 |
| Residential Care Services | 18,516 | 18,516 | 0.00 |
| Psychiatric Services | 104,215 | 104,215 | 0.00 |
| Adult Day Care | 2,736 | 2,736 | 0.00 |
| Unknown Services | 336,595 | 336,584 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, West Virginia.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 393,616 | 393,504 | 0.03 |
| No enrollment | 10,505 | 10,505 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 383,111 | 382,999 | 0.03 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 30,896 | 30,884 | 0.04 |
| Disabled | 104,969 | 104,929 | 0.04 |
| Child | 188,290 | 188,237 | 0.03 |
| Adult | 58,956 | 58,949 | 0.01 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 30,359 | 30,347 | 0.04 |
| Disabled | 103,796 | 103,756 | 0.04 |
| Child | 188,290 | 188,237 | 0.03 |
| Adult | 58,901 | 58,894 | 0.01 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 171,623 | 171,623 | 0.00 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 51,354 | 51,354 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 28,808 | 28,808 | 0.00 |
| Mental Hospital Services for the Aged | 217 | 217 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 1,902 | 1,902 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 545 | 545 | 0.00 |
| Nursing Facility Services | 10,889 | 10,889 | 0.00 |
| Physician Services | 190,938 | 190,936 | 0.00 |
| Dental Services | 97,914 | 97,913 | 0.00 |
| Other Practitioner Services | 33,376 | 33,376 | 0.00 |
| Outpatient Services | 126,125 | 126,125 | 0.00 |
| Clinic Services | 81,128 | 81,128 | 0.00 |
| Home Health Services | 2,134 | 2,134 | 0.00 |
| Lab/Xray Services | 154,120 | 154,120 | 0.00 |
| Drugs | 288,779 | 288,771 | 0.00 |
| Other Services | 59,182 | 59,180 | 0.00 |
| Sterilizations | 0 | 0 | 0.00 |
| Abortions | 2 | 2 | 0.00 |
| Transportation Services | 38,605 | 38,605 | 0.00 |
| Personal Care Services | 4,284 | 4,284 | 0.00 |
| Targeted Case Management | 7,468 | 7,468 | 0.00 |
| Rehabilitation Services | 23,483 | 23,481 | 0.01 |
| PT/OT/Hearing/Speech Services | 15,918 | 15,917 | 0.01 |
| Hospice Services | 644 | 644 | 0.00 |
| Nurse Midwife Services | 2,879 | 2,879 | 0.00 |
| Nurse Practitioner Services | 31,907 | 31,907 | 0.00 |
| Private Nursing Services | 644 | 644 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 55,895 | 55,895 | 0.00 |
| Residential Care Services | 3,468 | 3,468 | 0.00 |
| Psychiatric Services | 83,192 | 83,189 | 0.00 |
| Adult Day Care | 3 | 3 | 0.00 |
| Unknown Services | 8,106 | 8,106 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, Wisconsin.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 1,034,583 | 1,028,142 | 0.62 |
| No enrollment | 12,380 | 12,380 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 1,022,203 | 1,015,762 | 0.63 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 145,573 | 145,565 | 0.01 |
| Disabled | 144,286 | 144,195 | 0.06 |
| Child | 431,040 | 424,880 | 1.43 |
| Adult | 301,304 | 301,122 | 0.06 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 139,868 | 139,860 | 0.01 |
| Disabled | 141,759 | 141,668 | 0.06 |
| Child | 429,442 | 423,280 | 1.43 |
| Adult | 284,733 | 284,543 | 0.07 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 501,010 | 497,562 | 0.69 |
| PHP | 14,846 | 14,844 | 0.01 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 102,977 | 102,813 | 0.16 |
| Mental Hospital Services for the Aged | 162 | 162 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 2,772 | 2,771 | 0.04 |
| Intermediate Care Facility Services for the Mentally Retarded | 2,144 | 2,144 | 0.00 |
| Nursing Facility Services | 34,232 | 34,232 | 0.00 |
| Physician Services | 443,842 | 440,618 | 0.73 |
| Dental Services | 196,900 | 196,845 | 0.03 |
| Other Practitioner Services | 140,938 | 140,790 | 0.11 |
| Outpatient Services | 368,676 | 367,446 | 0.33 |
| Clinic Services | 395,981 | 394,921 | 0.27 |
| Home Health Services | 7,729 | 7,713 | 0.21 |
| Lab/Xray Services | 503,184 | 501,859 | 0.26 |
| Drugs | 684,309 | 681,777 | 0.37 |
| Other Services | 155,173 | 155,087 | 0.06 |
| Sterilizations | 3,696 | 3,696 | 0.00 |
| Abortions | 0 | 0 | 0.00 |
| Transportation Services | 73,701 | 73,663 | 0.05 |
| Personal Care Services | 12,920 | 12,919 | 0.01 |
| Targeted Case Management | 35,090 | 34,976 | 0.32 |
| Rehabilitation Services | 8,361 | 8,327 | 0.41 |
| PT/OT/Hearing/Speech Services | 14,844 | 14,808 | 0.24 |
| Hospice Services | 3,141 | 3,141 | 0.00 |
| Nurse Midwife Services | 415 | 415 | 0.00 |
| Nurse Practitioner Services | 34,676 | 34,597 | 0.23 |
| Private Nursing Services | 349 | 347 | 0.57 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 236,933 | 236,684 | 0.11 |
| Residential Care Services | 10,881 | 10,880 | 0.01 |
| Psychiatric Services | 109,035 | 108,997 | 0.03 |
| Adult Day Care | 2,953 | 2,953 | 0.00 |
| Unknown Services | 158,924 | 156,491 | 1.53 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2005, Wyoming.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 81,599 | 81,529 | 0.09 |
| No enrollment | 400 | 400 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 81,199 | 81,129 | 0.09 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 5,424 | 5,422 | 0.04 |
| Disabled | 9,469 | 9,467 | 0.02 |
| Child | 52,764 | 52,702 | 0.12 |
| Adult | 13,542 | 13,538 | 0.03 |
| Total Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 5,287 | 5,285 | 0.04 |
| Disabled | 9,377 | 9,375 | 0.02 |
| Child | 52,763 | 52,701 | 0.12 |
| Adult | 13,517 | 13,513 | 0.03 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 0 | 0 | 0.00 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 11,300 | 11,298 | 0.02 |
| Mental Hospital Services for the Aged | 18 | 18 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 461 | 461 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 89 | 89 | 0.00 |
| Nursing Facility Services | 2,436 | 2,436 | 0.00 |
| Physician Services | 52,857 | 52,829 | 0.05 |
| Dental Services | 18,551 | 18,548 | 0.02 |
| Other Practitioner Services | 11,787 | 11,787 | 0.00 |
| Outpatient Services | 29,699 | 29,690 | 0.03 |
| Clinic Services | 15,716 | 15,712 | 0.03 |
| Home Health Services | 553 | 553 | 0.00 |
| Lab/Xray Services | 38,866 | 38,854 | 0.03 |
| Drugs | 50,008 | 49,985 | 0.05 |
| Other Services | 19,280 | 19,273 | 0.04 |
| Sterilizations | 463 | 463 | 0.00 |
| Abortions | 2 | 2 | 0.00 |
| Transportation Services | 3,011 | 3,011 | 0.00 |
| Personal Care Services | 0 | 0 | 0.00 |
| Targeted Case Management | 2,258 | 2,258 | 0.00 |
| Rehabilitation Services | 3,408 | 3,408 | 0.00 |
| PT/OT/Hearing/Speech Services | 620 | 620 | 0.00 |
| Hospice Services | 78 | 78 | 0.00 |
| Nurse Midwife Services | 0 | 0 | 0.00 |
| Nurse Practitioner Services | 8,671 | 8,668 | 0.03 |
| Private Nursing Services | 0 | 0 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 21,348 | 21,345 | 0.01 |
| Residential Care Services | 1,022 | 1,022 | 0.00 |
| Psychiatric Services | 9,895 | 9,895 | 0.00 |
| Adult Day Care | 52 | 52 | 0.00 |
| Unknown Services | 9,890 | 9,888 | 0.02 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, Alabama.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 976,361 | 975,571 | 0.08 |
| No enrollment | 8,584 | 8,584 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 967,777 | 966,987 | 0.08 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 104,417 | 104,378 | 0.04 |
| Disabled | 211,356 | 211,182 | 0.08 |
| Child | 439,256 | 438,798 | 0.10 |
| Adult | 212,748 | 212,629 | 0.06 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 101,845 | 101,797 | 0.05 |
| Disabled | 208,009 | 207,833 | 0.08 |
| Child | 438,997 | 438,538 | 0.10 |
| Adult | 177,833 | 177,708 | 0.07 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 0 | 0 | 0.00 |
| PHP | 596,874 | 596,363 | 0.09 |
| PCCM | 443,785 | 443,541 | 0.05 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 115,408 | 115,391 | 0.01 |
| Mental Hospital Services for the Aged | 218 | 218 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 0 | 0 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 254 | 254 | 0.00 |
| Nursing Facility Services | 26,100 | 26,085 | 0.06 |
| Physician Services | 561,111 | 560,864 | 0.04 |
| Dental Services | 173,815 | 173,788 | 0.02 |
| Other Practitioner Services | 110,025 | 110,018 | 0.01 |
| Outpatient Services | 233,014 | 232,962 | 0.02 |
| Clinic Services | 221,410 | 221,348 | 0.03 |
| Home Health Services | 51,213 | 51,203 | 0.02 |
| Lab/Xray Services | 490,566 | 490,394 | 0.04 |
| Drugs | 531,227 | 530,982 | 0.05 |
| Other Services | 36,283 | 36,280 | 0.01 |
| Sterilizations | 2,896 | 2,896 | 0.00 |
| Abortions | 1,421 | 1,421 | 0.00 |
| Transportation Services | 46,790 | 46,782 | 0.02 |
| Personal Care Services | 0 | 0 | 0.00 |
| Targeted Case Management | 30,536 | 30,499 | 0.12 |
| Rehabilitation Services | 4,543 | 4,540 | 0.07 |
| PT/OT/Hearing/Speech Services | 4,925 | 4,922 | 0.06 |
| Hospice Services | 3,850 | 3,850 | 0.00 |
| Nurse Midwife Services | 3,930 | 3,930 | 0.00 |
| Nurse Practitioner Services | 0 | 0 | 0.00 |
| Private Nursing Services | 46 | 46 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 146,099 | 146,085 | 0.01 |
| Residential Care Services | 2,964 | 2,964 | 0.00 |
| Psychiatric Services | 95,464 | 95,417 | 0.05 |
| Adult Day Care | 248 | 248 | 0.00 |
| Unknown Services | 0 | 0 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, Alaska.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 131,586 | 131,581 | 0.00 |
| No enrollment | 846 | 846 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 130,740 | 130,735 | 0.00 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 7,373 | 7,373 | 0.00 |
| Disabled | 15,497 | 15,497 | 0.00 |
| Child | 79,601 | 79,596 | 0.01 |
| Adult | 28,269 | 28,269 | 0.00 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 7,337 | 7,337 | 0.00 |
| Disabled | 15,454 | 15,454 | 0.00 |
| Child | 79,601 | 79,596 | 0.01 |
| Adult | 28,269 | 28,269 | 0.00 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 0 | 0 | 0.00 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 15,514 | 15,514 | 0.00 |
| Mental Hospital Services for the Aged | 2 | 2 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 1,435 | 1,435 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 0 | 0 | 0.00 |
| Nursing Facility Services | 1,263 | 1,263 | 0.00 |
| Physician Services | 82,240 | 82,239 | 0.00 |
| Dental Services | 40,811 | 40,808 | 0.01 |
| Other Practitioner Services | 19,250 | 19,249 | 0.01 |
| Outpatient Services | 42,658 | 42,658 | 0.00 |
| Clinic Services | 35,530 | 35,530 | 0.00 |
| Home Health Services | 351 | 351 | 0.00 |
| Lab/Xray Services | 61,206 | 61,206 | 0.00 |
| Drugs | 67,854 | 67,853 | 0.00 |
| Other Services | 7,611 | 7,611 | 0.00 |
| Sterilizations | 386 | 386 | 0.00 |
| Abortions | 1 | 1 | 0.00 |
| Transportation Services | 22,958 | 22,958 | 0.00 |
| Personal Care Services | 4,600 | 4,600 | 0.00 |
| Targeted Case Management | 5,150 | 5,150 | 0.00 |
| Rehabilitation Services | 162 | 162 | 0.00 |
| PT/OT/Hearing/Speech Services | 5,973 | 5,973 | 0.00 |
| Hospice Services | 29 | 29 | 0.00 |
| Nurse Midwife Services | 2,208 | 2,208 | 0.00 |
| Nurse Practitioner Services | 12,123 | 12,123 | 0.00 |
| Private Nursing Services | 74 | 74 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 29,979 | 29,979 | 0.00 |
| Residential Care Services | 851 | 851 | 0.00 |
| Psychiatric Services | 17,237 | 17,237 | 0.00 |
| Adult Day Care | 443 | 443 | 0.00 |
| Unknown Services | 0 | 0 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, Arizona.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 1,533,874 | 1,533,658 | 0.01 |
| No enrollment | 22,020 | 22,020 | 0.00 |
| Enrollees with S-CHIP only | 47,232 | 47,185 | 0.10 |
| Total Medicaid Enrollees | 1,511,854 | 1,511,638 | 0.01 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 75,084 | 75,080 | 0.01 |
| Disabled | 138,895 | 138,880 | 0.01 |
| Child | 672,404 | 672,306 | 0.01 |
| Adult | 578,239 | 578,187 | 0.01 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 72,782 | 72,778 | 0.01 |
| Disabled | 137,468 | 137,450 | 0.01 |
| Child | 671,642 | 671,544 | 0.01 |
| Adult | 568,239 | 568,182 | 0.01 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 899,761 | 899,649 | 0.01 |
| PHP | 936,251 | 936,160 | 0.01 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 191,536 | 191,530 | 0.00 |
| Mental Hospital Services for the Aged | 0 | 0 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 740 | 740 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 0 | 0 | 0.00 |
| Nursing Facility Services | 15,244 | 15,244 | 0.00 |
| Physician Services | 843,459 | 843,427 | 0.00 |
| Dental Services | 472 | 472 | 0.00 |
| Other Practitioner Services | 157,241 | 157,241 | 0.00 |
| Outpatient Services | 501,354 | 501,348 | 0.00 |
| Clinic Services | 128,691 | 128,684 | 0.01 |
| Home Health Services | 9,798 | 9,798 | 0.00 |
| Lab/Xray Services | 668,591 | 668,575 | 0.00 |
| Drugs | 729,327 | 729,299 | 0.00 |
| Other Services | 103,829 | 103,827 | 0.00 |
| Sterilizations | 3,801 | 3,801 | 0.00 |
| Abortions | 4,182 | 4,182 | 0.00 |
| Transportation Services | 154,541 | 154,540 | 0.00 |
| Personal Care Services | 8,656 | 8,656 | 0.00 |
| Targeted Case Management | 0 | 0 | 0.00 |
| Rehabilitation Services | 22,919 | 22,918 | 0.00 |
| PT/OT/Hearing/Speech Services | 9,430 | 9,430 | 0.00 |
| Hospice Services | 0 | 0 | 0.00 |
| Nurse Midwife Services | 7,084 | 7,084 | 0.00 |
| Nurse Practitioner Services | 112,270 | 112,270 | 0.00 |
| Private Nursing Services | 6 | 6 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 253,312 | 253,308 | 0.00 |
| Residential Care Services | 5,656 | 5,656 | 0.00 |
| Psychiatric Services | 193,340 | 193,333 | 0.00 |
| Adult Day Care | 764 | 764 | 0.00 |
| Unknown Services | 1 | 1 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, Arkansas.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 771,587 | 770,869 | 0.09 |
| No enrollment | 12,681 | 12,681 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 758,906 | 758,188 | 0.09 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 64,391 | 64,267 | 0.19 |
| Disabled | 116,927 | 116,613 | 0.27 |
| Child | 426,732 | 426,582 | 0.04 |
| Adult | 150,856 | 150,726 | 0.09 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 59,227 | 59,041 | 0.31 |
| Disabled | 115,801 | 115,304 | 0.43 |
| Child | 425,338 | 425,185 | 0.04 |
| Adult | 137,756 | 137,605 | 0.11 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 0 | 0 | 0.00 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 481,640 | 481,511 | 0.03 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 88,379 | 88,365 | 0.02 |
| Mental Hospital Services for the Aged | 0 | 0 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 6,085 | 6,083 | 0.03 |
| Intermediate Care Facility Services for the Mentally Retarded | 1,717 | 1,717 | 0.00 |
| Nursing Facility Services | 18,434 | 18,424 | 0.05 |
| Physician Services | 494,326 | 494,076 | 0.05 |
| Dental Services | 127,844 | 127,833 | 0.01 |
| Other Practitioner Services | 116,043 | 116,029 | 0.01 |
| Outpatient Services | 248,599 | 248,523 | 0.03 |
| Clinic Services | 228,581 | 228,520 | 0.03 |
| Home Health Services | 6,491 | 6,490 | 0.02 |
| Lab/Xray Services | 375,854 | 375,699 | 0.04 |
| Drugs | 457,535 | 457,408 | 0.03 |
| Other Services | 62,952 | 62,877 | 0.12 |
| Sterilizations | 4,034 | 4,034 | 0.00 |
| Abortions | 1 | 1 | 0.00 |
| Transportation Services | 551,352 | 551,061 | 0.05 |
| Personal Care Services | 14,816 | 14,814 | 0.01 |
| Targeted Case Management | 16,670 | 16,663 | 0.04 |
| Rehabilitation Services | 59 | 59 | 0.00 |
| PT/OT/Hearing/Speech Services | 19,775 | 19,772 | 0.02 |
| Hospice Services | 1,893 | 1,893 | 0.00 |
| Nurse Midwife Services | 896 | 896 | 0.00 |
| Nurse Practitioner Services | 5,433 | 5,429 | 0.07 |
| Private Nursing Services | 129 | 129 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 150,296 | 150,270 | 0.02 |
| Residential Care Services | 0 | 0 | 0.00 |
| Psychiatric Services | 94,991 | 94,902 | 0.09 |
| Adult Day Care | 506 | 505 | 0.20 |
| Unknown Services | 2,883 | 2,881 | 0.07 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, California.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 10,946,644 | 10,946,521 | 0.00 |
| No enrollment | 334,725 | 334,725 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 10,611,919 | 10,611,796 | 0.00 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 764,574 | 764,483 | 0.01 |
| Disabled | 1,125,246 | 1,125,220 | 0.00 |
| Child | 4,280,264 | 4,280,264 | 0.00 |
| Adult | 4,441,835 | 4,441,829 | 0.00 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 752,973 | 752,880 | 0.01 |
| Disabled | 1,121,140 | 1,121,114 | 0.00 |
| Child | 4,256,145 | 4,256,145 | 0.00 |
| Adult | 4,414,245 | 4,414,239 | 0.00 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 4,142,519 | 4,142,515 | 0.00 |
| PHP | 6,551,301 | 6,551,229 | 0.00 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 586,236 | 586,236 | 0.00 |
| Mental Hospital Services for the Aged | 7 | 7 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 631 | 631 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 9,856 | 9,856 | 0.00 |
| Nursing Facility Services | 127,512 | 127,501 | 0.01 |
| Physician Services | 4,507,908 | 4,507,897 | 0.00 |
| Dental Services | 2,063,131 | 2,063,130 | 0.00 |
| Other Practitioner Services | 676,826 | 676,824 | 0.00 |
| Outpatient Services | 2,021,747 | 2,021,744 | 0.00 |
| Clinic Services | 2,661,687 | 2,661,685 | 0.00 |
| Home Health Services | 38,604 | 38,604 | 0.00 |
| Lab/Xray Services | 4,538,162 | 4,538,159 | 0.00 |
| Drugs | 5,188,379 | 5,188,363 | 0.00 |
| Other Services | 1,280,646 | 1,280,642 | 0.00 |
| Sterilizations | 22,613 | 22,613 | 0.00 |
| Abortions | 0 | 0 | 0.00 |
| Transportation Services | 291,028 | 291,024 | 0.00 |
| Personal Care Services | 392,778 | 392,770 | 0.00 |
| Targeted Case Management | 202,281 | 202,280 | 0.00 |
| Rehabilitation Services | 115,693 | 115,693 | 0.00 |
| PT/OT/Hearing/Speech Services | 50,672 | 50,672 | 0.00 |
| Hospice Services | 14,307 | 14,307 | 0.00 |
| Nurse Midwife Services | 11,915 | 11,915 | 0.00 |
| Nurse Practitioner Services | 56,069 | 56,069 | 0.00 |
| Private Nursing Services | 1,811 | 1,811 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 2,956,977 | 2,956,969 | 0.00 |
| Residential Care Services | 67,362 | 67,362 | 0.00 |
| Psychiatric Services | 918,062 | 918,062 | 0.00 |
| Adult Day Care | 80,290 | 80,287 | 0.00 |
| Unknown Services | 14,478 | 14,478 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, Colorado.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 642,575 | 642,291 | 0.04 |
| No enrollment | 15,807 | 15,807 | 0.00 |
| Enrollees with S-CHIP only | 55,064 | 55,048 | 0.03 |
| Total Medicaid Enrollees | 626,768 | 626,484 | 0.05 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 52,174 | 52,169 | 0.01 |
| Disabled | 76,797 | 76,785 | 0.02 |
| Child | 336,889 | 336,652 | 0.07 |
| Adult | 105,844 | 105,830 | 0.01 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 50,970 | 50,965 | 0.01 |
| Disabled | 75,752 | 75,739 | 0.02 |
| Child | 336,793 | 336,556 | 0.07 |
| Adult | 105,454 | 105,437 | 0.02 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 176,427 | 176,416 | 0.01 |
| PHP | 537,443 | 537,182 | 0.05 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 46,032 | 46,030 | 0.00 |
| Mental Hospital Services for the Aged | 11 | 11 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 136 | 136 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 137 | 137 | 0.00 |
| Nursing Facility Services | 14,831 | 14,831 | 0.00 |
| Physician Services | 55,026 | 55,021 | 0.01 |
| Dental Services | 122,192 | 122,171 | 0.02 |
| Other Practitioner Services | 14,757 | 14,757 | 0.00 |
| Outpatient Services | 159,699 | 159,682 | 0.01 |
| Clinic Services | 364,481 | 364,411 | 0.02 |
| Home Health Services | 10,220 | 10,214 | 0.06 |
| Lab/Xray Services | 228,050 | 228,024 | 0.01 |
| Drugs | 254,945 | 254,878 | 0.03 |
| Other Services | 29,309 | 29,305 | 0.01 |
| Sterilizations | 1,948 | 1,948 | 0.00 |
| Abortions | 13 | 13 | 0.00 |
| Transportation Services | 17,618 | 17,618 | 0.00 |
| Personal Care Services | 0 | 0 | 0.00 |
| Targeted Case Management | 0 | 0 | 0.00 |
| Rehabilitation Services | 0 | 0 | 0.00 |
| PT/OT/Hearing/Speech Services | 1,896 | 1,891 | 0.26 |
| Hospice Services | 2,701 | 2,701 | 0.00 |
| Nurse Midwife Services | 588 | 588 | 0.00 |
| Nurse Practitioner Services | 623 | 623 | 0.00 |
| Private Nursing Services | 184 | 183 | 0.54 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 118,787 | 118,775 | 0.01 |
| Residential Care Services | 4,561 | 4,559 | 0.04 |
| Psychiatric Services | 34,897 | 34,894 | 0.01 |
| Adult Day Care | 1,344 | 1,344 | 0.00 |
| Unknown Services | 969 | 969 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, Connecticut.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 534,495 | 533,902 | 0.11 |
| No enrollment | 927 | 927 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 533,568 | 532,975 | 0.11 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 64,392 | 64,383 | 0.01 |
| Disabled | 65,983 | 65,964 | 0.03 |
| Child | 284,332 | 283,798 | 0.19 |
| Adult | 118,861 | 118,830 | 0.03 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 61,719 | 61,705 | 0.02 |
| Disabled | 62,264 | 62,245 | 0.03 |
| Child | 284,331 | 283,797 | 0.19 |
| Adult | 118,749 | 118,718 | 0.03 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 378,665 | 378,161 | 0.13 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 32,091 | 32,088 | 0.01 |
| Mental Hospital Services for the Aged | 1,101 | 1,101 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 866 | 866 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 1,257 | 1,256 | 0.08 |
| Nursing Facility Services | 29,578 | 29,578 | 0.00 |
| Physician Services | 99,997 | 99,992 | 0.01 |
| Dental Services | 37,876 | 37,874 | 0.01 |
| Other Practitioner Services | 36,500 | 36,498 | 0.01 |
| Outpatient Services | 88,340 | 88,331 | 0.01 |
| Clinic Services | 42,746 | 42,739 | 0.02 |
| Home Health Services | 22,030 | 22,029 | 0.00 |
| Lab/Xray Services | 98,632 | 98,624 | 0.01 |
| Drugs | 116,428 | 116,422 | 0.01 |
| Other Services | 30,306 | 30,295 | 0.04 |
| Sterilizations | 278 | 278 | 0.00 |
| Abortions | 0 | 0 | 0.00 |
| Transportation Services | 34,074 | 34,073 | 0.00 |
| Personal Care Services | 13,257 | 13,257 | 0.00 |
| Targeted Case Management | 15,004 | 15,002 | 0.01 |
| Rehabilitation Services | 6,665 | 6,664 | 0.02 |
| PT/OT/Hearing/Speech Services | 3,043 | 3,043 | 0.00 |
| Hospice Services | 35 | 35 | 0.00 |
| Nurse Midwife Services | 1,360 | 1,360 | 0.00 |
| Nurse Practitioner Services | 13,634 | 13,634 | 0.00 |
| Private Nursing Services | 0 | 0 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 74,584 | 74,581 | 0.00 |
| Residential Care Services | 6,593 | 6,592 | 0.02 |
| Psychiatric Services | 59,504 | 59,455 | 0.08 |
| Adult Day Care | 1,875 | 1,875 | 0.00 |
| Unknown Services | 3,332 | 3,332 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, Delaware.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 185,602 | 185,588 | 0.01 |
| No enrollment | 1,060 | 1,060 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 184,542 | 184,528 | 0.01 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 13,226 | 13,226 | 0.00 |
| Disabled | 21,627 | 21,626 | 0.00 |
| Child | 79,128 | 79,119 | 0.01 |
| Adult | 70,561 | 70,557 | 0.01 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 12,724 | 12,724 | 0.00 |
| Disabled | 20,858 | 20,857 | 0.00 |
| Child | 78,893 | 78,884 | 0.01 |
| Adult | 64,792 | 64,788 | 0.01 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 131,056 | 131,049 | 0.01 |
| PHP | 158,250 | 158,240 | 0.01 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 10,158 | 10,158 | 0.00 |
| Mental Hospital Services for the Aged | 184 | 184 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 36 | 36 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 150 | 150 | 0.00 |
| Nursing Facility Services | 3,647 | 3,647 | 0.00 |
| Physician Services | 124,673 | 124,669 | 0.00 |
| Dental Services | 25,954 | 25,952 | 0.01 |
| Other Practitioner Services | 48,464 | 48,464 | 0.00 |
| Outpatient Services | 18,527 | 18,527 | 0.00 |
| Clinic Services | 9,009 | 9,009 | 0.00 |
| Home Health Services | 1,321 | 1,321 | 0.00 |
| Lab/Xray Services | 92,320 | 92,319 | 0.00 |
| Drugs | 112,897 | 112,894 | 0.00 |
| Other Services | 24,454 | 24,454 | 0.00 |
| Sterilizations | 733 | 733 | 0.00 |
| Abortions | 61 | 61 | 0.00 |
| Transportation Services | 15,745 | 15,745 | 0.00 |
| Personal Care Services | 0 | 0 | 0.00 |
| Targeted Case Management | 0 | 0 | 0.00 |
| Rehabilitation Services | 580 | 580 | 0.00 |
| PT/OT/Hearing/Speech Services | 7,496 | 7,496 | 0.00 |
| Hospice Services | 495 | 495 | 0.00 |
| Nurse Midwife Services | 55 | 55 | 0.00 |
| Nurse Practitioner Services | 66 | 66 | 0.00 |
| Private Nursing Services | 2,789 | 2,789 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 30,782 | 30,782 | 0.00 |
| Residential Care Services | 357 | 357 | 0.00 |
| Psychiatric Services | 26,026 | 26,026 | 0.00 |
| Adult Day Care | 220 | 220 | 0.00 |
| Unknown Services | 53,771 | 53,770 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, District of Columbia.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 169,814 | 169,722 | 0.05 |
| No enrollment | 2,640 | 2,640 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 167,174 | 167,082 | 0.06 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 10,111 | 10,105 | 0.06 |
| Disabled | 35,596 | 35,567 | 0.08 |
| Child | 80,275 | 80,233 | 0.05 |
| Adult | 41,192 | 41,177 | 0.04 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 9,726 | 9,719 | 0.07 |
| Disabled | 35,045 | 35,016 | 0.08 |
| Child | 80,274 | 80,232 | 0.05 |
| Adult | 41,164 | 41,149 | 0.04 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 112,773 | 112,746 | 0.02 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 15,150 | 15,150 | 0.00 |
| Mental Hospital Services for the Aged | 151 | 151 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 212 | 212 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 706 | 706 | 0.00 |
| Nursing Facility Services | 3,835 | 3,835 | 0.00 |
| Physician Services | 22,703 | 22,702 | 0.00 |
| Dental Services | 2,587 | 2,587 | 0.00 |
| Other Practitioner Services | 7,530 | 7,529 | 0.01 |
| Outpatient Services | 19,179 | 19,176 | 0.02 |
| Clinic Services | 17,970 | 17,967 | 0.02 |
| Home Health Services | 3,390 | 3,390 | 0.00 |
| Lab/Xray Services | 31,871 | 31,864 | 0.02 |
| Drugs | 31,586 | 31,582 | 0.01 |
| Other Services | 20,851 | 20,844 | 0.03 |
| Sterilizations | 50 | 50 | 0.00 |
| Abortions | 1 | 1 | 0.00 |
| Transportation Services | 13,394 | 13,392 | 0.01 |
| Personal Care Services | 0 | 0 | 0.00 |
| Targeted Case Management | 0 | 0 | 0.00 |
| Rehabilitation Services | 144 | 144 | 0.00 |
| PT/OT/Hearing/Speech Services | 0 | 0 | 0.00 |
| Hospice Services | 214 | 214 | 0.00 |
| Nurse Midwife Services | 0 | 0 | 0.00 |
| Nurse Practitioner Services | 789 | 789 | 0.00 |
| Private Nursing Services | 0 | 0 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 19,619 | 19,615 | 0.02 |
| Residential Care Services | 0 | 0 | 0.00 |
| Psychiatric Services | 16,613 | 16,613 | 0.00 |
| Adult Day Care | 0 | 0 | 0.00 |
| Unknown Services | 15 | 15 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, Florida.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 3,042,834 | 3,042,487 | 0.01 |
| No enrollment | 45,033 | 45,033 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 2,997,801 | 2,997,454 | 0.01 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 353,678 | 353,619 | 0.02 |
| Disabled | 530,551 | 530,459 | 0.02 |
| Child | 1,555,568 | 1,555,383 | 0.01 |
| Adult | 558,004 | 557,993 | 0.00 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 339,147 | 339,077 | 0.02 |
| Disabled | 517,476 | 517,382 | 0.02 |
| Child | 1,554,599 | 1,554,414 | 0.01 |
| Adult | 543,353 | 543,340 | 0.00 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 1,275,827 | 1,275,750 | 0.01 |
| PHP | 530,692 | 530,680 | 0.00 |
| PCCM | 1,172,701 | 1,172,634 | 0.01 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 317,039 | 317,033 | 0.00 |
| Mental Hospital Services for the Aged | 174 | 174 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 0 | 0 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 3,127 | 3,127 | 0.00 |
| Nursing Facility Services | 78,418 | 78,412 | 0.01 |
| Physician Services | 1,206,330 | 1,206,264 | 0.01 |
| Dental Services | 333,788 | 333,786 | 0.00 |
| Other Practitioner Services | 218,941 | 218,941 | 0.00 |
| Outpatient Services | 581,484 | 581,477 | 0.00 |
| Clinic Services | 276,752 | 276,751 | 0.00 |
| Home Health Services | 27,218 | 27,218 | 0.00 |
| Lab/Xray Services | 966,648 | 966,610 | 0.00 |
| Drugs | 1,080,996 | 1,080,948 | 0.00 |
| Other Services | 573,225 | 573,213 | 0.00 |
| Sterilizations | 7,258 | 7,258 | 0.00 |
| Abortions | 66 | 66 | 0.00 |
| Transportation Services | 173,938 | 173,930 | 0.00 |
| Personal Care Services | 7,095 | 7,093 | 0.03 |
| Targeted Case Management | 73,607 | 73,605 | 0.00 |
| Rehabilitation Services | 0 | 0 | 0.00 |
| PT/OT/Hearing/Speech Services | 72,857 | 72,854 | 0.00 |
| Hospice Services | 17,449 | 17,449 | 0.00 |
| Nurse Midwife Services | 1,207 | 1,207 | 0.00 |
| Nurse Practitioner Services | 164,299 | 164,299 | 0.00 |
| Private Nursing Services | 0 | 0 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 348,389 | 348,383 | 0.00 |
| Residential Care Services | 9,033 | 9,033 | 0.00 |
| Psychiatric Services | 202,631 | 202,628 | 0.00 |
| Adult Day Care | 13,537 | 13,537 | 0.00 |
| Unknown Services | 892 | 892 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, Georgia.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 2,101,713 | 2,101,652 | 0.00 |
| No enrollment | 58,064 | 58,064 | 0.00 |
| Enrollees with S-CHIP only | 284,861 | 284,828 | 0.01 |
| Total Medicaid Enrollees | 2,043,649 | 2,043,588 | 0.00 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 137,078 | 137,071 | 0.01 |
| Disabled | 289,256 | 289,249 | 0.00 |
| Child | 1,031,574 | 1,031,560 | 0.00 |
| Adult | 300,880 | 300,880 | 0.00 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 131,972 | 131,960 | 0.01 |
| Disabled | 284,260 | 284,252 | 0.00 |
| Child | 1,031,541 | 1,031,527 | 0.00 |
| Adult | 300,518 | 300,518 | 0.00 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 970,633 | 970,627 | 0.00 |
| PHP | 1,571,374 | 1,571,363 | 0.00 |
| PCCM | 1,064,172 | 1,064,164 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 193,389 | 193,388 | 0.00 |
| Mental Hospital Services for the Aged | 0 | 0 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 0 | 0 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 1,097 | 1,097 | 0.00 |
| Nursing Facility Services | 38,255 | 38,255 | 0.00 |
| Physician Services | 1,089,426 | 1,089,422 | 0.00 |
| Dental Services | 382,862 | 382,862 | 0.00 |
| Other Practitioner Services | 252,191 | 252,191 | 0.00 |
| Outpatient Services | 560,260 | 560,259 | 0.00 |
| Clinic Services | 385,091 | 385,091 | 0.00 |
| Home Health Services | 7,259 | 7,259 | 0.00 |
| Lab/Xray Services | 797,856 | 797,852 | 0.00 |
| Drugs | 1,038,665 | 1,038,663 | 0.00 |
| Other Services | 77,546 | 77,546 | 0.00 |
| Sterilizations | 4,558 | 4,558 | 0.00 |
| Abortions | 131 | 131 | 0.00 |
| Transportation Services | 76,896 | 76,896 | 0.00 |
| Personal Care Services | 0 | 0 | 0.00 |
| Targeted Case Management | 213,010 | 213,008 | 0.00 |
| Rehabilitation Services | 0 | 0 | 0.00 |
| PT/OT/Hearing/Speech Services | 1,651 | 1,651 | 0.00 |
| Hospice Services | 5,449 | 5,449 | 0.00 |
| Nurse Midwife Services | 16,494 | 16,494 | 0.00 |
| Nurse Practitioner Services | 143,039 | 143,039 | 0.00 |
| Private Nursing Services | 694 | 694 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 398,791 | 398,790 | 0.00 |
| Residential Care Services | 2,319 | 2,319 | 0.00 |
| Psychiatric Services | 171,509 | 171,509 | 0.00 |
| Adult Day Care | 3,114 | 3,114 | 0.00 |
| Unknown Services | 38,947 | 38,947 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, Hawaii.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 238,226 | 238,093 | 0.06 |
| No enrollment | 6,584 | 6,584 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 231,642 | 231,509 | 0.06 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 22,312 | 22,310 | 0.01 |
| Disabled | 25,827 | 25,822 | 0.02 |
| Child | 109,235 | 109,135 | 0.09 |
| Adult | 74,268 | 74,242 | 0.04 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 21,942 | 21,940 | 0.01 |
| Disabled | 25,541 | 25,536 | 0.02 |
| Child | 109,235 | 109,135 | 0.09 |
| Adult | 74,264 | 74,238 | 0.04 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 181,318 | 181,216 | 0.06 |
| PHP | 4,725 | 4,725 | 0.00 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 22,355 | 22,354 | 0.00 |
| Mental Hospital Services for the Aged | 129 | 129 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 16 | 16 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 88 | 88 | 0.00 |
| Nursing Facility Services | 4,711 | 4,711 | 0.00 |
| Physician Services | 158,203 | 158,178 | 0.02 |
| Dental Services | 59,444 | 59,439 | 0.01 |
| Other Practitioner Services | 18,872 | 18,872 | 0.00 |
| Outpatient Services | 59,243 | 59,240 | 0.01 |
| Clinic Services | 23,211 | 23,209 | 0.01 |
| Home Health Services | 5,286 | 5,286 | 0.00 |
| Lab/Xray Services | 110,958 | 110,945 | 0.01 |
| Drugs | 152,102 | 152,080 | 0.01 |
| Other Services | 28,276 | 28,274 | 0.01 |
| Sterilizations | 650 | 650 | 0.00 |
| Abortions | 1,538 | 1,538 | 0.00 |
| Transportation Services | 14,218 | 14,218 | 0.00 |
| Personal Care Services | 0 | 0 | 0.00 |
| Targeted Case Management | 1,992 | 1,992 | 0.00 |
| Rehabilitation Services | 170 | 170 | 0.00 |
| PT/OT/Hearing/Speech Services | 2,957 | 2,957 | 0.00 |
| Hospice Services | 120 | 120 | 0.00 |
| Nurse Midwife Services | 0 | 0 | 0.00 |
| Nurse Practitioner Services | 10,143 | 10,143 | 0.00 |
| Private Nursing Services | 797 | 797 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 38,088 | 38,087 | 0.00 |
| Residential Care Services | 858 | 858 | 0.00 |
| Psychiatric Services | 31,990 | 31,988 | 0.01 |
| Adult Day Care | 1,535 | 1,535 | 0.00 |
| Unknown Services | 0 | 0 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, Idaho.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 230,815 | 230,796 | 0.01 |
| No enrollment | 903 | 903 | 0.00 |
| Enrollees with S-CHIP only | 3,703 | 3,703 | 0.00 |
| Total Medicaid Enrollees | 229,912 | 229,893 | 0.01 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 16,274 | 16,274 | 0.00 |
| Disabled | 35,080 | 35,080 | 0.00 |
| Child | 142,625 | 142,607 | 0.01 |
| Adult | 32,230 | 32,229 | 0.00 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 15,773 | 15,773 | 0.00 |
| Disabled | 34,501 | 34,501 | 0.00 |
| Child | 142,624 | 142,606 | 0.01 |
| Adult | 32,221 | 32,220 | 0.00 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 0 | 0 | 0.00 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 189,159 | 189,142 | 0.01 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 24,539 | 24,539 | 0.00 |
| Mental Hospital Services for the Aged | 838 | 838 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 948 | 948 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 593 | 593 | 0.00 |
| Nursing Facility Services | 4,528 | 4,528 | 0.00 |
| Physician Services | 147,399 | 147,397 | 0.00 |
| Dental Services | 76,368 | 76,366 | 0.00 |
| Other Practitioner Services | 48,608 | 48,608 | 0.00 |
| Outpatient Services | 77,056 | 77,056 | 0.00 |
| Clinic Services | 57,464 | 57,463 | 0.00 |
| Home Health Services | 1,825 | 1,825 | 0.00 |
| Lab/Xray Services | 102,446 | 102,444 | 0.00 |
| Drugs | 129,588 | 129,582 | 0.00 |
| Other Services | 26,395 | 26,394 | 0.00 |
| Sterilizations | 1,095 | 1,095 | 0.00 |
| Abortions | 0 | 0 | 0.00 |
| Transportation Services | 15,611 | 15,611 | 0.00 |
| Personal Care Services | 6,628 | 6,628 | 0.00 |
| Targeted Case Management | 8,476 | 8,476 | 0.00 |
| Rehabilitation Services | 4,083 | 4,083 | 0.00 |
| PT/OT/Hearing/Speech Services | 9,625 | 9,625 | 0.00 |
| Hospice Services | 322 | 322 | 0.00 |
| Nurse Midwife Services | 0 | 0 | 0.00 |
| Nurse Practitioner Services | 26,638 | 26,638 | 0.00 |
| Private Nursing Services | 1,584 | 1,584 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 42,551 | 42,551 | 0.00 |
| Residential Care Services | 4,946 | 4,946 | 0.00 |
| Psychiatric Services | 31,560 | 31,557 | 0.01 |
| Adult Day Care | 529 | 529 | 0.00 |
| Unknown Services | 456 | 456 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, Illinois.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 2,602,268 | 2,575,245 | 1.04 |
| No enrollment | 1,621 | 1,621 | 0.00 |
| Enrollees with S-CHIP only | 196,048 | 193,735 | 1.18 |
| Total Medicaid Enrollees | 2,600,647 | 2,573,624 | 1.04 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 197,732 | 193,827 | 1.97 |
| Disabled | 341,708 | 340,780 | 0.27 |
| Child | 1,367,081 | 1,350,508 | 1.21 |
| Adult | 498,078 | 494,774 | 0.66 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 186,964 | 180,374 | 3.52 |
| Disabled | 327,881 | 326,532 | 0.41 |
| Child | 1,366,233 | 1,349,472 | 1.23 |
| Adult | 437,019 | 433,429 | 0.82 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 169,410 | 169,337 | 0.04 |
| PHP | 32,551 | 32,539 | 0.04 |
| PCCM | 121 | 121 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 191,439 | 191,287 | 0.08 |
| Mental Hospital Services for the Aged | 1,784 | 1,781 | 0.17 |
| Inpatient Psychiatric Facility Services (under Age 21) | 5,177 | 5,172 | 0.10 |
| Intermediate Care Facility Services for the Mentally Retarded | 9,504 | 9,502 | 0.02 |
| Nursing Facility Services | 73,913 | 73,887 | 0.04 |
| Physician Services | 1,319,532 | 1,316,572 | 0.22 |
| Dental Services | 605,146 | 604,717 | 0.07 |
| Other Practitioner Services | 219,406 | 219,373 | 0.02 |
| Outpatient Services | 696,268 | 695,224 | 0.15 |
| Clinic Services | 469,640 | 468,952 | 0.15 |
| Home Health Services | 13,393 | 13,365 | 0.21 |
| Lab/Xray Services | 1,096,952 | 1,094,462 | 0.23 |
| Drugs | 1,467,608 | 1,463,976 | 0.25 |
| Other Services | 114,194 | 114,124 | 0.06 |
| Sterilizations | 5,536 | 5,536 | 0.00 |
| Abortions | 328 | 328 | 0.00 |
| Transportation Services | 160,212 | 160,076 | 0.08 |
| Personal Care Services | 22,261 | 22,257 | 0.02 |
| Targeted Case Management | 748,829 | 747,785 | 0.14 |
| Rehabilitation Services | 13,344 | 13,338 | 0.04 |
| PT/OT/Hearing/Speech Services | 101,145 | 100,911 | 0.23 |
| Hospice Services | 7,528 | 7,528 | 0.00 |
| Nurse Midwife Services | 1,433 | 1,430 | 0.21 |
| Nurse Practitioner Services | 38,292 | 38,277 | 0.04 |
| Private Nursing Services | 719 | 715 | 0.56 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 405,091 | 404,823 | 0.07 |
| Residential Care Services | 8,989 | 8,980 | 0.10 |
| Psychiatric Services | 288,389 | 287,943 | 0.15 |
| Adult Day Care | 1,943 | 1,942 | 0.05 |
| Unknown Services | 0 | 0 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, Indiana.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 1,067,016 | 1,066,881 | 0.01 |
| No enrollment | 553 | 553 | 0.00 |
| Enrollees with S-CHIP only | 16,703 | 16,703 | 0.00 |
| Total Medicaid Enrollees | 1,066,463 | 1,066,328 | 0.01 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 81,241 | 81,237 | 0.00 |
| Disabled | 152,797 | 152,790 | 0.00 |
| Child | 622,409 | 622,294 | 0.02 |
| Adult | 193,313 | 193,304 | 0.00 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 71,584 | 71,580 | 0.01 |
| Disabled | 140,244 | 140,237 | 0.00 |
| Child | 622,333 | 622,218 | 0.02 |
| Adult | 193,248 | 193,239 | 0.00 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 724,495 | 724,440 | 0.01 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 79,628 | 79,627 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 119,550 | 119,549 | 0.00 |
| Mental Hospital Services for the Aged | 316 | 316 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 2,798 | 2,798 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 4,261 | 4,261 | 0.00 |
| Nursing Facility Services | 37,202 | 37,202 | 0.00 |
| Physician Services | 595,099 | 595,072 | 0.00 |
| Dental Services | 349,317 | 349,311 | 0.00 |
| Other Practitioner Services | 59,617 | 59,617 | 0.00 |
| Outpatient Services | 385,342 | 385,336 | 0.00 |
| Clinic Services | 312,715 | 312,707 | 0.00 |
| Home Health Services | 22,278 | 22,278 | 0.00 |
| Lab/Xray Services | 490,596 | 490,585 | 0.00 |
| Drugs | 610,276 | 610,252 | 0.00 |
| Other Services | 187,358 | 187,353 | 0.00 |
| Sterilizations | 1,796 | 1,796 | 0.00 |
| Abortions | 0 | 0 | 0.00 |
| Transportation Services | 73,698 | 73,698 | 0.00 |
| Personal Care Services | 0 | 0 | 0.00 |
| Targeted Case Management | 12,056 | 12,056 | 0.00 |
| Rehabilitation Services | 63,433 | 63,428 | 0.01 |
| PT/OT/Hearing/Speech Services | 23,720 | 23,720 | 0.00 |
| Hospice Services | 4,935 | 4,935 | 0.00 |
| Nurse Midwife Services | 784 | 784 | 0.00 |
| Nurse Practitioner Services | 4,440 | 4,440 | 0.00 |
| Private Nursing Services | 0 | 0 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 286,208 | 286,205 | 0.00 |
| Residential Care Services | 5,769 | 5,769 | 0.00 |
| Psychiatric Services | 143,838 | 143,827 | 0.01 |
| Adult Day Care | 250 | 250 | 0.00 |
| Unknown Services | 4 | 4 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, Iowa.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 468,572 | 468,135 | 0.09 |
| No enrollment | 1,225 | 1,225 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 467,347 | 466,910 | 0.09 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 41,813 | 41,809 | 0.01 |
| Disabled | 70,390 | 70,380 | 0.01 |
| Child | 230,481 | 230,067 | 0.18 |
| Adult | 124,663 | 124,654 | 0.01 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 39,976 | 39,972 | 0.01 |
| Disabled | 68,639 | 68,629 | 0.01 |
| Child | 230,023 | 229,607 | 0.18 |
| Adult | 118,436 | 118,424 | 0.01 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 7,673 | 7,673 | 0.00 |
| PHP | 356,978 | 356,589 | 0.11 |
| PCCM | 180,754 | 180,748 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 59,769 | 59,769 | 0.00 |
| Mental Hospital Services for the Aged | 10 | 10 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 967 | 967 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 2,316 | 2,316 | 0.00 |
| Nursing Facility Services | 18,969 | 18,969 | 0.00 |
| Physician Services | 289,194 | 289,096 | 0.03 |
| Dental Services | 131,483 | 131,432 | 0.04 |
| Other Practitioner Services | 121,934 | 121,920 | 0.01 |
| Outpatient Services | 173,109 | 173,070 | 0.02 |
| Clinic Services | 171,974 | 171,935 | 0.02 |
| Home Health Services | 27,860 | 27,855 | 0.02 |
| Lab/Xray Services | 247,933 | 247,886 | 0.02 |
| Drugs | 278,239 | 278,067 | 0.06 |
| Other Services | 50,299 | 50,278 | 0.04 |
| Sterilizations | 0 | 0 | 0.00 |
| Abortions | 0 | 0 | 0.00 |
| Transportation Services | 16,891 | 16,891 | 0.00 |
| Personal Care Services | 0 | 0 | 0.00 |
| Targeted Case Management | 11,379 | 11,372 | 0.06 |
| Rehabilitation Services | 2,482 | 2,477 | 0.20 |
| PT/OT/Hearing/Speech Services | 4,985 | 4,985 | 0.00 |
| Hospice Services | 0 | 0 | 0.00 |
| Nurse Midwife Services | 1,689 | 1,689 | 0.00 |
| Nurse Practitioner Services | 28,288 | 28,282 | 0.02 |
| Private Nursing Services | 0 | 0 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 152,197 | 152,173 | 0.02 |
| Residential Care Services | 12,151 | 12,147 | 0.03 |
| Psychiatric Services | 92,093 | 91,995 | 0.11 |
| Adult Day Care | 4,079 | 4,079 | 0.00 |
| Unknown Services | 6,452 | 6,452 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, Kansas.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 361,498 | 361,478 | 0.01 |
| No enrollment | 2,747 | 2,747 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 358,751 | 358,731 | 0.01 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 34,458 | 34,458 | 0.00 |
| Disabled | 61,740 | 61,739 | 0.00 |
| Child | 202,682 | 202,663 | 0.01 |
| Adult | 59,871 | 59,871 | 0.00 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 33,060 | 33,060 | 0.00 |
| Disabled | 59,623 | 59,622 | 0.00 |
| Child | 202,681 | 202,662 | 0.01 |
| Adult | 59,853 | 59,853 | 0.00 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 120,162 | 120,160 | 0.00 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 87,322 | 87,320 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 50,009 | 50,009 | 0.00 |
| Mental Hospital Services for the Aged | 166 | 166 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 333 | 333 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 646 | 646 | 0.00 |
| Nursing Facility Services | 14,622 | 14,622 | 0.00 |
| Physician Services | 238,627 | 238,621 | 0.00 |
| Dental Services | 79,312 | 79,311 | 0.00 |
| Other Practitioner Services | 41,644 | 41,644 | 0.00 |
| Outpatient Services | 112,211 | 112,211 | 0.00 |
| Clinic Services | 93,841 | 93,839 | 0.00 |
| Home Health Services | 6,000 | 6,000 | 0.00 |
| Lab/Xray Services | 174,111 | 174,109 | 0.00 |
| Drugs | 223,415 | 223,411 | 0.00 |
| Other Services | 53,864 | 53,863 | 0.00 |
| Sterilizations | 1,158 | 1,158 | 0.00 |
| Abortions | 2 | 2 | 0.00 |
| Transportation Services | 22,105 | 22,105 | 0.00 |
| Personal Care Services | 359 | 359 | 0.00 |
| Targeted Case Management | 18,926 | 18,924 | 0.01 |
| Rehabilitation Services | 4,054 | 4,054 | 0.00 |
| PT/OT/Hearing/Speech Services | 1,927 | 1,927 | 0.00 |
| Hospice Services | 2,707 | 2,707 | 0.00 |
| Nurse Midwife Services | 704 | 704 | 0.00 |
| Nurse Practitioner Services | 24,051 | 24,051 | 0.00 |
| Private Nursing Services | 0 | 0 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 62,235 | 62,235 | 0.00 |
| Residential Care Services | 4,384 | 4,384 | 0.00 |
| Psychiatric Services | 63,845 | 63,843 | 0.00 |
| Adult Day Care | 85 | 85 | 0.00 |
| Unknown Services | 1,504 | 1,504 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, Kentucky.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 893,225 | 893,221 | 0.00 |
| No enrollment | 3,133 | 3,133 | 0.00 |
| Enrollees with S-CHIP only | 18,250 | 18,250 | 0.00 |
| Total Medicaid Enrollees | 890,092 | 890,088 | 0.00 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 71,479 | 71,478 | 0.00 |
| Disabled | 237,036 | 237,034 | 0.00 |
| Child | 427,910 | 427,909 | 0.00 |
| Adult | 135,417 | 135,417 | 0.00 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 69,363 | 69,362 | 0.00 |
| Disabled | 234,635 | 234,633 | 0.00 |
| Child | 427,832 | 427,831 | 0.00 |
| Adult | 134,978 | 134,978 | 0.00 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 172,571 | 172,571 | 0.00 |
| PHP | 798,364 | 798,364 | 0.00 |
| PCCM | 428,424 | 428,424 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 84,907 | 84,907 | 0.00 |
| Mental Hospital Services for the Aged | 338 | 338 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 3,324 | 3,324 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 712 | 712 | 0.00 |
| Nursing Facility Services | 27,261 | 27,261 | 0.00 |
| Physician Services | 611,281 | 611,281 | 0.00 |
| Dental Services | 237,388 | 237,388 | 0.00 |
| Other Practitioner Services | 214,293 | 214,293 | 0.00 |
| Outpatient Services | 397,912 | 397,912 | 0.00 |
| Clinic Services | 221,827 | 221,827 | 0.00 |
| Home Health Services | 20,190 | 20,190 | 0.00 |
| Lab/Xray Services | 495,555 | 495,555 | 0.00 |
| Drugs | 629,366 | 629,366 | 0.00 |
| Other Services | 243,598 | 243,598 | 0.00 |
| Sterilizations | 4,881 | 4,881 | 0.00 |
| Abortions | 859 | 859 | 0.00 |
| Transportation Services | 76,200 | 76,200 | 0.00 |
| Personal Care Services | 0 | 0 | 0.00 |
| Targeted Case Management | 16,115 | 16,115 | 0.00 |
| Rehabilitation Services | 120 | 120 | 0.00 |
| PT/OT/Hearing/Speech Services | 3,524 | 3,524 | 0.00 |
| Hospice Services | 2,796 | 2,796 | 0.00 |
| Nurse Midwife Services | 0 | 0 | 0.00 |
| Nurse Practitioner Services | 94,261 | 94,261 | 0.00 |
| Private Nursing Services | 0 | 0 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 203,065 | 203,065 | 0.00 |
| Residential Care Services | 2,437 | 2,437 | 0.00 |
| Psychiatric Services | 152,918 | 152,918 | 0.00 |
| Adult Day Care | 3,380 | 3,380 | 0.00 |
| Unknown Services | 3,114 | 3,114 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, Louisiana.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 1,273,978 | 1,273,959 | 0.00 |
| No enrollment | 60,901 | 60,901 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 1,213,077 | 1,213,058 | 0.00 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 111,104 | 111,089 | 0.01 |
| Disabled | 197,602 | 197,599 | 0.00 |
| Child | 749,866 | 749,866 | 0.00 |
| Adult | 154,505 | 154,504 | 0.00 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 107,254 | 107,238 | 0.01 |
| Disabled | 193,752 | 193,748 | 0.00 |
| Child | 749,863 | 749,863 | 0.00 |
| Adult | 152,163 | 152,161 | 0.00 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 0 | 0 | 0.00 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 824,809 | 824,809 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 134,351 | 134,351 | 0.00 |
| Mental Hospital Services for the Aged | 6,117 | 6,117 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 3,349 | 3,349 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 5,539 | 5,539 | 0.00 |
| Nursing Facility Services | 29,007 | 29,006 | 0.00 |
| Physician Services | 756,344 | 756,344 | 0.00 |
| Dental Services | 227,266 | 227,266 | 0.00 |
| Other Practitioner Services | 168,140 | 168,140 | 0.00 |
| Outpatient Services | 435,899 | 435,899 | 0.00 |
| Clinic Services | 157,527 | 157,527 | 0.00 |
| Home Health Services | 10,428 | 10,428 | 0.00 |
| Lab/Xray Services | 609,005 | 609,005 | 0.00 |
| Drugs | 707,806 | 707,806 | 0.00 |
| Other Services | 429,126 | 429,126 | 0.00 |
| Sterilizations | 6,233 | 6,233 | 0.00 |
| Abortions | 18 | 18 | 0.00 |
| Transportation Services | 96,301 | 96,301 | 0.00 |
| Personal Care Services | 8,792 | 8,792 | 0.00 |
| Targeted Case Management | 11,878 | 11,878 | 0.00 |
| Rehabilitation Services | 4,875 | 4,875 | 0.00 |
| PT/OT/Hearing/Speech Services | 68,729 | 68,729 | 0.00 |
| Hospice Services | 3,932 | 3,932 | 0.00 |
| Nurse Midwife Services | 29,923 | 29,923 | 0.00 |
| Nurse Practitioner Services | 97,046 | 97,046 | 0.00 |
| Private Nursing Services | 0 | 0 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 284,837 | 284,837 | 0.00 |
| Residential Care Services | 0 | 0 | 0.00 |
| Psychiatric Services | 63,596 | 63,596 | 0.00 |
| Adult Day Care | 0 | 0 | 0.00 |
| Unknown Services | 0 | 0 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, Maine.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 337,424 | 337,421 | 0.00 |
| No enrollment | 1,287 | 1,287 | 0.00 |
| Enrollees with S-CHIP only | 3,726 | 3,726 | 0.00 |
| Total Medicaid Enrollees | 336,137 | 336,134 | 0.00 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 40,547 | 40,546 | 0.00 |
| Disabled | 53,718 | 53,716 | 0.00 |
| Child | 128,668 | 128,668 | 0.00 |
| Adult | 109,478 | 109,478 | 0.00 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 38,594 | 38,593 | 0.00 |
| Disabled | 52,391 | 52,389 | 0.00 |
| Child | 128,651 | 128,651 | 0.00 |
| Adult | 109,267 | 109,267 | 0.00 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 0 | 0 | 0.00 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 0 | 0 | 0.00 |
| Mental Hospital Services for the Aged | 0 | 0 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 0 | 0 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 0 | 0 | 0.00 |
| Nursing Facility Services | 0 | 0 | 0.00 |
| Physician Services | 0 | 0 | 0.00 |
| Dental Services | 0 | 0 | 0.00 |
| Other Practitioner Services | 0 | 0 | 0.00 |
| Outpatient Services | 0 | 0 | 0.00 |
| Clinic Services | 0 | 0 | 0.00 |
| Home Health Services | 0 | 0 | 0.00 |
| Lab/Xray Services | 0 | 0 | 0.00 |
| Drugs | 210,669 | 210,669 | 0.00 |
| Other Services | 0 | 0 | 0.00 |
| Sterilizations | 0 | 0 | 0.00 |
| Abortions | 0 | 0 | 0.00 |
| Transportation Services | 0 | 0 | 0.00 |
| Personal Care Services | 0 | 0 | 0.00 |
| Targeted Case Management | 0 | 0 | 0.00 |
| Rehabilitation Services | 0 | 0 | 0.00 |
| PT/OT/Hearing/Speech Services | 0 | 0 | 0.00 |
| Hospice Services | 0 | 0 | 0.00 |
| Nurse Midwife Services | 0 | 0 | 0.00 |
| Nurse Practitioner Services | 0 | 0 | 0.00 |
| Private Nursing Services | 0 | 0 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 0 | 0 | 0.00 |
| Residential Care Services | 0 | 0 | 0.00 |
| Psychiatric Services | 0 | 0 | 0.00 |
| Adult Day Care | 0 | 0 | 0.00 |
| Unknown Services | 0 | 0 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, Maryland.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 867,649 | 867,637 | 0.00 |
| No enrollment | 1,672 | 1,672 | 0.00 |
| Enrollees with S-CHIP only | 10,232 | 10,229 | 0.03 |
| Total Medicaid Enrollees | 865,977 | 865,965 | 0.00 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 62,751 | 62,750 | 0.00 |
| Disabled | 139,127 | 139,127 | 0.00 |
| Child | 478,217 | 478,209 | 0.00 |
| Adult | 175,650 | 175,650 | 0.00 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 61,020 | 61,019 | 0.00 |
| Disabled | 134,549 | 134,549 | 0.00 |
| Child | 474,771 | 474,763 | 0.00 |
| Adult | 132,868 | 132,868 | 0.00 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 588,452 | 588,446 | 0.00 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 117,194 | 117,194 | 0.00 |
| Mental Hospital Services for the Aged | 48 | 48 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 2,846 | 2,846 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 346 | 346 | 0.00 |
| Nursing Facility Services | 24,150 | 24,150 | 0.00 |
| Physician Services | 557,765 | 557,759 | 0.00 |
| Dental Services | 140,875 | 140,875 | 0.00 |
| Other Practitioner Services | 21,928 | 21,928 | 0.00 |
| Outpatient Services | 286,375 | 286,371 | 0.00 |
| Clinic Services | 33,529 | 33,529 | 0.00 |
| Home Health Services | 19,663 | 19,663 | 0.00 |
| Lab/Xray Services | 315,915 | 315,914 | 0.00 |
| Drugs | 463,974 | 463,969 | 0.00 |
| Other Services | 61,005 | 61,005 | 0.00 |
| Sterilizations | 1,196 | 1,196 | 0.00 |
| Abortions | 3,351 | 3,351 | 0.00 |
| Transportation Services | 27,402 | 27,402 | 0.00 |
| Personal Care Services | 4,727 | 4,727 | 0.00 |
| Targeted Case Management | 10,597 | 10,597 | 0.00 |
| Rehabilitation Services | 3,415 | 3,415 | 0.00 |
| PT/OT/Hearing/Speech Services | 59,698 | 59,698 | 0.00 |
| Hospice Services | 2,142 | 2,142 | 0.00 |
| Nurse Midwife Services | 7,699 | 7,699 | 0.00 |
| Nurse Practitioner Services | 37,156 | 37,156 | 0.00 |
| Private Nursing Services | 736 | 736 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 151,885 | 151,885 | 0.00 |
| Residential Care Services | 353,607 | 353,604 | 0.00 |
| Psychiatric Services | 276,352 | 276,351 | 0.00 |
| Adult Day Care | 365,328 | 365,326 | 0.00 |
| Unknown Services | 4,917 | 4,917 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, Massachusetts.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 1,315,266 | 1,315,161 | 0.01 |
| No enrollment | 7,592 | 7,592 | 0.00 |
| Enrollees with S-CHIP only | 50,728 | 50,726 | 0.00 |
| Total Medicaid Enrollees | 1,307,674 | 1,307,569 | 0.01 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 152,356 | 152,348 | 0.01 |
| Disabled | 247,892 | 247,877 | 0.01 |
| Child | 477,264 | 477,230 | 0.01 |
| Adult | 379,434 | 379,388 | 0.01 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 147,905 | 147,893 | 0.01 |
| Disabled | 247,662 | 247,647 | 0.01 |
| Child | 477,263 | 477,229 | 0.01 |
| Adult | 379,378 | 379,332 | 0.01 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 475,814 | 475,806 | 0.00 |
| PHP | 406,100 | 406,090 | 0.00 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 76,534 | 76,533 | 0.00 |
| Mental Hospital Services for the Aged | 21 | 21 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 3,840 | 3,840 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 1,032 | 1,032 | 0.00 |
| Nursing Facility Services | 50,799 | 50,799 | 0.00 |
| Physician Services | 488,229 | 488,218 | 0.00 |
| Dental Services | 358,951 | 358,949 | 0.00 |
| Other Practitioner Services | 105,263 | 105,263 | 0.00 |
| Outpatient Services | 391,262 | 391,253 | 0.00 |
| Clinic Services | 95,769 | 95,767 | 0.00 |
| Home Health Services | 35,198 | 35,197 | 0.00 |
| Lab/Xray Services | 417,809 | 417,800 | 0.00 |
| Drugs | 521,231 | 521,219 | 0.00 |
| Other Services | 111,543 | 111,542 | 0.00 |
| Sterilizations | 1,246 | 1,246 | 0.00 |
| Abortions | 0 | 0 | 0.00 |
| Transportation Services | 92,805 | 92,804 | 0.00 |
| Personal Care Services | 10,279 | 10,279 | 0.00 |
| Targeted Case Management | 33,346 | 33,346 | 0.00 |
| Rehabilitation Services | 69,987 | 69,987 | 0.00 |
| PT/OT/Hearing/Speech Services | 8,072 | 8,072 | 0.00 |
| Hospice Services | 5,016 | 5,016 | 0.00 |
| Nurse Midwife Services | 2,405 | 2,405 | 0.00 |
| Nurse Practitioner Services | 29,501 | 29,501 | 0.00 |
| Private Nursing Services | 0 | 0 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 167,390 | 167,388 | 0.00 |
| Residential Care Services | 12,884 | 12,884 | 0.00 |
| Psychiatric Services | 142,944 | 142,944 | 0.00 |
| Adult Day Care | 6,913 | 6,913 | 0.00 |
| Unknown Services | 2,751 | 2,751 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, Michigan.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 1,958,996 | 1,958,848 | 0.01 |
| No enrollment | 20,597 | 20,597 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 1,938,399 | 1,938,251 | 0.01 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 134,837 | 134,817 | 0.01 |
| Disabled | 301,863 | 301,840 | 0.01 |
| Child | 1,025,731 | 1,025,632 | 0.01 |
| Adult | 475,968 | 475,962 | 0.00 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 129,247 | 129,226 | 0.02 |
| Disabled | 295,276 | 295,249 | 0.01 |
| Child | 1,024,711 | 1,024,612 | 0.01 |
| Adult | 471,370 | 471,364 | 0.00 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 1,221,750 | 1,221,689 | 0.00 |
| PHP | 1,677,937 | 1,677,809 | 0.01 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 94,486 | 94,485 | 0.00 |
| Mental Hospital Services for the Aged | 49 | 49 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 543 | 543 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 160 | 160 | 0.00 |
| Nursing Facility Services | 43,828 | 43,824 | 0.01 |
| Physician Services | 495,199 | 495,182 | 0.00 |
| Dental Services | 396,869 | 396,863 | 0.00 |
| Other Practitioner Services | 91,112 | 91,112 | 0.00 |
| Outpatient Services | 289,214 | 289,209 | 0.00 |
| Clinic Services | 164,028 | 164,025 | 0.00 |
| Home Health Services | 7,068 | 7,068 | 0.00 |
| Lab/Xray Services | 273,450 | 273,445 | 0.00 |
| Drugs | 589,121 | 589,103 | 0.00 |
| Other Services | 42,697 | 42,696 | 0.00 |
| Sterilizations | 2,806 | 2,806 | 0.00 |
| Abortions | 20 | 20 | 0.00 |
| Transportation Services | 30,766 | 30,766 | 0.00 |
| Personal Care Services | 0 | 0 | 0.00 |
| Targeted Case Management | 52,281 | 52,281 | 0.00 |
| Rehabilitation Services | 24 | 24 | 0.00 |
| PT/OT/Hearing/Speech Services | 82 | 82 | 0.00 |
| Hospice Services | 875 | 875 | 0.00 |
| Nurse Midwife Services | 3,676 | 3,676 | 0.00 |
| Nurse Practitioner Services | 22,001 | 22,001 | 0.00 |
| Private Nursing Services | 0 | 0 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 169,199 | 169,197 | 0.00 |
| Residential Care Services | 5,721 | 5,721 | 0.00 |
| Psychiatric Services | 64,942 | 64,939 | 0.00 |
| Adult Day Care | 384 | 384 | 0.00 |
| Unknown Services | 0 | 0 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, Minnesota.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 809,009 | 808,952 | 0.01 |
| No enrollment | 6,827 | 6,827 | 0.00 |
| Enrollees with S-CHIP only | 24,056 | 24,056 | 0.00 |
| Total Medicaid Enrollees | 802,182 | 802,125 | 0.01 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 92,908 | 92,853 | 0.06 |
| Disabled | 112,599 | 112,597 | 0.00 |
| Child | 390,325 | 390,325 | 0.00 |
| Adult | 182,294 | 182,294 | 0.00 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 90,911 | 90,856 | 0.06 |
| Disabled | 110,931 | 110,929 | 0.00 |
| Child | 389,941 | 389,941 | 0.00 |
| Adult | 181,605 | 181,605 | 0.00 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 531,216 | 531,207 | 0.00 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 72,569 | 72,568 | 0.00 |
| Mental Hospital Services for the Aged | 118 | 118 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 643 | 643 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 2,823 | 2,823 | 0.00 |
| Nursing Facility Services | 30,400 | 30,392 | 0.03 |
| Physician Services | 539,843 | 539,834 | 0.00 |
| Dental Services | 225,159 | 225,156 | 0.00 |
| Other Practitioner Services | 166,579 | 166,574 | 0.00 |
| Outpatient Services | 280,175 | 280,172 | 0.00 |
| Clinic Services | 49,004 | 49,004 | 0.00 |
| Home Health Services | 74,579 | 74,578 | 0.00 |
| Lab/Xray Services | 425,800 | 425,795 | 0.00 |
| Drugs | 493,560 | 493,559 | 0.00 |
| Other Services | 122,586 | 122,585 | 0.00 |
| Sterilizations | 1,841 | 1,841 | 0.00 |
| Abortions | 23 | 23 | 0.00 |
| Transportation Services | 66,127 | 66,124 | 0.00 |
| Personal Care Services | 44,441 | 44,438 | 0.01 |
| Targeted Case Management | 104,404 | 104,399 | 0.00 |
| Rehabilitation Services | 10,677 | 10,676 | 0.01 |
| PT/OT/Hearing/Speech Services | 27,382 | 27,381 | 0.00 |
| Hospice Services | 2,771 | 2,771 | 0.00 |
| Nurse Midwife Services | 8,897 | 8,897 | 0.00 |
| Nurse Practitioner Services | 113,919 | 113,916 | 0.00 |
| Private Nursing Services | 2,123 | 2,123 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 198,542 | 198,537 | 0.00 |
| Residential Care Services | 11,189 | 11,187 | 0.02 |
| Psychiatric Services | 143,896 | 143,896 | 0.00 |
| Adult Day Care | 12,440 | 12,439 | 0.01 |
| Unknown Services | 0 | 0 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, Mississippi.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 777,471 | 775,018 | 0.32 |
| No enrollment | 1,472 | 1,472 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 775,999 | 773,546 | 0.32 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 83,517 | 83,436 | 0.10 |
| Disabled | 168,390 | 167,167 | 0.73 |
| Child | 388,035 | 387,314 | 0.19 |
| Adult | 136,057 | 135,629 | 0.31 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 79,574 | 79,465 | 0.14 |
| Disabled | 164,013 | 162,750 | 0.77 |
| Child | 387,765 | 387,042 | 0.19 |
| Adult | 113,445 | 112,809 | 0.56 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 0 | 0 | 0.00 |
| PHP | 2 | 2 | 0.00 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 97,155 | 97,107 | 0.05 |
| Mental Hospital Services for the Aged | 239 | 239 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 2,510 | 2,505 | 0.20 |
| Intermediate Care Facility Services for the Mentally Retarded | 2,865 | 2,865 | 0.00 |
| Nursing Facility Services | 21,705 | 21,703 | 0.01 |
| Physician Services | 445,413 | 444,963 | 0.10 |
| Dental Services | 149,336 | 149,311 | 0.02 |
| Other Practitioner Services | 200,945 | 200,869 | 0.04 |
| Outpatient Services | 322,114 | 321,873 | 0.07 |
| Clinic Services | 203,537 | 203,410 | 0.06 |
| Home Health Services | 7,687 | 7,683 | 0.05 |
| Lab/Xray Services | 403,028 | 402,639 | 0.10 |
| Drugs | 428,193 | 427,733 | 0.11 |
| Other Services | 101,826 | 101,799 | 0.03 |
| Sterilizations | 5,546 | 5,546 | 0.00 |
| Abortions | 0 | 0 | 0.00 |
| Transportation Services | 63,358 | 63,312 | 0.07 |
| Personal Care Services | 356 | 356 | 0.00 |
| Targeted Case Management | 36,117 | 36,073 | 0.12 |
| Rehabilitation Services | 125 | 125 | 0.00 |
| PT/OT/Hearing/Speech Services | 5,488 | 5,481 | 0.13 |
| Hospice Services | 2,211 | 2,211 | 0.00 |
| Nurse Midwife Services | 0 | 0 | 0.00 |
| Nurse Practitioner Services | 127,567 | 127,518 | 0.04 |
| Private Nursing Services | 1 | 1 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 213,264 | 213,184 | 0.04 |
| Residential Care Services | 90 | 90 | 0.00 |
| Psychiatric Services | 81,831 | 81,756 | 0.09 |
| Adult Day Care | 798 | 798 | 0.00 |
| Unknown Services | 28 | 28 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, Missouri.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 1,115,164 | 1,115,145 | 0.00 |
| No enrollment | 3,766 | 3,766 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 1,111,398 | 1,111,379 | 0.00 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 95,551 | 95,547 | 0.00 |
| Disabled | 184,547 | 184,543 | 0.00 |
| Child | 619,852 | 619,841 | 0.00 |
| Adult | 211,448 | 211,448 | 0.00 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 92,083 | 92,078 | 0.01 |
| Disabled | 178,361 | 178,356 | 0.00 |
| Child | 619,810 | 619,799 | 0.00 |
| Adult | 190,373 | 190,373 | 0.00 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 748,835 | 748,827 | 0.00 |
| PHP | 5,729 | 5,729 | 0.00 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 123,947 | 123,947 | 0.00 |
| Mental Hospital Services for the Aged | 5 | 5 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 399 | 399 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 1,050 | 1,050 | 0.00 |
| Nursing Facility Services | 37,920 | 37,920 | 0.00 |
| Physician Services | 453,732 | 453,732 | 0.00 |
| Dental Services | 150,873 | 150,873 | 0.00 |
| Other Practitioner Services | 124,836 | 124,836 | 0.00 |
| Outpatient Services | 517,614 | 517,613 | 0.00 |
| Clinic Services | 508,068 | 508,064 | 0.00 |
| Home Health Services | 6,023 | 6,023 | 0.00 |
| Lab/Xray Services | 579,806 | 579,806 | 0.00 |
| Drugs | 741,211 | 741,209 | 0.00 |
| Other Services | 272,867 | 272,867 | 0.00 |
| Sterilizations | 1,920 | 1,920 | 0.00 |
| Abortions | 30 | 30 | 0.00 |
| Transportation Services | 80,506 | 80,506 | 0.00 |
| Personal Care Services | 45,497 | 45,497 | 0.00 |
| Targeted Case Management | 38,211 | 38,210 | 0.00 |
| Rehabilitation Services | 11,673 | 11,673 | 0.00 |
| PT/OT/Hearing/Speech Services | 3,994 | 3,994 | 0.00 |
| Hospice Services | 1,191 | 1,191 | 0.00 |
| Nurse Midwife Services | 1,273 | 1,273 | 0.00 |
| Nurse Practitioner Services | 4,001 | 4,001 | 0.00 |
| Private Nursing Services | 51 | 51 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 217,553 | 217,553 | 0.00 |
| Residential Care Services | 11,197 | 11,197 | 0.00 |
| Psychiatric Services | 126,368 | 126,367 | 0.00 |
| Adult Day Care | 1,448 | 1,448 | 0.00 |
| Unknown Services | 188 | 188 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, Montana.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 129,162 | 129,162 | 0.00 |
| No enrollment | 2,228 | 2,228 | 0.00 |
| Enrollees with S-CHIP only | 14,168 | 14,168 | 0.00 |
| Total Medicaid Enrollees | 126,934 | 126,934 | 0.00 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 9,670 | 9,670 | 0.00 |
| Disabled | 19,437 | 19,437 | 0.00 |
| Child | 61,361 | 61,361 | 0.00 |
| Adult | 22,298 | 22,298 | 0.00 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 9,670 | 9,670 | 0.00 |
| Disabled | 19,437 | 19,437 | 0.00 |
| Child | 61,361 | 61,361 | 0.00 |
| Adult | 22,298 | 22,298 | 0.00 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 0 | 0 | 0.00 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 73,501 | 73,501 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 16,962 | 16,962 | 0.00 |
| Mental Hospital Services for the Aged | 54 | 54 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 422 | 422 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 86 | 86 | 0.00 |
| Nursing Facility Services | 5,039 | 5,039 | 0.00 |
| Physician Services | 70,962 | 70,962 | 0.00 |
| Dental Services | 21,711 | 21,711 | 0.00 |
| Other Practitioner Services | 21,312 | 21,312 | 0.00 |
| Outpatient Services | 42,465 | 42,465 | 0.00 |
| Clinic Services | 16,806 | 16,806 | 0.00 |
| Home Health Services | 415 | 415 | 0.00 |
| Lab/Xray Services | 49,897 | 49,897 | 0.00 |
| Drugs | 60,651 | 60,651 | 0.00 |
| Other Services | 97,518 | 97,518 | 0.00 |
| Sterilizations | 3 | 3 | 0.00 |
| Abortions | 1,265 | 1,265 | 0.00 |
| Transportation Services | 5,211 | 5,211 | 0.00 |
| Personal Care Services | 3,104 | 3,104 | 0.00 |
| Targeted Case Management | 10,557 | 10,557 | 0.00 |
| Rehabilitation Services | 377 | 377 | 0.00 |
| PT/OT/Hearing/Speech Services | 9 | 9 | 0.00 |
| Hospice Services | 266 | 266 | 0.00 |
| Nurse Midwife Services | 0 | 0 | 0.00 |
| Nurse Practitioner Services | 27,684 | 27,684 | 0.00 |
| Private Nursing Services | 0 | 0 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 29,716 | 29,716 | 0.00 |
| Residential Care Services | 99 | 99 | 0.00 |
| Psychiatric Services | 17,480 | 17,480 | 0.00 |
| Adult Day Care | 265 | 265 | 0.00 |
| Unknown Services | 203 | 203 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, Nebraska.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 262,403 | 262,331 | 0.03 |
| No enrollment | 389 | 389 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 262,014 | 261,942 | 0.03 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 23,941 | 23,939 | 0.01 |
| Disabled | 34,782 | 34,773 | 0.03 |
| Child | 157,188 | 157,129 | 0.04 |
| Adult | 46,103 | 46,101 | 0.00 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 23,431 | 23,429 | 0.01 |
| Disabled | 34,218 | 34,208 | 0.03 |
| Child | 157,188 | 157,129 | 0.04 |
| Adult | 46,103 | 46,101 | 0.00 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 42,566 | 42,564 | 0.00 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 55,185 | 55,183 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 32,579 | 32,579 | 0.00 |
| Mental Hospital Services for the Aged | 1 | 1 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 1,683 | 1,683 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 641 | 641 | 0.00 |
| Nursing Facility Services | 11,065 | 11,065 | 0.00 |
| Physician Services | 192,260 | 192,249 | 0.01 |
| Dental Services | 103,178 | 103,165 | 0.01 |
| Other Practitioner Services | 70,856 | 70,855 | 0.00 |
| Outpatient Services | 97,711 | 97,707 | 0.00 |
| Clinic Services | 41,198 | 41,193 | 0.01 |
| Home Health Services | 5,633 | 5,633 | 0.00 |
| Lab/Xray Services | 150,575 | 150,569 | 0.00 |
| Drugs | 192,161 | 192,134 | 0.01 |
| Other Services | 32,818 | 32,818 | 0.00 |
| Sterilizations | 1,518 | 1,518 | 0.00 |
| Abortions | 0 | 0 | 0.00 |
| Transportation Services | 22,950 | 22,950 | 0.00 |
| Personal Care Services | 2,017 | 2,016 | 0.05 |
| Targeted Case Management | 0 | 0 | 0.00 |
| Rehabilitation Services | 1 | 1 | 0.00 |
| PT/OT/Hearing/Speech Services | 14,058 | 14,056 | 0.01 |
| Hospice Services | 1,189 | 1,189 | 0.00 |
| Nurse Midwife Services | 0 | 0 | 0.00 |
| Nurse Practitioner Services | 9,311 | 9,311 | 0.00 |
| Private Nursing Services | 176 | 176 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 95,314 | 95,312 | 0.00 |
| Residential Care Services | 3,264 | 3,263 | 0.03 |
| Psychiatric Services | 49,620 | 49,604 | 0.03 |
| Adult Day Care | 3,212 | 3,212 | 0.00 |
| Unknown Services | 0 | 0 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, Nevada.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 256,955 | 256,946 | 0.00 |
| No enrollment | 2,208 | 2,208 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 254,747 | 254,738 | 0.00 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 23,023 | 23,016 | 0.03 |
| Disabled | 38,423 | 38,421 | 0.01 |
| Child | 143,193 | 143,193 | 0.00 |
| Adult | 50,108 | 50,108 | 0.00 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 22,257 | 22,250 | 0.03 |
| Disabled | 37,616 | 37,613 | 0.01 |
| Child | 143,173 | 143,173 | 0.00 |
| Adult | 50,042 | 50,042 | 0.00 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 134,995 | 134,995 | 0.00 |
| PHP | 219,383 | 219,382 | 0.00 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 36,614 | 36,614 | 0.00 |
| Mental Hospital Services for the Aged | 7 | 7 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 903 | 903 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 162 | 162 | 0.00 |
| Nursing Facility Services | 4,564 | 4,564 | 0.00 |
| Physician Services | 134,459 | 134,458 | 0.00 |
| Dental Services | 43,391 | 43,391 | 0.00 |
| Other Practitioner Services | 14,854 | 14,854 | 0.00 |
| Outpatient Services | 41,021 | 41,021 | 0.00 |
| Clinic Services | 20,167 | 20,167 | 0.00 |
| Home Health Services | 825 | 825 | 0.00 |
| Lab/Xray Services | 91,183 | 91,183 | 0.00 |
| Drugs | 81,851 | 81,850 | 0.00 |
| Other Services | 14,394 | 14,394 | 0.00 |
| Sterilizations | 4,486 | 4,486 | 0.00 |
| Abortions | 0 | 0 | 0.00 |
| Transportation Services | 16,604 | 16,604 | 0.00 |
| Personal Care Services | 5,441 | 5,441 | 0.00 |
| Targeted Case Management | 10,084 | 10,084 | 0.00 |
| Rehabilitation Services | 7,108 | 7,108 | 0.00 |
| PT/OT/Hearing/Speech Services | 3,067 | 3,067 | 0.00 |
| Hospice Services | 741 | 741 | 0.00 |
| Nurse Midwife Services | 308 | 308 | 0.00 |
| Nurse Practitioner Services | 17,067 | 17,067 | 0.00 |
| Private Nursing Services | 0 | 0 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 33,228 | 33,228 | 0.00 |
| Residential Care Services | 1,218 | 1,218 | 0.00 |
| Psychiatric Services | 17,880 | 17,880 | 0.00 |
| Adult Day Care | 342 | 342 | 0.00 |
| Unknown Services | 0 | 0 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, New Hampshire.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 148,759 | 148,752 | 0.00 |
| No enrollment | 88 | 88 | 0.00 |
| Enrollees with S-CHIP only | 6,446 | 6,446 | 0.00 |
| Total Medicaid Enrollees | 148,671 | 148,664 | 0.00 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 14,354 | 14,354 | 0.00 |
| Disabled | 21,203 | 21,203 | 0.00 |
| Child | 86,632 | 86,625 | 0.01 |
| Adult | 20,036 | 20,036 | 0.00 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 13,269 | 13,269 | 0.00 |
| Disabled | 19,495 | 19,495 | 0.00 |
| Child | 86,632 | 86,625 | 0.01 |
| Adult | 19,894 | 19,894 | 0.00 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 0 | 0 | 0.00 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 15,265 | 15,265 | 0.00 |
| Mental Hospital Services for the Aged | 0 | 0 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 283 | 283 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 38 | 38 | 0.00 |
| Nursing Facility Services | 7,124 | 7,124 | 0.00 |
| Physician Services | 89,912 | 89,910 | 0.00 |
| Dental Services | 41,502 | 41,499 | 0.01 |
| Other Practitioner Services | 22,104 | 22,104 | 0.00 |
| Outpatient Services | 55,643 | 55,643 | 0.00 |
| Clinic Services | 37,294 | 37,293 | 0.00 |
| Home Health Services | 2,882 | 2,882 | 0.00 |
| Lab/Xray Services | 61,282 | 61,282 | 0.00 |
| Drugs | 88,129 | 88,125 | 0.00 |
| Other Services | 11,366 | 11,365 | 0.01 |
| Sterilizations | 688 | 688 | 0.00 |
| Abortions | 2 | 2 | 0.00 |
| Transportation Services | 7,287 | 7,287 | 0.00 |
| Personal Care Services | 171 | 171 | 0.00 |
| Targeted Case Management | 0 | 0 | 0.00 |
| Rehabilitation Services | 2,285 | 2,285 | 0.00 |
| PT/OT/Hearing/Speech Services | 1,849 | 1,849 | 0.00 |
| Hospice Services | 0 | 0 | 0.00 |
| Nurse Midwife Services | 0 | 0 | 0.00 |
| Nurse Practitioner Services | 1,025 | 1,025 | 0.00 |
| Private Nursing Services | 129 | 129 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 34,955 | 34,955 | 0.00 |
| Residential Care Services | 528 | 528 | 0.00 |
| Psychiatric Services | 29,473 | 29,470 | 0.01 |
| Adult Day Care | 460 | 460 | 0.00 |
| Unknown Services | 0 | 0 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, New Jersey.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 1,190,176 | 1,189,236 | 0.08 |
| No enrollment | 9,499 | 9,499 | 0.00 |
| Enrollees with S-CHIP only | 99,179 | 99,174 | 0.01 |
| Total Medicaid Enrollees | 1,180,677 | 1,179,737 | 0.08 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 126,998 | 126,403 | 0.47 |
| Disabled | 189,826 | 189,507 | 0.17 |
| Child | 560,671 | 560,663 | 0.00 |
| Adult | 204,003 | 203,990 | 0.01 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 125,891 | 125,107 | 0.62 |
| Disabled | 189,377 | 188,905 | 0.25 |
| Child | 560,650 | 560,642 | 0.00 |
| Adult | 203,600 | 203,587 | 0.01 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 740,917 | 740,913 | 0.00 |
| PHP | 39,943 | 39,791 | 0.38 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 109,396 | 109,394 | 0.00 |
| Mental Hospital Services for the Aged | 359 | 359 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 1,794 | 1,792 | 0.11 |
| Intermediate Care Facility Services for the Mentally Retarded | 3,056 | 3,056 | 0.00 |
| Nursing Facility Services | 41,834 | 41,663 | 0.41 |
| Physician Services | 658,405 | 658,378 | 0.00 |
| Dental Services | 255,061 | 255,041 | 0.01 |
| Other Practitioner Services | 87,020 | 87,016 | 0.00 |
| Outpatient Services | 380,505 | 380,480 | 0.01 |
| Clinic Services | 68,928 | 68,923 | 0.01 |
| Home Health Services | 14,426 | 14,424 | 0.01 |
| Lab/Xray Services | 512,168 | 512,141 | 0.01 |
| Drugs | 715,713 | 715,639 | 0.01 |
| Other Services | 183,640 | 183,625 | 0.01 |
| Sterilizations | 413 | 413 | 0.00 |
| Abortions | 0 | 0 | 0.00 |
| Transportation Services | 90,358 | 90,307 | 0.06 |
| Personal Care Services | 27,562 | 27,553 | 0.03 |
| Targeted Case Management | 4,105 | 4,104 | 0.02 |
| Rehabilitation Services | 27,887 | 27,887 | 0.00 |
| PT/OT/Hearing/Speech Services | 0 | 0 | 0.00 |
| Hospice Services | 3,977 | 3,977 | 0.00 |
| Nurse Midwife Services | 744 | 744 | 0.00 |
| Nurse Practitioner Services | 14,609 | 14,609 | 0.00 |
| Private Nursing Services | 426 | 426 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 228,185 | 228,169 | 0.01 |
| Residential Care Services | 8,693 | 8,692 | 0.01 |
| Psychiatric Services | 125,137 | 125,121 | 0.01 |
| Adult Day Care | 14,399 | 14,395 | 0.03 |
| Unknown Services | 0 | 0 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, New Mexico.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 521,785 | 521,777 | 0.00 |
| No enrollment | 4,923 | 4,923 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 516,862 | 516,854 | 0.00 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 26,226 | 26,220 | 0.02 |
| Disabled | 65,664 | 65,662 | 0.00 |
| Child | 303,629 | 303,629 | 0.00 |
| Adult | 121,343 | 121,343 | 0.00 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 25,514 | 25,508 | 0.02 |
| Disabled | 64,811 | 64,807 | 0.01 |
| Child | 303,536 | 303,536 | 0.00 |
| Adult | 104,317 | 104,317 | 0.00 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 438,092 | 438,092 | 0.00 |
| PHP | 442,693 | 442,693 | 0.00 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 52,247 | 52,247 | 0.00 |
| Mental Hospital Services for the Aged | 73 | 73 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 4,742 | 4,742 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 259 | 259 | 0.00 |
| Nursing Facility Services | 6,359 | 6,359 | 0.00 |
| Physician Services | 315,157 | 315,156 | 0.00 |
| Dental Services | 161,936 | 161,936 | 0.00 |
| Other Practitioner Services | 66,200 | 66,200 | 0.00 |
| Outpatient Services | 184,683 | 184,683 | 0.00 |
| Clinic Services | 45,611 | 45,611 | 0.00 |
| Home Health Services | 3,857 | 3,857 | 0.00 |
| Lab/Xray Services | 225,939 | 225,939 | 0.00 |
| Drugs | 310,991 | 310,991 | 0.00 |
| Other Services | 89,720 | 89,720 | 0.00 |
| Sterilizations | 804 | 804 | 0.00 |
| Abortions | 11 | 11 | 0.00 |
| Transportation Services | 30,122 | 30,122 | 0.00 |
| Personal Care Services | 11,263 | 11,263 | 0.00 |
| Targeted Case Management | 21,938 | 21,938 | 0.00 |
| Rehabilitation Services | 841 | 841 | 0.00 |
| PT/OT/Hearing/Speech Services | 23,762 | 23,762 | 0.00 |
| Hospice Services | 1,052 | 1,052 | 0.00 |
| Nurse Midwife Services | 10,454 | 10,454 | 0.00 |
| Nurse Practitioner Services | 49,949 | 49,949 | 0.00 |
| Private Nursing Services | 5 | 5 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 122,818 | 122,818 | 0.00 |
| Residential Care Services | 2,560 | 2,560 | 0.00 |
| Psychiatric Services | 60,861 | 60,861 | 0.00 |
| Adult Day Care | 21 | 21 | 0.00 |
| Unknown Services | 24,608 | 24,607 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, New York.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 5,123,013 | 5,052,299 | 1.38 |
| No enrollment | 30,076 | 30,076 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 5,092,937 | 5,022,223 | 1.39 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 438,055 | 433,946 | 0.94 |
| Disabled | 740,854 | 726,884 | 1.89 |
| Child | 2,029,293 | 1,995,124 | 1.68 |
| Adult | 1,884,735 | 1,866,269 | 0.98 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 434,323 | 430,089 | 0.97 |
| Disabled | 737,990 | 723,961 | 1.90 |
| Child | 2,024,391 | 1,990,113 | 1.69 |
| Adult | 1,864,318 | 1,845,550 | 1.01 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 3,214,581 | 3,193,866 | 0.64 |
| PHP | 219,058 | 218,802 | 0.12 |
| PCCM | 11 | 11 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 650,867 | 649,429 | 0.22 |
| Mental Hospital Services for the Aged | 4,155 | 4,143 | 0.29 |
| Inpatient Psychiatric Facility Services (under Age 21) | 11,308 | 11,114 | 1.72 |
| Intermediate Care Facility Services for the Mentally Retarded | 8,678 | 8,655 | 0.27 |
| Nursing Facility Services | 148,004 | 147,897 | 0.07 |
| Physician Services | 2,779,270 | 2,770,393 | 0.32 |
| Dental Services | 1,301,431 | 1,299,850 | 0.12 |
| Other Practitioner Services | 291,979 | 291,832 | 0.05 |
| Outpatient Services | 1,913,229 | 1,906,686 | 0.34 |
| Clinic Services | 965,971 | 963,642 | 0.24 |
| Home Health Services | 267,084 | 266,650 | 0.16 |
| Lab/Xray Services | 2,210,127 | 2,204,618 | 0.25 |
| Drugs | 3,053,643 | 3,041,074 | 0.41 |
| Other Services | 946,331 | 944,276 | 0.22 |
| Sterilizations | 3,162 | 3,162 | 0.00 |
| Abortions | 9 | 9 | 0.00 |
| Transportation Services | 446,686 | 445,757 | 0.21 |
| Personal Care Services | 97,568 | 97,467 | 0.10 |
| Targeted Case Management | 35,252 | 35,155 | 0.28 |
| Rehabilitation Services | 119,090 | 118,799 | 0.24 |
| PT/OT/Hearing/Speech Services | 33,205 | 33,201 | 0.01 |
| Hospice Services | 7,176 | 7,175 | 0.01 |
| Nurse Midwife Services | 6,636 | 6,633 | 0.05 |
| Nurse Practitioner Services | 113,286 | 113,243 | 0.04 |
| Private Nursing Services | 9,168 | 9,157 | 0.12 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 613,928 | 613,456 | 0.08 |
| Residential Care Services | 45,712 | 45,655 | 0.12 |
| Psychiatric Services | 794,701 | 792,071 | 0.33 |
| Adult Day Care | 61,656 | 61,531 | 0.20 |
| Unknown Services | 4 | 4 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, North Carolina.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 1,782,760 | 1,782,735 | 0.00 |
| No enrollment | 1,807 | 1,807 | 0.00 |
| Enrollees with S-CHIP only | 107,324 | 107,318 | 0.01 |
| Total Medicaid Enrollees | 1,780,953 | 1,780,928 | 0.00 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 182,851 | 182,851 | 0.00 |
| Disabled | 288,753 | 288,753 | 0.00 |
| Child | 884,020 | 884,006 | 0.00 |
| Adult | 318,005 | 318,000 | 0.00 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 176,749 | 176,749 | 0.00 |
| Disabled | 282,566 | 282,566 | 0.00 |
| Child | 883,684 | 883,670 | 0.00 |
| Adult | 298,240 | 298,235 | 0.00 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 12,329 | 12,329 | 0.00 |
| PHP | 88,333 | 88,333 | 0.00 |
| PCCM | 1,137,269 | 1,137,258 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 211,929 | 211,928 | 0.00 |
| Mental Hospital Services for the Aged | 183 | 183 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 2,257 | 2,257 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 4,158 | 4,158 | 0.00 |
| Nursing Facility Services | 41,335 | 41,335 | 0.00 |
| Physician Services | 1,229,813 | 1,229,812 | 0.00 |
| Dental Services | 493,488 | 493,486 | 0.00 |
| Other Practitioner Services | 231,911 | 231,911 | 0.00 |
| Outpatient Services | 665,175 | 665,175 | 0.00 |
| Clinic Services | 458,240 | 458,238 | 0.00 |
| Home Health Services | 38,229 | 38,229 | 0.00 |
| Lab/Xray Services | 971,587 | 971,587 | 0.00 |
| Drugs | 1,034,092 | 1,034,091 | 0.00 |
| Other Services | 241,445 | 241,445 | 0.00 |
| Sterilizations | 8,149 | 8,149 | 0.00 |
| Abortions | 15 | 15 | 0.00 |
| Transportation Services | 132,438 | 132,438 | 0.00 |
| Personal Care Services | 78,675 | 78,675 | 0.00 |
| Targeted Case Management | 141,390 | 141,390 | 0.00 |
| Rehabilitation Services | 0 | 0 | 0.00 |
| PT/OT/Hearing/Speech Services | 25,975 | 25,975 | 0.00 |
| Hospice Services | 5,701 | 5,701 | 0.00 |
| Nurse Midwife Services | 1,533 | 1,533 | 0.00 |
| Nurse Practitioner Services | 1 | 1 | 0.00 |
| Private Nursing Services | 0 | 0 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 461,172 | 461,172 | 0.00 |
| Residential Care Services | 21 | 21 | 0.00 |
| Psychiatric Services | 211,895 | 211,895 | 0.00 |
| Adult Day Care | 493 | 493 | 0.00 |
| Unknown Services | 0 | 0 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, North Dakota.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 80,920 | 78,366 | 3.16 |
| No enrollment | 1,110 | 1,110 | 0.00 |
| Enrollees with S-CHIP only | 4,933 | 2,966 | 39.87 |
| Total Medicaid Enrollees | 79,810 | 77,256 | 3.20 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 9,928 | 9,584 | 3.46 |
| Disabled | 10,855 | 10,613 | 2.23 |
| Child | 37,873 | 37,873 | 0.00 |
| Adult | 16,221 | 16,220 | 0.01 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 9,341 | 8,982 | 3.84 |
| Disabled | 10,346 | 10,085 | 2.52 |
| Child | 37,871 | 37,871 | 0.00 |
| Adult | 16,217 | 16,216 | 0.01 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 1,303 | 1,303 | 0.00 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 38,177 | 38,177 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 8,860 | 8,860 | 0.00 |
| Mental Hospital Services for the Aged | 14 | 14 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 50 | 50 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 636 | 636 | 0.00 |
| Nursing Facility Services | 5,156 | 5,156 | 0.00 |
| Physician Services | 45,236 | 45,202 | 0.08 |
| Dental Services | 18,742 | 18,742 | 0.00 |
| Other Practitioner Services | 19,685 | 19,682 | 0.02 |
| Outpatient Services | 24,884 | 24,873 | 0.04 |
| Clinic Services | 22,321 | 22,312 | 0.04 |
| Home Health Services | 1,393 | 1,391 | 0.14 |
| Lab/Xray Services | 34,695 | 34,684 | 0.03 |
| Drugs | 41,858 | 41,858 | 0.00 |
| Other Services | 8,599 | 8,595 | 0.05 |
| Sterilizations | 286 | 286 | 0.00 |
| Abortions | 75 | 75 | 0.00 |
| Transportation Services | 5,384 | 5,381 | 0.06 |
| Personal Care Services | 1,445 | 1,445 | 0.00 |
| Targeted Case Management | 3,876 | 3,875 | 0.03 |
| Rehabilitation Services | 9,453 | 9,453 | 0.00 |
| PT/OT/Hearing/Speech Services | 2,040 | 2,040 | 0.00 |
| Hospice Services | 377 | 377 | 0.00 |
| Nurse Midwife Services | 522 | 522 | 0.00 |
| Nurse Practitioner Services | 6,668 | 6,667 | 0.01 |
| Private Nursing Services | 0 | 0 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 20,019 | 20,014 | 0.02 |
| Residential Care Services | 675 | 675 | 0.00 |
| Psychiatric Services | 12,594 | 12,586 | 0.06 |
| Adult Day Care | 1,052 | 1,052 | 0.00 |
| Unknown Services | 2 | 2 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, Ohio.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 2,157,415 | 2,144,555 | 0.60 |
| No enrollment | 367 | 367 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 2,157,048 | 2,144,188 | 0.60 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 177,036 | 177,002 | 0.02 |
| Disabled | 346,620 | 346,266 | 0.10 |
| Child | 1,141,935 | 1,129,612 | 1.08 |
| Adult | 491,457 | 491,308 | 0.03 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 151,442 | 151,404 | 0.03 |
| Disabled | 316,802 | 316,446 | 0.11 |
| Child | 1,141,933 | 1,129,609 | 1.08 |
| Adult | 491,117 | 490,967 | 0.03 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 1,183,867 | 1,183,782 | 0.01 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 166,956 | 166,890 | 0.04 |
| Mental Hospital Services for the Aged | 12 | 12 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 1,677 | 1,666 | 0.66 |
| Intermediate Care Facility Services for the Mentally Retarded | 7,772 | 7,770 | 0.03 |
| Nursing Facility Services | 83,399 | 83,396 | 0.00 |
| Physician Services | 1,035,752 | 1,033,111 | 0.25 |
| Dental Services | 376,188 | 375,530 | 0.17 |
| Other Practitioner Services | 297,387 | 297,264 | 0.04 |
| Outpatient Services | 743,037 | 741,586 | 0.20 |
| Clinic Services | 232,578 | 232,336 | 0.10 |
| Home Health Services | 43,415 | 43,346 | 0.16 |
| Lab/Xray Services | 695,728 | 694,200 | 0.22 |
| Drugs | 967,421 | 964,424 | 0.31 |
| Other Services | 127,719 | 127,685 | 0.03 |
| Sterilizations | 5,333 | 5,333 | 0.00 |
| Abortions | 14 | 14 | 0.00 |
| Transportation Services | 157,435 | 157,387 | 0.03 |
| Personal Care Services | 0 | 0 | 0.00 |
| Targeted Case Management | 1 | 1 | 0.00 |
| Rehabilitation Services | 43,254 | 43,229 | 0.06 |
| PT/OT/Hearing/Speech Services | 16,307 | 16,306 | 0.01 |
| Hospice Services | 2,128 | 2,128 | 0.00 |
| Nurse Midwife Services | 0 | 0 | 0.00 |
| Nurse Practitioner Services | 150,360 | 150,237 | 0.08 |
| Private Nursing Services | 15,304 | 15,261 | 0.28 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 366,209 | 365,899 | 0.08 |
| Residential Care Services | 11,418 | 11,417 | 0.01 |
| Psychiatric Services | 315,004 | 313,104 | 0.60 |
| Adult Day Care | 14,659 | 14,659 | 0.00 |
| Unknown Services | 201 | 201 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, Oklahoma.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 763,254 | 760,886 | 0.31 |
| No enrollment | 2,186 | 2,186 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 761,068 | 758,700 | 0.31 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 65,012 | 64,905 | 0.16 |
| Disabled | 108,652 | 108,434 | 0.20 |
| Child | 466,826 | 465,212 | 0.35 |
| Adult | 120,578 | 120,149 | 0.36 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 63,448 | 63,328 | 0.19 |
| Disabled | 106,456 | 106,203 | 0.24 |
| Child | 466,696 | 465,080 | 0.35 |
| Adult | 113,091 | 112,621 | 0.42 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 0 | 0 | 0.00 |
| PHP | 673,907 | 672,718 | 0.18 |
| PCCM | 12,939 | 12,937 | 0.02 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 114,230 | 114,202 | 0.02 |
| Mental Hospital Services for the Aged | 98 | 98 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 3,667 | 3,659 | 0.22 |
| Intermediate Care Facility Services for the Mentally Retarded | 1,829 | 1,829 | 0.00 |
| Nursing Facility Services | 21,545 | 21,532 | 0.06 |
| Physician Services | 464,418 | 463,994 | 0.09 |
| Dental Services | 201,496 | 201,434 | 0.03 |
| Other Practitioner Services | 66,253 | 66,247 | 0.01 |
| Outpatient Services | 308,363 | 308,161 | 0.07 |
| Clinic Services | 141,624 | 141,565 | 0.04 |
| Home Health Services | 7,293 | 7,290 | 0.04 |
| Lab/Xray Services | 367,171 | 366,938 | 0.06 |
| Drugs | 431,938 | 431,487 | 0.10 |
| Other Services | 61,679 | 61,658 | 0.03 |
| Sterilizations | 5,971 | 5,971 | 0.00 |
| Abortions | 175 | 175 | 0.00 |
| Transportation Services | 39,384 | 39,376 | 0.02 |
| Personal Care Services | 4,016 | 4,016 | 0.00 |
| Targeted Case Management | 40,505 | 40,449 | 0.14 |
| Rehabilitation Services | 0 | 0 | 0.00 |
| PT/OT/Hearing/Speech Services | 1,897 | 1,897 | 0.00 |
| Hospice Services | 79 | 79 | 0.00 |
| Nurse Midwife Services | 110 | 110 | 0.00 |
| Nurse Practitioner Services | 13,498 | 13,495 | 0.02 |
| Private Nursing Services | 0 | 0 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 192,797 | 192,732 | 0.03 |
| Residential Care Services | 4,294 | 4,292 | 0.05 |
| Psychiatric Services | 83,490 | 83,427 | 0.08 |
| Adult Day Care | 603 | 603 | 0.00 |
| Unknown Services | 3,862 | 3,862 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, Oregon.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 554,749 | 554,074 | 0.12 |
| No enrollment | 1,934 | 1,934 | 0.00 |
| Enrollees with S-CHIP only | 28,688 | 28,660 | 0.10 |
| Total Medicaid Enrollees | 552,815 | 552,140 | 0.12 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 49,207 | 49,191 | 0.03 |
| Disabled | 81,162 | 81,121 | 0.05 |
| Child | 272,235 | 271,715 | 0.19 |
| Adult | 121,523 | 121,453 | 0.06 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 47,752 | 47,737 | 0.03 |
| Disabled | 79,193 | 79,152 | 0.05 |
| Child | 271,835 | 271,316 | 0.19 |
| Adult | 121,061 | 120,991 | 0.06 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 351,371 | 351,100 | 0.08 |
| PHP | 427,969 | 427,584 | 0.09 |
| PCCM | 9,602 | 9,594 | 0.08 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 63,852 | 63,849 | 0.00 |
| Mental Hospital Services for the Aged | 87 | 87 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 450 | 450 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 43 | 43 | 0.00 |
| Nursing Facility Services | 9,683 | 9,683 | 0.00 |
| Physician Services | 300,643 | 300,507 | 0.05 |
| Dental Services | 143,057 | 143,038 | 0.01 |
| Other Practitioner Services | 65,293 | 65,285 | 0.01 |
| Outpatient Services | 172,907 | 172,879 | 0.02 |
| Clinic Services | 70,970 | 70,961 | 0.01 |
| Home Health Services | 2,533 | 2,533 | 0.00 |
| Lab/Xray Services | 233,419 | 233,369 | 0.02 |
| Drugs | 222,338 | 222,245 | 0.04 |
| Other Services | 34,847 | 34,844 | 0.01 |
| Sterilizations | 1,993 | 1,993 | 0.00 |
| Abortions | 3,236 | 3,236 | 0.00 |
| Transportation Services | 51,890 | 51,884 | 0.01 |
| Personal Care Services | 7,967 | 7,967 | 0.00 |
| Targeted Case Management | 45,430 | 45,393 | 0.08 |
| Rehabilitation Services | 28,468 | 28,461 | 0.02 |
| PT/OT/Hearing/Speech Services | 6,612 | 6,606 | 0.09 |
| Hospice Services | 565 | 565 | 0.00 |
| Nurse Midwife Services | 2,466 | 2,466 | 0.00 |
| Nurse Practitioner Services | 60,360 | 60,355 | 0.01 |
| Private Nursing Services | 0 | 0 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 120,757 | 120,745 | 0.01 |
| Residential Care Services | 9,227 | 9,227 | 0.00 |
| Psychiatric Services | 80,682 | 80,656 | 0.03 |
| Adult Day Care | 139 | 139 | 0.00 |
| Unknown Services | 32,180 | 32,177 | 0.01 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, Pennsylvania.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 2,111,259 | 2,111,111 | 0.01 |
| No enrollment | 17,212 | 17,212 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 2,094,047 | 2,093,899 | 0.01 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 232,145 | 232,097 | 0.02 |
| Disabled | 497,436 | 497,378 | 0.01 |
| Child | 977,430 | 977,392 | 0.00 |
| Adult | 387,036 | 387,032 | 0.00 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 223,896 | 223,840 | 0.03 |
| Disabled | 489,270 | 489,211 | 0.01 |
| Child | 974,969 | 974,931 | 0.00 |
| Adult | 386,325 | 386,322 | 0.00 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 1,319,011 | 1,318,968 | 0.00 |
| PHP | 1,464,378 | 1,464,299 | 0.01 |
| PCCM | 378,138 | 378,132 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 108,163 | 108,161 | 0.00 |
| Mental Hospital Services for the Aged | 6,999 | 6,999 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 5,213 | 5,213 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 4,060 | 4,060 | 0.00 |
| Nursing Facility Services | 79,195 | 79,192 | 0.00 |
| Physician Services | 431,759 | 431,753 | 0.00 |
| Dental Services | 157,106 | 157,105 | 0.00 |
| Other Practitioner Services | 79,456 | 79,456 | 0.00 |
| Outpatient Services | 220,501 | 220,499 | 0.00 |
| Clinic Services | 79,125 | 79,125 | 0.00 |
| Home Health Services | 16,760 | 16,759 | 0.01 |
| Lab/Xray Services | 324,427 | 324,425 | 0.00 |
| Drugs | 489,167 | 489,160 | 0.00 |
| Other Services | 119,550 | 119,544 | 0.01 |
| Sterilizations | 1,810 | 1,810 | 0.00 |
| Abortions | 0 | 0 | 0.00 |
| Transportation Services | 29,171 | 29,170 | 0.00 |
| Personal Care Services | 1 | 1 | 0.00 |
| Targeted Case Management | 72,592 | 72,590 | 0.00 |
| Rehabilitation Services | 9,371 | 9,370 | 0.01 |
| PT/OT/Hearing/Speech Services | 9,362 | 9,362 | 0.00 |
| Hospice Services | 960 | 960 | 0.00 |
| Nurse Midwife Services | 2,496 | 2,496 | 0.00 |
| Nurse Practitioner Services | 498 | 498 | 0.00 |
| Private Nursing Services | 241 | 241 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 94,338 | 94,336 | 0.00 |
| Residential Care Services | 758 | 758 | 0.00 |
| Psychiatric Services | 103,734 | 103,733 | 0.00 |
| Adult Day Care | 2,120 | 2,120 | 0.00 |
| Unknown Services | 26 | 26 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, Rhode Island.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 225,873 | 225,872 | 0.00 |
| No enrollment | 4,823 | 4,823 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 221,050 | 221,049 | 0.00 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 20,946 | 20,946 | 0.00 |
| Disabled | 44,066 | 44,066 | 0.00 |
| Child | 99,916 | 99,916 | 0.00 |
| Adult | 56,122 | 56,121 | 0.00 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 20,412 | 20,412 | 0.00 |
| Disabled | 43,542 | 43,542 | 0.00 |
| Child | 99,913 | 99,913 | 0.00 |
| Adult | 54,673 | 54,672 | 0.00 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 150,954 | 150,954 | 0.00 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 31,343 | 31,343 | 0.00 |
| Mental Hospital Services for the Aged | 167 | 167 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 190 | 190 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 45 | 45 | 0.00 |
| Nursing Facility Services | 10,284 | 10,284 | 0.00 |
| Physician Services | 92,199 | 92,199 | 0.00 |
| Dental Services | 59,011 | 59,011 | 0.00 |
| Other Practitioner Services | 44,921 | 44,921 | 0.00 |
| Outpatient Services | 90,177 | 90,176 | 0.00 |
| Clinic Services | 47,001 | 47,001 | 0.00 |
| Home Health Services | 9,377 | 9,377 | 0.00 |
| Lab/Xray Services | 131,373 | 131,373 | 0.00 |
| Drugs | 154,845 | 154,844 | 0.00 |
| Other Services | 43,832 | 43,832 | 0.00 |
| Sterilizations | 482 | 482 | 0.00 |
| Abortions | 402 | 402 | 0.00 |
| Transportation Services | 12,888 | 12,888 | 0.00 |
| Personal Care Services | 1,418 | 1,418 | 0.00 |
| Targeted Case Management | 8,049 | 8,049 | 0.00 |
| Rehabilitation Services | 6,711 | 6,711 | 0.00 |
| PT/OT/Hearing/Speech Services | 390 | 390 | 0.00 |
| Hospice Services | 1,014 | 1,014 | 0.00 |
| Nurse Midwife Services | 0 | 0 | 0.00 |
| Nurse Practitioner Services | 11 | 11 | 0.00 |
| Private Nursing Services | 0 | 0 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 31,724 | 31,724 | 0.00 |
| Residential Care Services | 2,207 | 2,207 | 0.00 |
| Psychiatric Services | 42,870 | 42,870 | 0.00 |
| Adult Day Care | 3,987 | 3,987 | 0.00 |
| Unknown Services | 50 | 50 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, South Carolina.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 949,921 | 949,830 | 0.01 |
| No enrollment | 360 | 360 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 949,561 | 949,470 | 0.01 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 77,059 | 77,045 | 0.02 |
| Disabled | 157,312 | 157,286 | 0.02 |
| Child | 482,432 | 482,387 | 0.01 |
| Adult | 232,758 | 232,752 | 0.00 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 75,917 | 75,903 | 0.02 |
| Disabled | 156,100 | 156,073 | 0.02 |
| Child | 481,880 | 481,835 | 0.01 |
| Adult | 198,143 | 198,137 | 0.00 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 125,342 | 125,341 | 0.00 |
| PHP | 42,275 | 42,274 | 0.00 |
| PCCM | 75,456 | 75,454 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 107,042 | 107,041 | 0.00 |
| Mental Hospital Services for the Aged | 229 | 229 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 1,003 | 1,003 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 1,736 | 1,736 | 0.00 |
| Nursing Facility Services | 16,229 | 16,228 | 0.01 |
| Physician Services | 532,146 | 532,125 | 0.00 |
| Dental Services | 264,556 | 264,551 | 0.00 |
| Other Practitioner Services | 145,401 | 145,401 | 0.00 |
| Outpatient Services | 284,059 | 284,054 | 0.00 |
| Clinic Services | 344,609 | 344,602 | 0.00 |
| Home Health Services | 3,232 | 3,232 | 0.00 |
| Lab/Xray Services | 413,996 | 413,990 | 0.00 |
| Drugs | 519,461 | 519,440 | 0.00 |
| Other Services | 10,325 | 10,325 | 0.00 |
| Sterilizations | 5,116 | 5,116 | 0.00 |
| Abortions | 5 | 5 | 0.00 |
| Transportation Services | 55,210 | 55,209 | 0.00 |
| Personal Care Services | 17,721 | 17,721 | 0.00 |
| Targeted Case Management | 42,035 | 42,032 | 0.01 |
| Rehabilitation Services | 7,095 | 7,093 | 0.03 |
| PT/OT/Hearing/Speech Services | 7,346 | 7,346 | 0.00 |
| Hospice Services | 2,647 | 2,647 | 0.00 |
| Nurse Midwife Services | 7,095 | 7,095 | 0.00 |
| Nurse Practitioner Services | 20,285 | 20,285 | 0.00 |
| Private Nursing Services | 22 | 22 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 182,637 | 182,634 | 0.00 |
| Residential Care Services | 362 | 362 | 0.00 |
| Psychiatric Services | 105,548 | 105,546 | 0.00 |
| Adult Day Care | 9,120 | 9,120 | 0.00 |
| Unknown Services | 129 | 129 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, South Dakota.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 132,647 | 130,590 | 1.55 |
| No enrollment | 113 | 113 | 0.00 |
| Enrollees with S-CHIP only | 1,883 | 1,867 | 0.85 |
| Total Medicaid Enrollees | 132,534 | 130,477 | 1.55 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 10,337 | 10,334 | 0.03 |
| Disabled | 18,799 | 18,770 | 0.15 |
| Child | 80,365 | 78,357 | 2.50 |
| Adult | 21,150 | 21,149 | 0.00 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 10,055 | 10,052 | 0.03 |
| Disabled | 18,567 | 18,538 | 0.16 |
| Child | 80,364 | 78,356 | 2.50 |
| Adult | 21,142 | 21,140 | 0.01 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 0 | 0 | 0.00 |
| PHP | 130,651 | 128,610 | 1.56 |
| PCCM | 61,142 | 61,140 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 16,600 | 16,584 | 0.10 |
| Mental Hospital Services for the Aged | 55 | 55 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 488 | 480 | 1.64 |
| Intermediate Care Facility Services for the Mentally Retarded | 191 | 191 | 0.00 |
| Nursing Facility Services | 5,736 | 5,736 | 0.00 |
| Physician Services | 73,335 | 72,927 | 0.56 |
| Dental Services | 16,878 | 16,846 | 0.19 |
| Other Practitioner Services | 46,325 | 46,182 | 0.31 |
| Outpatient Services | 38,233 | 38,187 | 0.12 |
| Clinic Services | 41,986 | 41,841 | 0.35 |
| Home Health Services | 457 | 455 | 0.44 |
| Lab/Xray Services | 59,072 | 58,770 | 0.51 |
| Drugs | 71,137 | 70,598 | 0.76 |
| Other Services | 6,823 | 6,821 | 0.03 |
| Sterilizations | 0 | 0 | 0.00 |
| Abortions | 0 | 0 | 0.00 |
| Transportation Services | 9,662 | 9,656 | 0.06 |
| Personal Care Services | 2,326 | 2,326 | 0.00 |
| Targeted Case Management | 0 | 0 | 0.00 |
| Rehabilitation Services | 767 | 765 | 0.26 |
| PT/OT/Hearing/Speech Services | 5,135 | 5,117 | 0.35 |
| Hospice Services | 304 | 304 | 0.00 |
| Nurse Midwife Services | 986 | 984 | 0.20 |
| Nurse Practitioner Services | 0 | 0 | 0.00 |
| Private Nursing Services | 3 | 3 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 30,611 | 30,535 | 0.25 |
| Residential Care Services | 1,290 | 1,278 | 0.93 |
| Psychiatric Services | 15,686 | 15,387 | 1.91 |
| Adult Day Care | 3 | 3 | 0.00 |
| Unknown Services | 2,034 | 2,033 | 0.05 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, Tennessee.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 1,499,759 | 1,499,447 | 0.02 |
| No enrollment | 20,393 | 20,393 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 1,479,366 | 1,479,054 | 0.02 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 115,228 | 115,206 | 0.02 |
| Disabled | 346,508 | 346,420 | 0.03 |
| Child | 726,110 | 725,948 | 0.02 |
| Adult | 291,520 | 291,480 | 0.01 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 98,682 | 98,656 | 0.03 |
| Disabled | 340,501 | 340,413 | 0.03 |
| Child | 725,968 | 725,806 | 0.02 |
| Adult | 291,221 | 291,180 | 0.01 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 382 | 382 | 0.00 |
| PHP | 1,432,581 | 1,432,287 | 0.02 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 116,583 | 116,581 | 0.00 |
| Mental Hospital Services for the Aged | 103 | 103 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 3,343 | 3,343 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 1,292 | 1,292 | 0.00 |
| Nursing Facility Services | 32,893 | 32,892 | 0.00 |
| Physician Services | 836,556 | 836,509 | 0.01 |
| Dental Services | 288,768 | 288,751 | 0.01 |
| Other Practitioner Services | 227,459 | 227,455 | 0.00 |
| Outpatient Services | 404,770 | 404,764 | 0.00 |
| Clinic Services | 214,809 | 214,797 | 0.01 |
| Home Health Services | 20,621 | 20,620 | 0.00 |
| Lab/Xray Services | 744,703 | 744,676 | 0.00 |
| Drugs | 847,233 | 847,176 | 0.01 |
| Other Services | 17,120 | 17,120 | 0.00 |
| Sterilizations | 10,255 | 10,255 | 0.00 |
| Abortions | 8,451 | 8,451 | 0.00 |
| Transportation Services | 113,438 | 113,437 | 0.00 |
| Personal Care Services | 0 | 0 | 0.00 |
| Targeted Case Management | 0 | 0 | 0.00 |
| Rehabilitation Services | 8,165 | 8,165 | 0.00 |
| PT/OT/Hearing/Speech Services | 14,420 | 14,420 | 0.00 |
| Hospice Services | 6,700 | 6,700 | 0.00 |
| Nurse Midwife Services | 4,397 | 4,397 | 0.00 |
| Nurse Practitioner Services | 149,554 | 149,552 | 0.00 |
| Private Nursing Services | 0 | 0 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 191,815 | 191,813 | 0.00 |
| Residential Care Services | 4,560 | 4,560 | 0.00 |
| Psychiatric Services | 311,838 | 311,810 | 0.01 |
| Adult Day Care | 43 | 43 | 0.00 |
| Unknown Services | 0 | 0 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, Texas.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 4,184,402 | 4,176,360 | 0.19 |
| No enrollment | 32,738 | 32,738 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 4,151,664 | 4,143,622 | 0.19 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 426,251 | 425,970 | 0.07 |
| Disabled | 536,447 | 535,936 | 0.10 |
| Child | 2,650,688 | 2,644,079 | 0.25 |
| Adult | 538,278 | 537,637 | 0.12 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 414,398 | 414,085 | 0.08 |
| Disabled | 530,370 | 529,851 | 0.10 |
| Child | 2,650,570 | 2,643,961 | 0.25 |
| Adult | 537,851 | 537,204 | 0.12 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 1,714,227 | 1,712,708 | 0.09 |
| PHP | 451,976 | 451,355 | 0.14 |
| PCCM | 1,323,451 | 1,322,986 | 0.04 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 518,183 | 518,076 | 0.02 |
| Mental Hospital Services for the Aged | 460 | 460 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 7,124 | 7,116 | 0.11 |
| Intermediate Care Facility Services for the Mentally Retarded | 12,513 | 12,512 | 0.01 |
| Nursing Facility Services | 95,602 | 95,578 | 0.03 |
| Physician Services | 2,231,742 | 2,230,533 | 0.05 |
| Dental Services | 1,243,760 | 1,243,470 | 0.02 |
| Other Practitioner Services | 429,190 | 429,145 | 0.01 |
| Outpatient Services | 918,456 | 918,156 | 0.03 |
| Clinic Services | 304,282 | 304,195 | 0.03 |
| Home Health Services | 23,388 | 23,383 | 0.02 |
| Lab/Xray Services | 1,807,844 | 1,807,017 | 0.05 |
| Drugs | 2,625,505 | 2,624,001 | 0.06 |
| Other Services | 551,510 | 551,424 | 0.02 |
| Sterilizations | 22,921 | 22,918 | 0.01 |
| Abortions | 6,081 | 6,081 | 0.00 |
| Transportation Services | 231,390 | 231,353 | 0.02 |
| Personal Care Services | 1,603 | 1,603 | 0.00 |
| Targeted Case Management | 201,227 | 201,079 | 0.07 |
| Rehabilitation Services | 44,431 | 44,423 | 0.02 |
| PT/OT/Hearing/Speech Services | 12,120 | 12,120 | 0.00 |
| Hospice Services | 16,697 | 16,696 | 0.01 |
| Nurse Midwife Services | 9,856 | 9,851 | 0.05 |
| Nurse Practitioner Services | 129,800 | 129,773 | 0.02 |
| Private Nursing Services | 164 | 164 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 879,246 | 879,103 | 0.02 |
| Residential Care Services | 2,438 | 2,437 | 0.04 |
| Psychiatric Services | 280,762 | 280,604 | 0.06 |
| Adult Day Care | 24,050 | 24,050 | 0.00 |
| Unknown Services | 35 | 35 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, Utah.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 339,648 | 339,599 | 0.01 |
| No enrollment | 205 | 205 | 0.00 |
| Enrollees with S-CHIP only | 39,277 | 39,276 | 0.00 |
| Total Medicaid Enrollees | 339,443 | 339,394 | 0.01 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 14,277 | 14,276 | 0.01 |
| Disabled | 36,602 | 36,601 | 0.00 |
| Child | 167,009 | 166,973 | 0.02 |
| Adult | 82,278 | 82,268 | 0.01 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 13,517 | 13,516 | 0.01 |
| Disabled | 35,055 | 35,053 | 0.01 |
| Child | 166,960 | 166,924 | 0.02 |
| Adult | 82,061 | 82,050 | 0.01 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 589 | 589 | 0.00 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 31,515 | 31,515 | 0.00 |
| Mental Hospital Services for the Aged | 1 | 1 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 112 | 112 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 826 | 826 | 0.00 |
| Nursing Facility Services | 5,381 | 5,381 | 0.00 |
| Physician Services | 81,535 | 81,533 | 0.00 |
| Dental Services | 86,032 | 86,030 | 0.00 |
| Other Practitioner Services | 21,434 | 21,433 | 0.00 |
| Outpatient Services | 48,687 | 48,686 | 0.00 |
| Clinic Services | 120,973 | 120,967 | 0.00 |
| Home Health Services | 1,970 | 1,970 | 0.00 |
| Lab/Xray Services | 100,425 | 100,419 | 0.01 |
| Drugs | 184,247 | 184,234 | 0.01 |
| Other Services | 11,655 | 11,654 | 0.01 |
| Sterilizations | 947 | 947 | 0.00 |
| Abortions | 0 | 0 | 0.00 |
| Transportation Services | 12,346 | 12,346 | 0.00 |
| Personal Care Services | 473 | 473 | 0.00 |
| Targeted Case Management | 150 | 150 | 0.00 |
| Rehabilitation Services | 478 | 478 | 0.00 |
| PT/OT/Hearing/Speech Services | 5,699 | 5,699 | 0.00 |
| Hospice Services | 997 | 997 | 0.00 |
| Nurse Midwife Services | 0 | 0 | 0.00 |
| Nurse Practitioner Services | 13,428 | 13,428 | 0.00 |
| Private Nursing Services | 18 | 18 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 39,126 | 39,126 | 0.00 |
| Residential Care Services | 1,216 | 1,216 | 0.00 |
| Psychiatric Services | 17,164 | 17,158 | 0.03 |
| Adult Day Care | 54 | 54 | 0.00 |
| Unknown Services | 388 | 388 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, Vermont.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 164,682 | 164,679 | 0.00 |
| No enrollment | 3,146 | 3,146 | 0.00 |
| Enrollees with S-CHIP only | 2,066 | 2,066 | 0.00 |
| Total Medicaid Enrollees | 161,536 | 161,533 | 0.00 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 18,661 | 18,659 | 0.01 |
| Disabled | 22,044 | 22,043 | 0.00 |
| Child | 66,651 | 66,651 | 0.00 |
| Adult | 52,114 | 52,114 | 0.00 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 17,710 | 17,708 | 0.01 |
| Disabled | 21,325 | 21,324 | 0.00 |
| Child | 66,651 | 66,651 | 0.00 |
| Adult | 52,085 | 52,085 | 0.00 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 0 | 0 | 0.00 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 10,897 | 10,897 | 0.00 |
| Mental Hospital Services for the Aged | 164 | 164 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 0 | 0 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 6 | 6 | 0.00 |
| Nursing Facility Services | 3,497 | 3,497 | 0.00 |
| Physician Services | 108,575 | 108,575 | 0.00 |
| Dental Services | 46,974 | 46,974 | 0.00 |
| Other Practitioner Services | 14,816 | 14,816 | 0.00 |
| Outpatient Services | 55,056 | 55,056 | 0.00 |
| Clinic Services | 31,318 | 31,318 | 0.00 |
| Home Health Services | 3,542 | 3,542 | 0.00 |
| Lab/Xray Services | 83,095 | 83,095 | 0.00 |
| Drugs | 113,901 | 113,901 | 0.00 |
| Other Services | 21,424 | 21,424 | 0.00 |
| Sterilizations | 683 | 683 | 0.00 |
| Abortions | 42 | 42 | 0.00 |
| Transportation Services | 15,718 | 15,717 | 0.01 |
| Personal Care Services | 2,007 | 2,007 | 0.00 |
| Targeted Case Management | 6,354 | 6,354 | 0.00 |
| Rehabilitation Services | 6 | 6 | 0.00 |
| PT/OT/Hearing/Speech Services | 4,192 | 4,192 | 0.00 |
| Hospice Services | 101 | 101 | 0.00 |
| Nurse Midwife Services | 0 | 0 | 0.00 |
| Nurse Practitioner Services | 2,598 | 2,598 | 0.00 |
| Private Nursing Services | 0 | 0 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 22,190 | 22,190 | 0.00 |
| Residential Care Services | 67 | 67 | 0.00 |
| Psychiatric Services | 36,534 | 36,534 | 0.00 |
| Adult Day Care | 0 | 0 | 0.00 |
| Unknown Services | 56 | 56 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, Virginia.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 956,145 | 955,610 | 0.06 |
| No enrollment | 1,660 | 1,660 | 0.00 |
| Enrollees with S-CHIP only | 46,646 | 46,562 | 0.18 |
| Total Medicaid Enrollees | 954,485 | 953,950 | 0.06 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 99,814 | 99,809 | 0.01 |
| Disabled | 160,073 | 160,038 | 0.02 |
| Child | 507,165 | 506,789 | 0.07 |
| Adult | 140,787 | 140,752 | 0.02 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 96,496 | 96,490 | 0.01 |
| Disabled | 156,706 | 156,670 | 0.02 |
| Child | 507,138 | 506,762 | 0.07 |
| Adult | 126,994 | 126,959 | 0.03 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 504,112 | 503,921 | 0.04 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 82,651 | 82,631 | 0.02 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 157,855 | 157,847 | 0.01 |
| Mental Hospital Services for the Aged | 904 | 904 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 757 | 757 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 1,923 | 1,923 | 0.00 |
| Nursing Facility Services | 28,035 | 28,034 | 0.00 |
| Physician Services | 625,876 | 625,743 | 0.02 |
| Dental Services | 179,229 | 179,203 | 0.01 |
| Other Practitioner Services | 43,120 | 43,120 | 0.00 |
| Outpatient Services | 17,076 | 17,075 | 0.01 |
| Clinic Services | 90,280 | 90,271 | 0.01 |
| Home Health Services | 5,709 | 5,709 | 0.00 |
| Lab/Xray Services | 432,415 | 432,320 | 0.02 |
| Drugs | 538,699 | 538,569 | 0.02 |
| Other Services | 56,758 | 56,752 | 0.01 |
| Sterilizations | 4,687 | 4,687 | 0.00 |
| Abortions | 115 | 115 | 0.00 |
| Transportation Services | 90,928 | 90,922 | 0.01 |
| Personal Care Services | 12,537 | 12,537 | 0.00 |
| Targeted Case Management | 5,376 | 5,376 | 0.00 |
| Rehabilitation Services | 3,694 | 3,694 | 0.00 |
| PT/OT/Hearing/Speech Services | 4,733 | 4,733 | 0.00 |
| Hospice Services | 2,418 | 2,418 | 0.00 |
| Nurse Midwife Services | 1,768 | 1,768 | 0.00 |
| Nurse Practitioner Services | 20,523 | 20,522 | 0.00 |
| Private Nursing Services | 510 | 509 | 0.20 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 81,092 | 81,082 | 0.01 |
| Residential Care Services | 0 | 0 | 0.00 |
| Psychiatric Services | 103,899 | 103,872 | 0.03 |
| Adult Day Care | 631 | 631 | 0.00 |
| Unknown Services | 0 | 0 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, Washington.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 1,245,992 | 1,245,914 | 0.01 |
| No enrollment | 54,521 | 54,521 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 1,191,471 | 1,191,393 | 0.01 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 85,955 | 85,953 | 0.00 |
| Disabled | 170,717 | 170,698 | 0.01 |
| Child | 622,822 | 622,776 | 0.01 |
| Adult | 311,977 | 311,966 | 0.00 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 81,026 | 81,024 | 0.00 |
| Disabled | 161,711 | 161,692 | 0.01 |
| Child | 621,542 | 621,493 | 0.01 |
| Adult | 292,248 | 292,231 | 0.01 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 692,036 | 692,012 | 0.00 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 5,487 | 5,487 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 89,891 | 89,888 | 0.00 |
| Mental Hospital Services for the Aged | 928 | 928 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 0 | 0 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 59 | 59 | 0.00 |
| Nursing Facility Services | 21,068 | 21,068 | 0.00 |
| Physician Services | 371,532 | 371,518 | 0.00 |
| Dental Services | 386,072 | 386,065 | 0.00 |
| Other Practitioner Services | 123,770 | 123,770 | 0.00 |
| Outpatient Services | 209,692 | 209,689 | 0.00 |
| Clinic Services | 110,929 | 110,928 | 0.00 |
| Home Health Services | 18 | 18 | 0.00 |
| Lab/Xray Services | 506,543 | 506,532 | 0.00 |
| Drugs | 739,279 | 739,249 | 0.00 |
| Other Services | 161,415 | 161,408 | 0.00 |
| Sterilizations | 1,119 | 1,119 | 0.00 |
| Abortions | 140 | 140 | 0.00 |
| Transportation Services | 29,906 | 29,906 | 0.00 |
| Personal Care Services | 25,342 | 25,342 | 0.00 |
| Targeted Case Management | 2,591 | 2,591 | 0.00 |
| Rehabilitation Services | 4,986 | 4,986 | 0.00 |
| PT/OT/Hearing/Speech Services | 16,361 | 16,360 | 0.01 |
| Hospice Services | 2,395 | 2,394 | 0.04 |
| Nurse Midwife Services | 1,911 | 1,911 | 0.00 |
| Nurse Practitioner Services | 11,983 | 11,983 | 0.00 |
| Private Nursing Services | 338 | 338 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 271,598 | 271,596 | 0.00 |
| Residential Care Services | 37,029 | 37,029 | 0.00 |
| Psychiatric Services | 105,019 | 105,019 | 0.00 |
| Adult Day Care | 3,345 | 3,345 | 0.00 |
| Unknown Services | 4 | 4 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, West Virginia.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------|-----------------------------|-------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 393,607 | 393,440 | 0.04 |
| No enrollment | 862 | 862 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 392,745 | 392,578 | 0.04 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 36,846 | 36,749 | 0.26 |
| Disabled | 110,319 | 110,280 | 0.04 |
| Child | 187,208 | 187,181 | 0.01 |
| Adult | 58,372 | 58,368 | 0.01 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 35,739 | 35,622 | 0.33 |
| Disabled | 108,215 | 108,162 | 0.05 |
| Child | 187,208 | 187,181 | 0.01 |
| Adult | 58,306 | 58,302 | 0.01 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 194,381 | 194,373 | 0.00 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 31,900 | 31,900 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 23,985 | 23,985 | 0.00 |
| Mental Hospital Services for the Aged | 199 | 199 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 1,858 | 1,858 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 547 | 547 | 0.00 |
| Nursing Facility Services | 10,799 | 10,791 | 0.07 |
| Physician Services | 168,158 | 168,152 | 0.00 |
| Dental Services | 96,074 | 96,072 | 0.00 |
| Other Practitioner Services | 36,189 | 36,189 | 0.00 |
| Outpatient Services | 111,961 | 111,959 | 0.00 |
| Clinic Services | 71,428 | 71,425 | 0.00 |
| Home Health Services | 1,988 | 1,988 | 0.00 |
| Lab/Xray Services | 138,475 | 138,468 | 0.01 |
| Drugs | 269,610 | 269,594 | 0.01 |
| Other Services | 48,940 | 48,935 | 0.01 |
| Sterilizations | 0 | 0 | 0.00 |
| Abortions | 1 | 1 | 0.00 |
| Transportation Services | 35,471 | 35,468 | 0.01 |
| Personal Care Services | 5,528 | 5,527 | 0.02 |
| Targeted Case Management | 5,686 | 5,686 | 0.00 |
| Rehabilitation Services | 20,966 | 20,965 | 0.00 |
| PT/OT/Hearing/Speech Services | 15,496 | 15,496 | 0.00 |
| Hospice Services | 780 | 780 | 0.00 |
| Nurse Midwife Services | 1,842 | 1,842 | 0.00 |
| Nurse Practitioner Services | 28,982 | 28,981 | 0.00 |
| Private Nursing Services | 615 | 615 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 50,664 | 50,659 | 0.01 |
| Residential Care Services | 3,599 | 3,599 | 0.00 |
| Psychiatric Services | 77,341 | 77,340 | 0.00 |
| Adult Day Care | 0 | 0 | 0.00 |
| Unknown Services | 7 | 7 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, Wisconsin.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 1,051,903 | 1,049,766 | 0.20 |
| No enrollment | 13,099 | 13,099 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 1,038,804 | 1,036,667 | 0.21 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 150,181 | 150,170 | 0.01 |
| Disabled | 146,619 | 146,564 | 0.04 |
| Child | 436,533 | 434,569 | 0.45 |
| Adult | 305,471 | 305,364 | 0.04 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 144,355 | 144,343 | 0.01 |
| Disabled | 143,355 | 143,300 | 0.04 |
| Child | 435,149 | 433,184 | 0.45 |
| Adult | 289,292 | 289,182 | 0.04 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 524,025 | 523,420 | 0.12 |
| PHP | 56,001 | 55,940 | 0.11 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 102,905 | 102,796 | 0.11 |
| Mental Hospital Services for the Aged | 158 | 158 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 2,801 | 2,801 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 1,667 | 1,667 | 0.00 |
| Nursing Facility Services | 32,783 | 32,783 | 0.00 |
| Physician Services | 462,576 | 461,582 | 0.21 |
| Dental Services | 198,299 | 198,285 | 0.01 |
| Other Practitioner Services | 145,231 | 145,197 | 0.02 |
| Outpatient Services | 373,213 | 372,827 | 0.10 |
| Clinic Services | 404,368 | 404,035 | 0.08 |
| Home Health Services | 7,997 | 7,984 | 0.16 |
| Lab/Xray Services | 519,706 | 519,368 | 0.07 |
| Drugs | 684,398 | 683,271 | 0.16 |
| Other Services | 153,014 | 152,958 | 0.04 |
| Sterilizations | 3,772 | 3,772 | 0.00 |
| Abortions | 0 | 0 | 0.00 |
| Transportation Services | 70,214 | 70,202 | 0.02 |
| Personal Care Services | 13,920 | 13,920 | 0.00 |
| Targeted Case Management | 36,920 | 36,889 | 0.08 |
| Rehabilitation Services | 7,791 | 7,782 | 0.12 |
| PT/OT/Hearing/Speech Services | 15,745 | 15,736 | 0.06 |
| Hospice Services | 3,010 | 3,010 | 0.00 |
| Nurse Midwife Services | 650 | 650 | 0.00 |
| Nurse Practitioner Services | 37,022 | 37,001 | 0.06 |
| Private Nursing Services | 519 | 518 | 0.19 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 272,916 | 272,821 | 0.03 |
| Residential Care Services | 10,871 | 10,871 | 0.00 |
| Psychiatric Services | 110,205 | 110,189 | 0.01 |
| Adult Day Care | 3,335 | 3,335 | 0.00 |
| Unknown Services | 29 | 29 | 0.00 |

Table A.1 Within State/Within Year Validation Statistics Before and After Unduplication, 2006, Wyoming.

| Measure | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|---|----------------------------------|-----------------------------------|----------------------|
| Before Un-duplication (MAX) | | | |
| Total PS records | 80,790 | 80,767 | 0.03 |
| No enrollment | 393 | 393 | 0.00 |
| Enrollees with S-CHIP only | 0 | 0 | 0.00 |
| Total Medicaid Enrollees | 80,397 | 80,374 | 0.03 |
| Medicaid Enrollees by Basis of Enrollment | | | |
| Aged | 5,500 | 5,496 | 0.07 |
| Disabled | 9,742 | 9,741 | 0.01 |
| Child | 52,781 | 52,767 | 0.03 |
| Adult | 12,374 | 12,370 | 0.03 |
| Medicaid Enrollees (Excluding Persons with Restricted Benefits Only) | | | |
| Aged | 5,362 | 5,358 | 0.07 |
| Disabled | 9,655 | 9,654 | 0.01 |
| Child | 52,769 | 52,755 | 0.03 |
| Adult | 12,354 | 12,349 | 0.04 |
| Medicaid Enrollees by Type of Managed Care Premium Payment | | | |
| HMO/HIO | 0 | 0 | 0.00 |
| PHP | 0 | 0 | 0.00 |
| PCCM | 0 | 0 | 0.00 |
| Medicaid Enrollees by Type of Service Performed | | | |
| Inpatient Hospital | 11,189 | 11,189 | 0.00 |
| Mental Hospital Services for the Aged | 11 | 11 | 0.00 |
| Inpatient Psychiatric Facility Services (under Age 21) | 497 | 497 | 0.00 |
| Intermediate Care Facility Services for the Mentally Retarded | 96 | 96 | 0.00 |
| Nursing Facility Services | 2,303 | 2,303 | 0.00 |
| Physician Services | 52,590 | 52,583 | 0.01 |
| Dental Services | 20,095 | 20,094 | 0.00 |
| Other Practitioner Services | 11,680 | 11,679 | 0.01 |
| Outpatient Services | 29,640 | 29,639 | 0.00 |
| Clinic Services | 16,101 | 16,099 | 0.01 |
| Home Health Services | 591 | 591 | 0.00 |
| Lab/Xray Services | 39,220 | 39,216 | 0.01 |
| Drugs | 47,005 | 46,999 | 0.01 |
| Other Services | 19,896 | 19,892 | 0.02 |
| Sterilizations | 480 | 480 | 0.00 |
| Abortions | 1 | 1 | 0.00 |
| Transportation Services | 3,010 | 3,010 | 0.00 |
| Personal Care Services | 0 | 0 | 0.00 |
| Targeted Case Management | 2,307 | 2,307 | 0.00 |
| Rehabilitation Services | 3,480 | 3,480 | 0.00 |
| PT/OT/Hearing/Speech Services | 499 | 499 | 0.00 |
| Hospice Services | 83 | 83 | 0.00 |
| Nurse Midwife Services | 0 | 0 | 0.00 |
| Nurse Practitioner Services | 10,165 | 10,165 | 0.00 |
| Private Nursing Services | 0 | 0 | 0.00 |
| Religious Non-Medical Services | 0 | 0 | 0.00 |
| Durable Medical Equipment | 15,965 | 15,963 | 0.01 |
| Residential Care Services | 1,084 | 1,084 | 0.00 |
| Psychiatric Services | 10,149 | 10,149 | 0.00 |
| Adult Day Care | 48 | 48 | 0.00 |
| Unknown Services | 2 | 2 | 0.00 |

Table A.2 Person Summary File Record Count, Before Unduplication, 2005

| State | Before Unduplication (MAX) | | | |
|----------------------|----------------------------|-------------------------------|-------------------------------|--------------------------------|
| | Total PS Records | Persons with No Enrollment | Enrolled Only in S-CHIP | Total Medicaid Enrollees |
| Alabama | 963,526 | 7,936 | 0 | 955,590 |
| Alaska | 133,699 | 849 | 0 | 132,850 |
| Arizona | 1,491,569 | 14,727 | 0 | 1,476,842 |
| Arkansas | 762,193 | 15,687 | 0 | 746,506 |
| California | 10,924,768 | 331,245 | 0 | 10,593,523 |
| Colorado | 645,965 | 42,016 | 47,057 | 603,949 |
| Connecticut | 531,515 | 2,396 | 0 | 529,119 |
| Delaware | 181,053 | 1,118 | 0 | 179,935 |
| District of Columbia | 167,845 | 1,331 | 0 | 166,514 |
| Florida | 3,059,524 | 39,422 | 0 | 3,020,102 |
| Georgia | 2,107,826 | 24,602 | 244,314 | 2,083,224 |
| Hawaii | 237,736 | 5,949 | 0 | 231,787 |
| Idaho | 233,765 | 413 | 2,082 | 233,352 |
| Illinois | 2,612,709 | 2,238 | 160,064 | 2,610,471 |
| Indiana | 1,060,392 | 15,503 | 16,263 | 1,044,889 |
| Iowa | 430,985 | 2,171 | 0 | 428,814 |
| Kansas | 361,325 | 4,587 | 0 | 356,738 |
| Kentucky | 894,282 | 7,322 | 12,760 | 886,960 |
| Louisiana | 1,244,886 | 78,733 | 0 | 1,166,153 |
| Maine | 327,491 | 991 | 4,006 | 326,500 |
| Maryland | 868,686 | 1,765 | 7,820 | 866,921 |
| Massachusetts | 1,255,313 | 9,418 | 24,134 | 1,245,895 |
| Michigan | 1,878,812 | 21,037 | 0 | 1,857,775 |
| Minnesota | 792,366 | 1,654 | 26,499 | 790,712 |
| Mississippi | 787,537 | 7,291 | 0 | 780,246 |
| Missouri | 1,219,756 | 1,827 | 0 | 1,217,929 |
| Montana | 129,052 | 1,048 | 12,723 | 128,004 |
| Nebraska | 261,841 | 469 | 0 | 261,372 |
| Nevada | 272,739 | 4,859 | 0 | 267,880 |
| New Hampshire | 145,834 | 97 | 6,091 | 145,737 |
| New Jersey | 1,134,761 | 8,991 | 88,862 | 1,125,770 |
| New Mexico | 530,733 | 3,031 | 0 | 527,702 |
| New York | 5,118,695 | 30,861 | 0 | 5,087,834 |
| North Carolina | 1,729,575 | 967 | 126,721 | 1,728,608 |
| North Dakota | 79,961 | 1,336 | 3,639 | 78,625 |
| Ohio | 2,127,176 | 550 | 0 | 2,126,626 |
| Oklahoma | 730,873 | 2,264 | 0 | 728,609 |
| Oregon | 565,361 | 1,916 | 24,855 | 563,445 |
| Pennsylvania | 2,038,176 | 8,282 | 0 | 2,029,894 |
| Rhode Island | 224,884 | 5,100 | 0 | 219,784 |
| South Carolina | 1,012,763 | 476 | 0 | 1,012,287 |
| South Dakota | 130,988 | 94 | 1,810 | 130,894 |
| Tennessee | 1,607,615 | 13,370 | 0 | 1,594,245 |
| Texas | 4,164,091 | 60,821 | 0 | 4,103,270 |
| Utah | 359,506 | 14,055 | 36,166 | 345,451 |
| Vermont | 165,860 | 3,098 | 2,111 | 162,762 |
| Virginia | 928,642 | 957 | 43,186 | 927,685 |
| Washington | 1,285,090 | 85,518 | 0 | 1,199,572 |
| West Virginia | 393,616 | 10,505 | 0 | 383,111 |
| Wisconsin | 1,034,583 | 12,380 | 0 | 1,022,203 |
| Wyoming | 81,599 | 400 | 0 | 81,199 |
| United States | 61,429,538 | 913,673 | 891,163 | 60,515,865 |

Table A.2 Person Summary File Record Count , After Unduplication, 2005

| State | After Unduplication (MAXEM) | | | |
|-------------------------------|-----------------------------|----------------------------------|-------------------------------|--------------------------------|
| | Total PS Records | Persons with No Enrollment | Enrolled Only in S-CHIP | Total Medicaid Enrollees |
| Alabama | 962,325 | 7,936 | 0 | 954,389 |
| Alaska | 133,651 | 849 | 0 | 132,802 |
| Arizona | 1,489,015 | 14,727 | 0 | 1,474,288 |
| Arkansas | 761,387 | 15,687 | 0 | 745,700 |
| California | 10,924,364 | 331,245 | 0 | 10,593,119 |
| Colorado | 645,723 | 42,016 | 47,045 | 603,707 |
| Connecticut | 530,865 | 2,396 | 0 | 528,469 |
| Delaware | 181,031 | 1,118 | 0 | 179,913 |
| District of Columbia | 167,771 | 1,331 | 0 | 166,440 |
| Florida | 3,059,056 | 39,422 | 0 | 3,019,634 |
| Georgia | 2,104,924 | 24,602 | 243,326 | 2,080,322 |
| Hawaii | 237,569 | 5,949 | 0 | 231,620 |
| Idaho | 233,746 | 413 | 2,082 | 233,333 |
| Illinois | 2,572,719 | 2,238 | 158,439 | 2,570,481 |
| Indiana | 1,060,267 | 15,503 | 16,262 | 1,044,764 |
| Iowa | 430,450 | 2,171 | 0 | 428,279 |
| Kansas | 361,293 | 4,587 | 0 | 356,706 |
| Kentucky | 881,254 | 7,322 | 12,463 | 873,932 |
| Louisiana | 1,244,852 | 78,733 | 0 | 1,166,119 |
| Maine | 327,400 | 991 | 4,005 | 326,409 |
| Maryland | 868,665 | 1,765 | 7,817 | 866,900 |
| Massachusetts | 1,255,261 | 9,418 | 24,133 | 1,245,843 |
| Michigan | 1,878,738 | 21,037 | 0 | 1,857,701 |
| Minnesota | 792,269 | 1,654 | 26,499 | 790,615 |
| Mississippi | 785,813 | 7,291 | 0 | 778,522 |
| Missouri | 1,219,327 | 1,827 | 0 | 1,217,500 |
| Montana | 129,052 | 1,048 | 12,723 | 128,004 |
| Nebraska | 261,840 | 469 | 0 | 261,371 |
| Nevada | 272,692 | 4,859 | 0 | 267,833 |
| New Hampshire | 145,825 | 97 | 6,090 | 145,728 |
| New Jersey | 1,130,753 | 8,991 | 88,384 | 1,121,762 |
| New Mexico | 530,725 | 3,031 | 0 | 527,694 |
| New York | 5,043,983 | 30,861 | 0 | 5,013,122 |
| North Carolina | 1,728,885 | 967 | 126,694 | 1,727,918 |
| North Dakota | 78,448 | 1,336 | 2,495 | 77,112 |
| Ohio | 2,113,998 | 550 | 0 | 2,113,448 |
| Oklahoma | 728,101 | 2,264 | 0 | 725,837 |
| Oregon | 564,481 | 1,916 | 24,810 | 562,565 |
| Pennsylvania | 2,038,014 | 8,282 | 0 | 2,029,732 |
| Rhode Island | 224,883 | 5,100 | 0 | 219,783 |
| South Carolina | 1,012,647 | 476 | 0 | 1,012,171 |
| South Dakota | 128,932 | 94 | 1,790 | 128,838 |
| Tennessee | 1,607,239 | 13,370 | 0 | 1,593,869 |
| Texas | 4,156,996 | 60,821 | 0 | 4,096,175 |
| Utah | 359,493 | 14,055 | 36,166 | 345,438 |
| Vermont | 165,841 | 3,098 | 2,111 | 162,743 |
| Virginia | 927,841 | 957 | 43,018 | 926,884 |
| Washington | 1,284,959 | 85,518 | 0 | 1,199,441 |
| West Virginia | 393,504 | 10,505 | 0 | 382,999 |
| Wisconsin | 1,028,142 | 12,380 | 0 | 1,015,762 |
| Wyoming | 81,529 | 400 | 0 | 81,129 |
| United States | 61,248,538 | 913,673 | 886,352 | 60,334,865 |
| United States (across states) | 59,830,585 | 913,673 | 875,674 | 58,916,912 |

Table A.2 Person Summary File Record Count, Duplicates 2005

| State | Duplicates | | | |
|----------------------|------------------|----------------------------|-------------------------|--------------------------|
| | Total PS Records | Persons with No Enrollment | Enrolled Only in S-CHIP | Total Medicaid Enrollees |
| Alabama | 1,201 | 0 | 0 | 1,201 |
| Alaska | 48 | 0 | 0 | 48 |
| Arizona | 2,554 | 0 | 0 | 2,554 |
| Arkansas | 806 | 0 | 0 | 806 |
| California | 404 | 0 | 0 | 404 |
| Colorado | 242 | 0 | 12 | 242 |
| Connecticut | 650 | 0 | 0 | 650 |
| Delaware | 22 | 0 | 0 | 22 |
| District of Columbia | 74 | 0 | 0 | 74 |
| Florida | 468 | 0 | 0 | 468 |
| Georgia | 2,902 | 0 | 988 | 2,902 |
| Hawaii | 167 | 0 | 0 | 167 |
| Idaho | 19 | 0 | 0 | 19 |
| Illinois | 39,990 | 0 | 1,625 | 39,990 |
| Indiana | 125 | 0 | 1 | 125 |
| Iowa | 535 | 0 | 0 | 535 |
| Kansas | 32 | 0 | 0 | 32 |
| Kentucky | 13,028 | 0 | 297 | 13,028 |
| Louisiana | 34 | 0 | 0 | 34 |
| Maine | 91 | 0 | 1 | 91 |
| Maryland | 21 | 0 | 3 | 21 |
| Massachusetts | 52 | 0 | 1 | 52 |
| Michigan | 74 | 0 | 0 | 74 |
| Minnesota | 97 | 0 | 0 | 97 |
| Mississippi | 1,724 | 0 | 0 | 1,724 |
| Missouri | 429 | 0 | 0 | 429 |
| Montana | 0 | 0 | 0 | 0 |
| Nebraska | 1 | 0 | 0 | 1 |
| Nevada | 47 | 0 | 0 | 47 |
| New Hampshire | 9 | 0 | 1 | 9 |
| New Jersey | 4,008 | 0 | 478 | 4,008 |
| New Mexico | 8 | 0 | 0 | 8 |
| New York | 74,712 | 0 | 0 | 74,712 |
| North Carolina | 690 | 0 | 27 | 690 |
| North Dakota | 1,513 | 0 | 1,144 | 1,513 |
| Ohio | 13,178 | 0 | 0 | 13,178 |
| Oklahoma | 2,772 | 0 | 0 | 2,772 |
| Oregon | 880 | 0 | 45 | 880 |
| Pennsylvania | 162 | 0 | 0 | 162 |
| Rhode Island | 1 | 0 | 0 | 1 |
| South Carolina | 116 | 0 | 0 | 116 |
| South Dakota | 2,056 | 0 | 20 | 2,056 |
| Tennessee | 376 | 0 | 0 | 376 |
| Texas | 7,095 | 0 | 0 | 7,095 |
| Utah | 13 | 0 | 0 | 13 |
| Vermont | 19 | 0 | 0 | 19 |
| Virginia | 801 | 0 | 168 | 801 |
| Washington | 131 | 0 | 0 | 131 |
| West Virginia | 112 | 0 | 0 | 112 |
| Wisconsin | 6,441 | 0 | 0 | 6,441 |
| Wyoming | 70 | 0 | 0 | 70 |
| United States | 181,000 | 0 | 4,811 | 181,000 |

Table A.2 Person Summary File Record Count Before Unduplication, 2006

| State | Before Unduplication (MAX) | | | Total Medicaid Enrollees |
|----------------------|----------------------------|----------------------------------|-------------------------------|--------------------------------|
| | Total PS Records | Persons with No Enrollment | Enrolled Only in S-CHIP | |
| Alabama | 976,361 | 8,584 | 0 | 967,777 |
| Alaska | 131,586 | 846 | 0 | 130,740 |
| Arizona | 1,533,874 | 22,020 | 47,232 | 1,511,854 |
| Arkansas | 771,587 | 12,681 | 0 | 758,906 |
| California | 10,946,644 | 334,725 | 0 | 10,611,919 |
| Colorado | 642,575 | 15,807 | 55,064 | 626,768 |
| Connecticut | 534,495 | 927 | 0 | 533,568 |
| Delaware | 185,602 | 1,060 | 0 | 184,542 |
| District of Columbia | 169,814 | 2,640 | 0 | 167,174 |
| Florida | 3,042,834 | 45,033 | 0 | 2,997,801 |
| Georgia | 2,101,713 | 58,064 | 284,861 | 2,043,649 |
| Hawaii | 238,226 | 6,584 | 0 | 231,642 |
| Idaho | 230,815 | 903 | 3,703 | 229,912 |
| Illinois | 2,602,268 | 1,621 | 196,048 | 2,600,647 |
| Indiana | 1,067,016 | 553 | 16,703 | 1,066,463 |
| Iowa | 468,572 | 1,225 | 0 | 467,347 |
| Kansas | 361,498 | 2,747 | 0 | 358,751 |
| Kentucky | 893,225 | 3,133 | 18,250 | 890,092 |
| Louisiana | 1,273,978 | 60,901 | 0 | 1,213,077 |
| Maine | 337,424 | 1,287 | 3,726 | 336,137 |
| Maryland | 867,649 | 1,672 | 10,232 | 865,977 |
| Massachusetts | 1,315,266 | 7,592 | 50,728 | 1,307,674 |
| Michigan | 1,958,996 | 20,597 | 0 | 1,938,399 |
| Minnesota | 809,009 | 6,827 | 24,056 | 802,182 |
| Mississippi | 777,471 | 1,472 | 0 | 775,999 |
| Missouri | 1,115,164 | 3,766 | 0 | 1,111,398 |
| Montana | 129,162 | 2,228 | 14,168 | 126,934 |
| Nebraska | 262,403 | 389 | 0 | 262,014 |
| Nevada | 256,955 | 2,208 | 0 | 254,747 |
| New Hampshire | 148,759 | 88 | 6,446 | 148,671 |
| New Jersey | 1,190,176 | 9,499 | 99,179 | 1,180,677 |
| New Mexico | 521,785 | 4,923 | 0 | 516,862 |
| New York | 5,123,013 | 30,076 | 0 | 5,092,937 |
| North Carolina | 1,782,760 | 1,807 | 107,324 | 1,780,953 |
| North Dakota | 80,920 | 1,110 | 4,933 | 79,810 |
| Ohio | 2,157,415 | 367 | 0 | 2,157,048 |
| Oklahoma | 763,254 | 2,186 | 0 | 761,068 |
| Oregon | 554,749 | 1,934 | 28,688 | 552,815 |
| Pennsylvania | 2,111,259 | 17,212 | 0 | 2,094,047 |
| Rhode Island | 225,873 | 4,823 | 0 | 221,050 |
| South Carolina | 949,921 | 360 | 0 | 949,561 |
| South Dakota | 132,647 | 113 | 1,883 | 132,534 |
| Tennessee | 1,499,759 | 20,393 | 0 | 1,479,366 |
| Texas | 4,184,402 | 32,738 | 0 | 4,151,664 |
| Utah | 339,648 | 205 | 39,277 | 339,443 |
| Vermont | 164,682 | 3,146 | 2,066 | 161,536 |
| Virginia | 956,145 | 1,660 | 46,646 | 954,485 |
| Washington | 1,245,992 | 54,521 | 0 | 1,191,471 |
| West Virginia | 393,607 | 862 | 0 | 392,745 |
| Wisconsin | 1,051,903 | 13,099 | 0 | 1,038,804 |
| Wyoming | 80,790 | 393 | 0 | 80,397 |
| United States | 61,661,641 | 829,607 | 1,061,213 | 60,832,034 |

Table A.2 Person Summary File Record Count, After Unduplication, 2006

| State | After Unduplication (MAXEM) | | | Total Medicaid Enrollees |
|-------------------------------|-----------------------------|----------------------------------|-------------------------------|--------------------------------|
| | Total PS Records | Persons with No Enrollment | Enrolled Only in S-CHIP | |
| Alabama | 975,571 | 8,584 | 0 | 966,987 |
| Alaska | 131,581 | 846 | 0 | 130,735 |
| Arizona | 1,533,658 | 22,020 | 47,185 | 1,511,638 |
| Arkansas | 770,869 | 12,681 | 0 | 758,188 |
| California | 10,946,521 | 334,725 | 0 | 10,611,796 |
| Colorado | 642,291 | 15,807 | 55,048 | 626,484 |
| Connecticut | 533,902 | 927 | 0 | 532,975 |
| Delaware | 185,588 | 1,060 | 0 | 184,528 |
| District of Columbia | 169,722 | 2,640 | 0 | 167,082 |
| Florida | 3,042,487 | 45,033 | 0 | 2,997,454 |
| Georgia | 2,101,652 | 58,064 | 284,828 | 2,043,588 |
| Hawaii | 238,093 | 6,584 | 0 | 231,509 |
| Idaho | 230,796 | 903 | 3,703 | 229,893 |
| Illinois | 2,575,245 | 1,621 | 193,735 | 2,573,624 |
| Indiana | 1,066,881 | 553 | 16,703 | 1,066,328 |
| Iowa | 468,135 | 1,225 | 0 | 466,910 |
| Kansas | 361,478 | 2,747 | 0 | 358,731 |
| Kentucky | 893,221 | 3,133 | 18,250 | 890,088 |
| Louisiana | 1,273,959 | 60,901 | 0 | 1,213,058 |
| Maine | 337,421 | 1,287 | 3,726 | 336,134 |
| Maryland | 867,637 | 1,672 | 10,229 | 865,965 |
| Massachusetts | 1,315,161 | 7,592 | 50,726 | 1,307,569 |
| Michigan | 1,958,848 | 20,597 | 0 | 1,938,251 |
| Minnesota | 808,952 | 6,827 | 24,056 | 802,125 |
| Mississippi | 775,018 | 1,472 | 0 | 773,546 |
| Missouri | 1,115,145 | 3,766 | 0 | 1,111,379 |
| Montana | 129,162 | 2,228 | 14,168 | 126,934 |
| Nebraska | 262,331 | 389 | 0 | 261,942 |
| Nevada | 256,946 | 2,208 | 0 | 254,738 |
| New Hampshire | 148,752 | 88 | 6,446 | 148,664 |
| New Jersey | 1,189,236 | 9,499 | 99,174 | 1,179,737 |
| New Mexico | 521,777 | 4,923 | 0 | 516,854 |
| New York | 5,052,299 | 30,076 | 0 | 5,022,223 |
| North Carolina | 1,782,735 | 1,807 | 107,318 | 1,780,928 |
| North Dakota | 78,366 | 1,110 | 2,966 | 77,256 |
| Ohio | 2,144,555 | 367 | 0 | 2,144,188 |
| Oklahoma | 760,886 | 2,186 | 0 | 758,700 |
| Oregon | 554,074 | 1,934 | 28,660 | 552,140 |
| Pennsylvania | 2,111,111 | 17,212 | 0 | 2,093,899 |
| Rhode Island | 225,872 | 4,823 | 0 | 221,049 |
| South Carolina | 949,830 | 360 | 0 | 949,470 |
| South Dakota | 130,590 | 113 | 1,867 | 130,477 |
| Tennessee | 1,499,447 | 20,393 | 0 | 1,479,054 |
| Texas | 4,176,360 | 32,738 | 0 | 4,143,622 |
| Utah | 339,599 | 205 | 39,276 | 339,394 |
| Vermont | 164,679 | 3,146 | 2,066 | 161,533 |
| Virginia | 955,610 | 1,660 | 46,562 | 953,950 |
| Washington | 1,245,914 | 54,521 | 0 | 1,191,393 |
| West Virginia | 393,440 | 862 | 0 | 392,578 |
| Wisconsin | 1,049,766 | 13,099 | 0 | 1,036,667 |
| Wyoming | 80,767 | 393 | 0 | 80,374 |
| United States | 61,523,936 | 829,607 | 1,056,692 | 60,694,329 |
| United States (across states) | 60,155,196 | 829,607 | 1,044,813 | 59,325,589 |

Table A.2 Person Summary File Record Count, Duplicates 2006

| State | Duplicates | | | Total Medicaid Enrollees |
|----------------------|---------------------|----------------------------------|-------------------------------|--------------------------------|
| | Total PS Records | Persons with No Enrollment | Enrolled Only in S-CHIP | |
| Alabama | 790 | 0 | 0 | 790 |
| Alaska | 5 | 0 | 0 | 5 |
| Arizona | 216 | 0 | 47 | 216 |
| Arkansas | 718 | 0 | 0 | 718 |
| California | 123 | 0 | 0 | 123 |
| Colorado | 284 | 0 | 16 | 284 |
| Connecticut | 593 | 0 | 0 | 593 |
| Delaware | 14 | 0 | 0 | 14 |
| District of Columbia | 92 | 0 | 0 | 92 |
| Florida | 347 | 0 | 0 | 347 |
| Georgia | 61 | 0 | 33 | 61 |
| Hawaii | 133 | 0 | 0 | 133 |
| Idaho | 19 | 0 | 0 | 19 |
| Illinois | 27,023 | 0 | 2,313 | 27,023 |
| Indiana | 135 | 0 | 0 | 135 |
| Iowa | 437 | 0 | 0 | 437 |
| Kansas | 20 | 0 | 0 | 20 |
| Kentucky | 4 | 0 | 0 | 4 |
| Louisiana | 19 | 0 | 0 | 19 |
| Maine | 3 | 0 | 0 | 3 |
| Maryland | 12 | 0 | 3 | 12 |
| Massachusetts | 105 | 0 | 2 | 105 |
| Michigan | 148 | 0 | 0 | 148 |
| Minnesota | 57 | 0 | 0 | 57 |
| Mississippi | 2,453 | 0 | 0 | 2,453 |
| Missouri | 19 | 0 | 0 | 19 |
| Montana | 0 | 0 | 0 | 0 |
| Nebraska | 72 | 0 | 0 | 72 |
| Nevada | 9 | 0 | 0 | 9 |
| New Hampshire | 7 | 0 | 0 | 7 |
| New Jersey | 940 | 0 | 5 | 940 |
| New Mexico | 8 | 0 | 0 | 8 |
| New York | 70,714 | 0 | 0 | 70,714 |
| North Carolina | 25 | 0 | 6 | 25 |
| North Dakota | 2,554 | 0 | 1,967 | 2,554 |
| Ohio | 12,860 | 0 | 0 | 12,860 |
| Oklahoma | 2,368 | 0 | 0 | 2,368 |
| Oregon | 675 | 0 | 28 | 675 |
| Pennsylvania | 148 | 0 | 0 | 148 |
| Rhode Island | 1 | 0 | 0 | 1 |
| South Carolina | 91 | 0 | 0 | 91 |
| South Dakota | 2,057 | 0 | 16 | 2,057 |
| Tennessee | 312 | 0 | 0 | 312 |
| Texas | 8,042 | 0 | 0 | 8,042 |
| Utah | 49 | 0 | 1 | 49 |
| Vermont | 3 | 0 | 0 | 3 |
| Virginia | 535 | 0 | 84 | 535 |
| Washington | 78 | 0 | 0 | 78 |
| West Virginia | 167 | 0 | 0 | 167 |
| Wisconsin | 2,137 | 0 | 0 | 2,137 |
| Wyoming | 23 | 0 | 0 | 23 |
| United States | 137,705 | 0 | 4,521 | 137,705 |

Table A.3 Total Medicaid Enrollee Count Before and After Unduplication, 2005

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|-----------------------------------|------------|
| Alabama | 955,590 | 954,389 | 1,201 |
| Alaska | 132,850 | 132,802 | 48 |
| Arizona | 1,476,842 | 1,474,288 | 2,554 |
| Arkansas | 746,506 | 745,700 | 806 |
| California | 10,593,523 | 10,593,119 | 404 |
| Colorado | 603,949 | 603,707 | 242 |
| Connecticut | 529,119 | 528,469 | 650 |
| Delaware | 179,935 | 179,913 | 22 |
| District of Columbia | 166,514 | 166,440 | 74 |
| Florida | 3,020,102 | 3,019,634 | 468 |
| Georgia | 2,083,224 | 2,080,322 | 2,902 |
| Hawaii | 231,787 | 231,620 | 167 |
| Idaho | 233,352 | 233,333 | 19 |
| Illinois | 2,610,471 | 2,570,481 | 39,990 |
| Indiana | 1,044,889 | 1,044,764 | 125 |
| Iowa | 428,814 | 428,279 | 535 |
| Kansas | 356,738 | 356,706 | 32 |
| Kentucky | 886,960 | 873,932 | 13,028 |
| Louisiana | 1,166,153 | 1,166,119 | 34 |
| Maine | 326,500 | 326,409 | 91 |
| Maryland | 866,921 | 866,900 | 21 |
| Massachusetts | 1,245,895 | 1,245,843 | 52 |
| Michigan | 1,857,775 | 1,857,701 | 74 |
| Minnesota | 790,712 | 790,615 | 97 |
| Mississippi | 780,246 | 778,522 | 1,724 |
| Missouri | 1,217,929 | 1,217,500 | 429 |
| Montana | 128,004 | 128,004 | 0 |
| Nebraska | 261,372 | 261,371 | 1 |
| Nevada | 267,880 | 267,833 | 47 |
| New Hampshire | 145,737 | 145,728 | 9 |
| New Jersey | 1,125,770 | 1,121,762 | 4,008 |
| New Mexico | 527,702 | 527,694 | 8 |
| New York | 5,087,834 | 5,013,122 | 74,712 |
| North Carolina | 1,728,608 | 1,727,918 | 690 |
| North Dakota | 78,625 | 77,112 | 1,513 |
| Ohio | 2,126,626 | 2,113,448 | 13,178 |
| Oklahoma | 728,609 | 725,837 | 2,772 |
| Oregon | 563,445 | 562,565 | 880 |
| Pennsylvania | 2,029,894 | 2,029,732 | 162 |
| Rhode Island | 219,784 | 219,783 | 1 |
| South Carolina | 1,012,287 | 1,012,171 | 116 |
| South Dakota | 130,894 | 128,838 | 2,056 |
| Tennessee | 1,594,245 | 1,593,869 | 376 |
| Texas | 4,103,270 | 4,096,175 | 7,095 |
| Utah | 345,451 | 345,438 | 13 |
| Vermont | 162,762 | 162,743 | 19 |
| Virginia | 927,685 | 926,884 | 801 |
| Washington | 1,199,572 | 1,199,441 | 131 |
| West Virginia | 383,111 | 382,999 | 112 |
| Wisconsin | 1,022,203 | 1,015,762 | 6,441 |
| Wyoming | 81,199 | 81,129 | 70 |
| United States | 60,515,865 | 60,334,865 | 181,000 |
| United States (across states) | N/A | 58,916,912 | N/A |

Table A.3 Total Medicaid Enrollee Count Before and After Unduplication, 2006

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|-----------------------------------|------------|
| Alabama | 967,777 | 966,987 | 790 |
| Alaska | 130,740 | 130,735 | 5 |
| Arizona | 1,511,854 | 1,511,638 | 216 |
| Arkansas | 758,906 | 758,188 | 718 |
| California | 10,611,919 | 10,611,796 | 123 |
| Colorado | 626,768 | 626,484 | 284 |
| Connecticut | 533,568 | 532,975 | 593 |
| Delaware | 184,542 | 184,528 | 14 |
| District of Columbia | 167,174 | 167,082 | 92 |
| Florida | 2,997,801 | 2,997,454 | 347 |
| Georgia | 2,043,649 | 2,043,588 | 61 |
| Hawaii | 231,642 | 231,509 | 133 |
| Idaho | 229,912 | 229,893 | 19 |
| Illinois | 2,600,647 | 2,573,624 | 27,023 |
| Indiana | 1,066,463 | 1,066,328 | 135 |
| Iowa | 467,347 | 466,910 | 437 |
| Kansas | 358,751 | 358,731 | 20 |
| Kentucky | 890,092 | 890,088 | 4 |
| Louisiana | 1,213,077 | 1,213,058 | 19 |
| Maine | 336,137 | 336,134 | 3 |
| Maryland | 865,977 | 865,965 | 12 |
| Massachusetts | 1,307,674 | 1,307,569 | 105 |
| Michigan | 1,938,399 | 1,938,251 | 148 |
| Minnesota | 802,182 | 802,125 | 57 |
| Mississippi | 775,999 | 773,546 | 2,453 |
| Missouri | 1,111,398 | 1,111,379 | 19 |
| Montana | 126,934 | 126,934 | 0 |
| Nebraska | 262,014 | 261,942 | 72 |
| Nevada | 254,747 | 254,738 | 9 |
| New Hampshire | 148,671 | 148,664 | 7 |
| New Jersey | 1,180,677 | 1,179,737 | 940 |
| New Mexico | 516,862 | 516,854 | 8 |
| New York | 5,092,937 | 5,022,223 | 70,714 |
| North Carolina | 1,780,953 | 1,780,928 | 25 |
| North Dakota | 79,810 | 77,256 | 2,554 |
| Ohio | 2,157,048 | 2,144,188 | 12,860 |
| Oklahoma | 761,068 | 758,700 | 2,368 |
| Oregon | 552,815 | 552,140 | 675 |
| Pennsylvania | 2,094,047 | 2,093,899 | 148 |
| Rhode Island | 221,050 | 221,049 | 1 |
| South Carolina | 949,561 | 949,470 | 91 |
| South Dakota | 132,534 | 130,477 | 2,057 |
| Tennessee | 1,479,366 | 1,479,054 | 312 |
| Texas | 4,151,664 | 4,143,622 | 8,042 |
| Utah | 339,443 | 339,394 | 49 |
| Vermont | 161,536 | 161,533 | 3 |
| Virginia | 954,485 | 953,950 | 535 |
| Washington | 1,191,471 | 1,191,393 | 78 |
| West Virginia | 392,745 | 392,578 | 167 |
| Wisconsin | 1,038,804 | 1,036,667 | 2,137 |
| Wyoming | 80,397 | 80,374 | 23 |
| United States | 60,832,034 | 60,694,329 | 137,705 |
| United States (across states) | N/A | 59,325,589 | N/A |

Table A.4 Medicaid Enrollees by Basis of Eligibility, Before Unduplication 2005

| State | Before Unduplication (MAX) | | | | |
|----------------------|----------------------------|-----------|-----------|------------|------------|
| | Total | Aged | Disabled | Child | Adult |
| Alabama | 955,590 | 102,706 | 206,514 | 442,298 | 204,072 |
| Alaska | 132,850 | 7,306 | 14,987 | 82,319 | 28,238 |
| Arizona | 1,476,842 | 79,784 | 137,043 | 671,165 | 588,850 |
| Arkansas | 746,506 | 63,588 | 111,714 | 398,675 | 172,529 |
| California | 10,593,523 | 751,508 | 1,111,609 | 4,318,735 | 4,411,671 |
| Colorado | 556,892 | 50,802 | 78,934 | 328,711 | 98,445 |
| Connecticut | 529,119 | 64,105 | 64,093 | 285,444 | 115,477 |
| Delaware | 179,935 | 12,728 | 20,723 | 77,346 | 69,138 |
| District of Columbia | 166,514 | 10,116 | 34,150 | 80,409 | 41,839 |
| Florida | 3,020,102 | 347,360 | 533,460 | 1,570,668 | 568,614 |
| Georgia | 1,838,910 | 134,996 | 291,736 | 1,093,356 | 318,822 |
| Hawaii | 231,787 | 22,271 | 25,479 | 107,745 | 76,292 |
| Idaho | 231,270 | 15,776 | 33,563 | 147,540 | 34,391 |
| Illinois | 2,450,407 | 355,652 | 333,222 | 1,302,965 | 458,568 |
| Indiana | 1,028,626 | 80,935 | 150,403 | 607,504 | 189,784 |
| Iowa | 428,814 | 41,247 | 68,159 | 222,651 | 96,757 |
| Kansas | 356,738 | 34,121 | 59,892 | 201,869 | 60,856 |
| Kentucky | 874,200 | 70,323 | 232,951 | 437,850 | 133,076 |
| Louisiana | 1,166,153 | 111,175 | 201,014 | 710,679 | 143,285 |
| Maine | 322,494 | 35,471 | 51,902 | 127,231 | 107,890 |
| Maryland | 859,101 | 68,850 | 137,688 | 473,614 | 178,949 |
| Massachusetts | 1,221,761 | 145,040 | 239,917 | 484,330 | 352,474 |
| Michigan | 1,857,775 | 135,204 | 293,117 | 990,757 | 438,697 |
| Minnesota | 764,213 | 91,881 | 108,700 | 388,219 | 175,413 |
| Mississippi | 780,246 | 84,787 | 170,455 | 394,240 | 130,764 |
| Missouri | 1,217,929 | 100,849 | 194,214 | 658,177 | 264,689 |
| Montana | 115,281 | 10,117 | 19,450 | 62,248 | 23,466 |
| Nebraska | 261,372 | 23,808 | 33,876 | 156,743 | 46,945 |
| Nevada | 267,880 | 22,514 | 37,700 | 154,446 | 53,220 |
| New Hampshire | 139,646 | 14,230 | 20,199 | 85,379 | 19,838 |
| New Jersey | 1,036,908 | 117,720 | 197,672 | 536,292 | 185,224 |
| New Mexico | 527,702 | 25,472 | 63,308 | 311,944 | 126,978 |
| New York | 5,087,834 | 436,330 | 735,576 | 2,079,846 | 1,836,082 |
| North Carolina | 1,601,887 | 182,568 | 283,799 | 833,090 | 302,430 |
| North Dakota | 74,986 | 9,718 | 10,480 | 38,137 | 16,651 |
| Ohio | 2,126,626 | 173,471 | 338,623 | 1,124,213 | 490,319 |
| Oklahoma | 728,609 | 64,738 | 101,506 | 456,522 | 105,843 |
| Oregon | 538,590 | 48,516 | 78,905 | 273,095 | 138,074 |
| Pennsylvania | 2,029,894 | 231,063 | 473,531 | 959,344 | 365,956 |
| Rhode Island | 219,784 | 21,060 | 43,159 | 99,441 | 56,124 |
| South Carolina | 1,012,287 | 130,497 | 155,070 | 490,420 | 236,300 |
| South Dakota | 129,084 | 10,160 | 18,186 | 79,442 | 21,296 |
| Tennessee | 1,594,245 | 124,231 | 359,437 | 705,980 | 404,597 |
| Texas | 4,103,270 | 418,277 | 502,985 | 2,625,173 | 556,835 |
| Utah | 309,285 | 14,304 | 35,040 | 172,151 | 87,790 |
| Vermont | 160,651 | 18,918 | 21,434 | 67,524 | 52,775 |
| Virginia | 884,499 | 99,217 | 155,084 | 495,825 | 134,373 |
| Washington | 1,199,572 | 86,812 | 167,232 | 606,371 | 339,157 |
| West Virginia | 383,111 | 30,896 | 104,969 | 188,290 | 58,956 |
| Wisconsin | 1,022,203 | 145,573 | 144,286 | 431,040 | 301,304 |
| Wyoming | 81,199 | 5,424 | 9,469 | 52,764 | 13,542 |
| United States | 59,624,702 | 5,484,215 | 9,016,615 | 29,690,217 | 15,433,655 |

Table A.4 Medicaid Enrollees by Basis of Eligibility, After Unduplication 2005

| State | After Unduplication (MAXEM) | | | | |
|-------------------------------|-----------------------------|-----------|-----------|------------|------------|
| | Total | Aged | Disabled | Child | Adult |
| Alabama | 954,389 | 102,628 | 206,302 | 441,564 | 203,895 |
| Alaska | 132,802 | 7,306 | 14,986 | 82,273 | 28,237 |
| Arizona | 1,474,288 | 77,986 | 136,645 | 670,946 | 588,711 |
| Arkansas | 745,700 | 63,434 | 111,397 | 398,517 | 172,352 |
| California | 10,593,119 | 751,362 | 1,111,577 | 4,318,541 | 4,411,639 |
| Colorado | 556,662 | 50,796 | 78,924 | 328,503 | 98,439 |
| Connecticut | 528,469 | 64,091 | 64,074 | 284,846 | 115,458 |
| Delaware | 179,913 | 12,727 | 20,721 | 77,329 | 69,136 |
| District of Columbia | 166,440 | 10,110 | 34,121 | 80,383 | 41,826 |
| Florida | 3,019,634 | 347,307 | 533,320 | 1,570,406 | 568,601 |
| Georgia | 1,836,996 | 134,965 | 291,639 | 1,091,637 | 318,755 |
| Hawaii | 231,620 | 22,266 | 25,475 | 107,620 | 76,259 |
| Idaho | 231,251 | 15,776 | 33,559 | 147,526 | 34,390 |
| Illinois | 2,412,042 | 337,254 | 331,899 | 1,287,146 | 455,743 |
| Indiana | 1,028,502 | 80,932 | 150,394 | 607,398 | 189,778 |
| Iowa | 428,279 | 41,245 | 68,151 | 222,133 | 96,750 |
| Kansas | 356,706 | 34,120 | 59,888 | 201,843 | 60,855 |
| Kentucky | 861,469 | 70,233 | 232,459 | 425,856 | 132,921 |
| Louisiana | 1,166,119 | 111,162 | 201,012 | 710,661 | 143,284 |
| Maine | 322,404 | 35,460 | 51,886 | 127,178 | 107,880 |
| Maryland | 859,083 | 68,847 | 137,686 | 473,605 | 178,945 |
| Massachusetts | 1,221,710 | 145,035 | 239,912 | 484,312 | 352,451 |
| Michigan | 1,857,701 | 135,183 | 293,104 | 990,725 | 438,689 |
| Minnesota | 764,116 | 91,794 | 108,692 | 388,217 | 175,413 |
| Mississippi | 778,522 | 84,728 | 169,499 | 393,804 | 130,491 |
| Missouri | 1,217,500 | 100,837 | 194,207 | 657,823 | 264,633 |
| Montana | 115,281 | 10,117 | 19,450 | 62,248 | 23,466 |
| Nebraska | 261,371 | 23,808 | 33,876 | 156,742 | 46,945 |
| Nevada | 267,833 | 22,513 | 37,699 | 154,402 | 53,219 |
| New Hampshire | 139,638 | 14,230 | 20,199 | 85,373 | 19,836 |
| New Jersey | 1,033,378 | 117,017 | 197,145 | 534,340 | 184,876 |
| New Mexico | 527,694 | 25,468 | 63,304 | 311,944 | 126,978 |
| New York | 5,013,122 | 432,271 | 721,935 | 2,041,295 | 1,817,621 |
| North Carolina | 1,601,224 | 182,549 | 283,423 | 832,868 | 302,384 |
| North Dakota | 74,617 | 9,474 | 10,360 | 38,133 | 16,650 |
| Ohio | 2,113,448 | 173,428 | 338,238 | 1,111,855 | 489,927 |
| Oklahoma | 725,837 | 64,634 | 101,235 | 454,511 | 105,457 |
| Oregon | 537,755 | 48,508 | 78,854 | 272,446 | 137,947 |
| Pennsylvania | 2,029,732 | 231,015 | 473,455 | 959,314 | 365,948 |
| Rhode Island | 219,783 | 21,060 | 43,159 | 99,441 | 56,123 |
| South Carolina | 1,012,171 | 130,432 | 155,050 | 490,396 | 236,293 |
| South Dakota | 127,048 | 10,158 | 18,155 | 77,441 | 21,294 |
| Tennessee | 1,593,869 | 124,197 | 359,336 | 705,797 | 404,539 |
| Texas | 4,096,175 | 418,088 | 502,544 | 2,619,279 | 556,264 |
| Utah | 309,272 | 14,303 | 35,039 | 172,145 | 87,785 |
| Vermont | 160,632 | 18,915 | 21,433 | 67,510 | 52,774 |
| Virginia | 883,866 | 99,211 | 155,023 | 495,293 | 134,339 |
| Washington | 1,199,441 | 86,804 | 167,193 | 606,321 | 339,123 |
| West Virginia | 382,999 | 30,884 | 104,929 | 188,237 | 58,949 |
| Wisconsin | 1,015,762 | 145,565 | 144,195 | 424,880 | 301,122 |
| Wyoming | 81,129 | 5,422 | 9,467 | 52,702 | 13,538 |
| United States | 59,448,513 | 5,457,655 | 8,996,225 | 29,585,705 | 15,408,928 |
| United States (across states) | 58,041,238 | 5,397,375 | 8,740,254 | 28,761,014 | 15,142,595 |

Table A.4 Medicaid Enrollees by Basis of Eligibility, Duplicates 2005

| State | Duplicates | | | | |
|----------------------|------------|--------|----------|---------|--------|
| | Total | Aged | Disabled | Child | Adult |
| Alabama | 1,201 | 78 | 212 | 734 | 177 |
| Alaska | 48 | 0 | 1 | 46 | 1 |
| Arizona | 2,554 | 1,798 | 398 | 219 | 139 |
| Arkansas | 806 | 154 | 317 | 158 | 177 |
| California | 404 | 146 | 32 | 194 | 32 |
| Colorado | 230 | 6 | 10 | 208 | 6 |
| Connecticut | 650 | 14 | 19 | 598 | 19 |
| Delaware | 22 | 1 | 2 | 17 | 2 |
| District of Columbia | 74 | 6 | 29 | 26 | 13 |
| Florida | 468 | 53 | 140 | 262 | 13 |
| Georgia | 1,914 | 31 | 97 | 1,719 | 67 |
| Hawaii | 167 | 5 | 4 | 125 | 33 |
| Idaho | 19 | 0 | 4 | 14 | 1 |
| Illinois | 38,365 | 18,398 | 1,323 | 15,819 | 2,825 |
| Indiana | 124 | 3 | 9 | 106 | 6 |
| Iowa | 535 | 2 | 8 | 518 | 7 |
| Kansas | 32 | 1 | 4 | 26 | 1 |
| Kentucky | 12,731 | 90 | 492 | 11,994 | 155 |
| Louisiana | 34 | 13 | 2 | 18 | 1 |
| Maine | 90 | 11 | 16 | 53 | 10 |
| Maryland | 18 | 3 | 2 | 9 | 4 |
| Massachusetts | 51 | 5 | 5 | 18 | 23 |
| Michigan | 74 | 21 | 13 | 32 | 8 |
| Minnesota | 97 | 87 | 8 | 2 | 0 |
| Mississippi | 1,724 | 59 | 956 | 436 | 273 |
| Missouri | 429 | 12 | 7 | 354 | 56 |
| Montana | 0 | 0 | 0 | 0 | 0 |
| Nebraska | 1 | 0 | 0 | 1 | 0 |
| Nevada | 47 | 1 | 1 | 44 | 1 |
| New Hampshire | 8 | 0 | 0 | 6 | 2 |
| New Jersey | 3,530 | 703 | 527 | 1,952 | 348 |
| New Mexico | 8 | 4 | 4 | 0 | 0 |
| New York | 74,712 | 4,059 | 13,641 | 38,551 | 18,461 |
| North Carolina | 663 | 19 | 376 | 222 | 46 |
| North Dakota | 369 | 244 | 120 | 4 | 1 |
| Ohio | 13,178 | 43 | 385 | 12,358 | 392 |
| Oklahoma | 2,772 | 104 | 271 | 2,011 | 386 |
| Oregon | 835 | 8 | 51 | 649 | 127 |
| Pennsylvania | 162 | 48 | 76 | 30 | 8 |
| Rhode Island | 1 | 0 | 0 | 0 | 1 |
| South Carolina | 116 | 65 | 20 | 24 | 7 |
| South Dakota | 2,036 | 2 | 31 | 2,001 | 2 |
| Tennessee | 376 | 34 | 101 | 183 | 58 |
| Texas | 7,095 | 189 | 441 | 5,894 | 571 |
| Utah | 13 | 1 | 1 | 6 | 5 |
| Vermont | 19 | 3 | 1 | 14 | 1 |
| Virginia | 633 | 6 | 61 | 532 | 34 |
| Washington | 131 | 8 | 39 | 50 | 34 |
| West Virginia | 112 | 12 | 40 | 53 | 7 |
| Wisconsin | 6,441 | 8 | 91 | 6,160 | 182 |
| Wyoming | 70 | 2 | 2 | 62 | 4 |
| United States | 176,189 | 26,560 | 20,390 | 104,512 | 24,727 |

Table A.4 Medicaid Enrollees by Basis of Eligibility, Before Unduplication 2006

| State | Before Unduplication (MAX) | | | | |
|----------------------|----------------------------|-----------|-----------|------------|------------|
| | Total | Aged | Disabled | Child | Adult |
| Alabama | 967,777 | 104,417 | 211,356 | 439,256 | 212,748 |
| Alaska | 130,740 | 7,373 | 15,497 | 79,601 | 28,269 |
| Arizona | 1,464,622 | 75,084 | 138,895 | 672,404 | 578,239 |
| Arkansas | 758,906 | 64,391 | 116,927 | 426,732 | 150,856 |
| California | 10,611,919 | 764,574 | 1,125,246 | 4,280,264 | 4,441,835 |
| Colorado | 571,704 | 52,174 | 76,797 | 336,889 | 105,844 |
| Connecticut | 533,568 | 64,392 | 65,983 | 284,332 | 118,861 |
| Delaware | 184,542 | 13,226 | 21,627 | 79,128 | 70,561 |
| District of Columbia | 167,174 | 10,111 | 35,596 | 80,275 | 41,192 |
| Florida | 2,997,801 | 353,678 | 530,551 | 1,555,568 | 558,004 |
| Georgia | 1,758,788 | 137,078 | 289,256 | 1,031,574 | 300,880 |
| Hawaii | 231,642 | 22,312 | 25,827 | 109,235 | 74,268 |
| Idaho | 226,209 | 16,274 | 35,080 | 142,625 | 32,230 |
| Illinois | 2,404,599 | 197,732 | 341,708 | 1,367,081 | 498,078 |
| Indiana | 1,049,760 | 81,241 | 152,797 | 622,409 | 193,313 |
| Iowa | 467,347 | 41,813 | 70,390 | 230,481 | 124,663 |
| Kansas | 358,751 | 34,458 | 61,740 | 202,682 | 59,871 |
| Kentucky | 871,842 | 71,479 | 237,036 | 427,910 | 135,417 |
| Louisiana | 1,213,077 | 111,104 | 197,602 | 749,866 | 154,505 |
| Maine | 332,411 | 40,547 | 53,718 | 128,668 | 109,478 |
| Maryland | 855,745 | 62,751 | 139,127 | 478,217 | 175,650 |
| Massachusetts | 1,256,946 | 152,356 | 247,892 | 477,264 | 379,434 |
| Michigan | 1,938,399 | 134,837 | 301,863 | 1,025,731 | 475,968 |
| Minnesota | 778,126 | 92,908 | 112,599 | 390,325 | 182,294 |
| Mississippi | 775,999 | 83,517 | 168,390 | 388,035 | 136,057 |
| Missouri | 1,111,398 | 95,551 | 184,547 | 619,852 | 211,448 |
| Montana | 112,766 | 9,670 | 19,437 | 61,361 | 22,298 |
| Nebraska | 262,014 | 23,941 | 34,782 | 157,188 | 46,103 |
| Nevada | 254,747 | 23,023 | 38,423 | 143,193 | 50,108 |
| New Hampshire | 142,225 | 14,354 | 21,203 | 86,632 | 20,036 |
| New Jersey | 1,081,498 | 126,998 | 189,826 | 560,671 | 204,003 |
| New Mexico | 516,862 | 26,226 | 65,664 | 303,629 | 121,343 |
| New York | 5,092,937 | 438,055 | 740,854 | 2,029,293 | 1,884,735 |
| North Carolina | 1,673,629 | 182,851 | 288,753 | 884,020 | 318,005 |
| North Dakota | 74,877 | 9,928 | 10,855 | 37,873 | 16,221 |
| Ohio | 2,157,048 | 177,036 | 346,620 | 1,141,935 | 491,457 |
| Oklahoma | 761,068 | 65,012 | 108,652 | 466,826 | 120,578 |
| Oregon | 524,127 | 49,207 | 81,162 | 272,235 | 121,523 |
| Pennsylvania | 2,094,047 | 232,145 | 497,436 | 977,430 | 387,036 |
| Rhode Island | 221,050 | 20,946 | 44,066 | 99,916 | 56,122 |
| South Carolina | 949,561 | 77,059 | 157,312 | 482,432 | 232,758 |
| South Dakota | 130,651 | 10,337 | 18,799 | 80,365 | 21,150 |
| Tennessee | 1,479,366 | 115,228 | 346,508 | 726,110 | 291,520 |
| Texas | 4,151,664 | 426,251 | 536,447 | 2,650,688 | 538,278 |
| Utah | 300,166 | 14,277 | 36,602 | 167,009 | 82,278 |
| Vermont | 159,470 | 18,661 | 22,044 | 66,651 | 52,114 |
| Virginia | 907,839 | 99,814 | 160,073 | 507,165 | 140,787 |
| Washington | 1,191,471 | 85,955 | 170,717 | 622,822 | 311,977 |
| West Virginia | 392,745 | 36,846 | 110,319 | 187,208 | 58,372 |
| Wisconsin | 1,038,804 | 150,181 | 146,619 | 436,533 | 305,471 |
| Wyoming | 80,397 | 5,500 | 9,742 | 52,781 | 12,374 |
| United States | 59,770,821 | 5,324,879 | 9,160,962 | 29,828,370 | 15,456,610 |

Table A.4 Medicaid Enrollees by Basis of Eligibility, After Unduplication 2006

| State | After Unduplication (MAXEM) | | | | |
|-------------------------------|-----------------------------|-----------|-----------|------------|------------|
| | Total | Aged | Disabled | Child | Adult |
| Alabama | 966,987 | 104,378 | 211,182 | 438,798 | 212,629 |
| Alaska | 130,735 | 7,373 | 15,497 | 79,596 | 28,269 |
| Arizona | 1,464,453 | 75,080 | 138,880 | 672,306 | 578,187 |
| Arkansas | 758,188 | 64,267 | 116,613 | 426,582 | 150,726 |
| California | 10,611,796 | 764,483 | 1,125,220 | 4,280,264 | 4,441,829 |
| Colorado | 571,436 | 52,169 | 76,785 | 336,652 | 105,830 |
| Connecticut | 532,975 | 64,383 | 65,964 | 283,798 | 118,830 |
| Delaware | 184,528 | 13,226 | 21,626 | 79,119 | 70,557 |
| District of Columbia | 167,082 | 10,105 | 35,567 | 80,233 | 41,177 |
| Florida | 2,997,454 | 353,619 | 530,459 | 1,555,383 | 557,993 |
| Georgia | 1,758,760 | 137,071 | 289,249 | 1,031,560 | 300,880 |
| Hawaii | 231,509 | 22,310 | 25,822 | 109,135 | 74,242 |
| Idaho | 226,190 | 16,274 | 35,080 | 142,607 | 32,229 |
| Illinois | 2,379,889 | 193,827 | 340,780 | 1,350,508 | 494,774 |
| Indiana | 1,049,625 | 81,237 | 152,790 | 622,294 | 193,304 |
| Iowa | 466,910 | 41,809 | 70,380 | 230,067 | 124,654 |
| Kansas | 358,731 | 34,458 | 61,739 | 202,663 | 59,871 |
| Kentucky | 871,838 | 71,478 | 237,034 | 427,909 | 135,417 |
| Louisiana | 1,213,058 | 111,089 | 197,599 | 749,866 | 154,504 |
| Maine | 332,408 | 40,546 | 53,716 | 128,668 | 109,478 |
| Maryland | 855,736 | 62,750 | 139,127 | 478,209 | 175,650 |
| Massachusetts | 1,256,843 | 152,348 | 247,877 | 477,230 | 379,388 |
| Michigan | 1,938,251 | 134,817 | 301,840 | 1,025,632 | 475,962 |
| Minnesota | 778,069 | 92,853 | 112,597 | 390,325 | 182,294 |
| Mississippi | 773,546 | 83,436 | 167,167 | 387,314 | 135,629 |
| Missouri | 1,111,379 | 95,547 | 184,543 | 619,841 | 211,448 |
| Montana | 112,766 | 9,670 | 19,437 | 61,361 | 22,298 |
| Nebraska | 261,942 | 23,939 | 34,773 | 157,129 | 46,101 |
| Nevada | 254,738 | 23,016 | 38,421 | 143,193 | 50,108 |
| New Hampshire | 142,218 | 14,354 | 21,203 | 86,625 | 20,036 |
| New Jersey | 1,080,563 | 126,403 | 189,507 | 560,663 | 203,990 |
| New Mexico | 516,854 | 26,220 | 65,662 | 303,629 | 121,343 |
| New York | 5,022,223 | 433,946 | 726,884 | 1,995,124 | 1,866,269 |
| North Carolina | 1,673,610 | 182,851 | 288,753 | 884,006 | 318,000 |
| North Dakota | 74,290 | 9,584 | 10,613 | 37,873 | 16,220 |
| Ohio | 2,144,188 | 177,002 | 346,266 | 1,129,612 | 491,308 |
| Oklahoma | 758,700 | 64,905 | 108,434 | 465,212 | 120,149 |
| Oregon | 523,480 | 49,191 | 81,121 | 271,715 | 121,453 |
| Pennsylvania | 2,093,899 | 232,097 | 497,378 | 977,392 | 387,032 |
| Rhode Island | 221,049 | 20,946 | 44,066 | 99,916 | 56,121 |
| South Carolina | 949,470 | 77,045 | 157,286 | 482,387 | 232,752 |
| South Dakota | 128,610 | 10,334 | 18,770 | 78,357 | 21,149 |
| Tennessee | 1,479,054 | 115,206 | 346,420 | 725,948 | 291,480 |
| Texas | 4,143,622 | 425,970 | 535,936 | 2,644,079 | 537,637 |
| Utah | 300,118 | 14,276 | 36,601 | 166,973 | 82,268 |
| Vermont | 159,467 | 18,659 | 22,043 | 66,651 | 52,114 |
| Virginia | 907,388 | 99,809 | 160,038 | 506,789 | 140,752 |
| Washington | 1,191,393 | 85,953 | 170,698 | 622,776 | 311,966 |
| West Virginia | 392,578 | 36,749 | 110,280 | 187,181 | 58,368 |
| Wisconsin | 1,036,667 | 150,170 | 146,564 | 434,569 | 305,364 |
| Wyoming | 80,374 | 5,496 | 9,741 | 52,767 | 12,370 |
| United States | 59,637,637 | 5,314,724 | 9,142,028 | 29,748,486 | 15,432,399 |
| United States (across states) | 58,280,776 | 5,254,961 | 8,889,960 | 28,956,973 | 15,178,883 |

Table A.4 Medicaid Enrollees by Basis of Eligibility, Duplicates 2006

| State | Duplicates | | | | |
|----------------------|------------|--------|----------|--------|--------|
| | Total | Aged | Disabled | Child | Adult |
| Alabama | 790 | 39 | 174 | 458 | 119 |
| Alaska | 5 | 0 | 0 | 5 | 0 |
| Arizona | 169 | 4 | 15 | 98 | 52 |
| Arkansas | 718 | 124 | 314 | 150 | 130 |
| California | 123 | 91 | 26 | 0 | 6 |
| Colorado | 268 | 5 | 12 | 237 | 14 |
| Connecticut | 593 | 9 | 19 | 534 | 31 |
| Delaware | 14 | 0 | 1 | 9 | 4 |
| District of Columbia | 92 | 6 | 29 | 42 | 15 |
| Florida | 347 | 59 | 92 | 185 | 11 |
| Georgia | 28 | 7 | 7 | 14 | 0 |
| Hawaii | 133 | 2 | 5 | 100 | 26 |
| Idaho | 19 | 0 | 0 | 18 | 1 |
| Illinois | 24,710 | 3,905 | 928 | 16,573 | 3,304 |
| Indiana | 135 | 4 | 7 | 115 | 9 |
| Iowa | 437 | 4 | 10 | 414 | 9 |
| Kansas | 20 | 0 | 1 | 19 | 0 |
| Kentucky | 4 | 1 | 2 | 1 | 0 |
| Louisiana | 19 | 15 | 3 | 0 | 1 |
| Maine | 3 | 1 | 2 | 0 | 0 |
| Maryland | 9 | 1 | 0 | 8 | 0 |
| Massachusetts | 103 | 8 | 15 | 34 | 46 |
| Michigan | 148 | 20 | 23 | 99 | 6 |
| Minnesota | 57 | 55 | 2 | 0 | 0 |
| Mississippi | 2,453 | 81 | 1,223 | 721 | 428 |
| Missouri | 19 | 4 | 4 | 11 | 0 |
| Montana | 0 | 0 | 0 | 0 | 0 |
| Nebraska | 72 | 2 | 9 | 59 | 2 |
| Nevada | 9 | 7 | 2 | 0 | 0 |
| New Hampshire | 7 | 0 | 0 | 7 | 0 |
| New Jersey | 935 | 595 | 319 | 8 | 13 |
| New Mexico | 8 | 6 | 2 | 0 | 0 |
| New York | 70,714 | 4,109 | 13,970 | 34,169 | 18,466 |
| North Carolina | 19 | 0 | 0 | 14 | 5 |
| North Dakota | 587 | 344 | 242 | 0 | 1 |
| Ohio | 12,860 | 34 | 354 | 12,323 | 149 |
| Oklahoma | 2,368 | 107 | 218 | 1,614 | 429 |
| Oregon | 647 | 16 | 41 | 520 | 70 |
| Pennsylvania | 148 | 48 | 58 | 38 | 4 |
| Rhode Island | 1 | 0 | 0 | 0 | 1 |
| South Carolina | 91 | 14 | 26 | 45 | 6 |
| South Dakota | 2,041 | 3 | 29 | 2,008 | 1 |
| Tennessee | 312 | 22 | 88 | 162 | 40 |
| Texas | 8,042 | 281 | 511 | 6,609 | 641 |
| Utah | 48 | 1 | 1 | 36 | 10 |
| Vermont | 3 | 2 | 1 | 0 | 0 |
| Virginia | 451 | 5 | 35 | 376 | 35 |
| Washington | 78 | 2 | 19 | 46 | 11 |
| West Virginia | 167 | 97 | 39 | 27 | 4 |
| Wisconsin | 2,137 | 11 | 55 | 1,964 | 107 |
| Wyoming | 23 | 4 | 1 | 14 | 4 |
| United States | 133,184 | 10,155 | 18,934 | 79,884 | 24,211 |

Table A.5 Medicaid Enrollees (Excluding Persons with Only Restricted Benefits) by Basis of Eligibility,
Before Unduplication 2005

| State | Before Unduplication (MAX) | | | | |
|----------------------|----------------------------|-----------|-----------|------------|------------|
| | Total | Aged | Disabled | Child | Adult |
| Alabama | 911,956 | 99,916 | 202,889 | 441,428 | 167,723 |
| Alaska | 132,824 | 7,292 | 14,975 | 82,319 | 28,238 |
| Arizona | 1,465,045 | 78,877 | 136,587 | 670,384 | 579,197 |
| Arkansas | 725,174 | 62,447 | 110,504 | 397,651 | 154,572 |
| California | 10,526,495 | 740,656 | 1,108,128 | 4,292,800 | 4,384,911 |
| Colorado | 552,246 | 49,312 | 76,632 | 328,554 | 97,748 |
| Connecticut | 522,928 | 61,266 | 60,865 | 285,444 | 115,353 |
| Delaware | 173,318 | 12,276 | 20,017 | 77,137 | 63,888 |
| District of Columbia | 164,865 | 9,208 | 33,483 | 80,408 | 41,766 |
| Florida | 2,972,589 | 331,934 | 516,483 | 1,569,690 | 554,482 |
| Georgia | 1,822,476 | 127,682 | 285,350 | 1,092,698 | 316,746 |
| Hawaii | 231,244 | 21,939 | 25,272 | 107,745 | 76,288 |
| Idaho | 230,220 | 15,255 | 33,039 | 147,540 | 34,386 |
| Illinois | 2,381,203 | 346,404 | 328,088 | 1,302,185 | 404,526 |
| Indiana | 1,010,903 | 72,449 | 141,208 | 607,496 | 189,750 |
| Iowa | 424,926 | 39,384 | 66,582 | 222,646 | 96,314 |
| Kansas | 351,328 | 31,712 | 56,915 | 201,866 | 60,835 |
| Kentucky | 868,072 | 67,570 | 229,993 | 437,691 | 132,818 |
| Louisiana | 1,157,055 | 106,639 | 196,536 | 710,677 | 143,203 |
| Maine | 319,130 | 33,589 | 50,649 | 127,212 | 107,680 |
| Maryland | 825,877 | 66,926 | 132,506 | 470,195 | 156,250 |
| Massachusetts | 1,219,217 | 142,698 | 239,763 | 484,330 | 352,426 |
| Michigan | 1,844,476 | 129,904 | 286,890 | 989,741 | 437,941 |
| Minnesota | 760,391 | 89,915 | 107,447 | 387,969 | 175,060 |
| Mississippi | 757,111 | 81,963 | 168,372 | 394,043 | 112,733 |
| Missouri | 1,195,176 | 98,170 | 190,272 | 658,137 | 248,597 |
| Montana | 115,281 | 10,117 | 19,450 | 62,248 | 23,466 |
| Nebraska | 260,518 | 23,341 | 33,489 | 156,743 | 46,945 |
| Nevada | 266,291 | 21,728 | 36,975 | 154,436 | 53,152 |
| New Hampshire | 137,328 | 13,326 | 18,886 | 85,379 | 19,737 |
| New Jersey | 1,034,641 | 116,406 | 197,150 | 536,253 | 184,832 |
| New Mexico | 508,067 | 24,861 | 62,547 | 311,845 | 108,814 |
| New York | 5,056,538 | 433,514 | 733,900 | 2,074,386 | 1,814,738 |
| North Carolina | 1,584,599 | 177,592 | 279,160 | 833,017 | 294,830 |
| North Dakota | 74,142 | 9,237 | 10,119 | 38,137 | 16,649 |
| Ohio | 2,080,160 | 148,805 | 317,319 | 1,124,212 | 489,824 |
| Oklahoma | 716,034 | 60,007 | 98,515 | 456,421 | 101,091 |
| Oregon | 534,578 | 47,098 | 77,225 | 272,698 | 137,557 |
| Pennsylvania | 2,020,347 | 226,299 | 469,549 | 958,703 | 365,796 |
| Rhode Island | 217,646 | 20,569 | 42,766 | 99,440 | 54,871 |
| South Carolina | 972,937 | 128,215 | 153,970 | 489,691 | 201,061 |
| South Dakota | 128,534 | 9,851 | 17,956 | 79,442 | 21,285 |
| Tennessee | 1,570,601 | 109,041 | 351,987 | 705,701 | 403,872 |
| Texas | 4,085,449 | 406,260 | 497,665 | 2,625,077 | 556,447 |
| Utah | 306,283 | 13,159 | 33,466 | 172,108 | 87,550 |
| Vermont | 158,877 | 17,943 | 20,659 | 67,524 | 52,751 |
| Virginia | 865,578 | 95,918 | 151,960 | 495,796 | 121,904 |
| Washington | 1,170,548 | 82,112 | 160,192 | 605,063 | 323,181 |
| West Virginia | 381,346 | 30,359 | 103,796 | 188,290 | 58,901 |
| Wisconsin | 995,802 | 139,868 | 141,759 | 429,442 | 284,733 |
| Wyoming | 80,944 | 5,287 | 9,377 | 52,763 | 13,517 |
| United States | 58,869,314 | 5,296,296 | 8,859,282 | 29,642,801 | 15,070,935 |

Table A.5 Medicaid Enrollees (Excluding Persons with Only Restricted Benefits) by Basis of Eligibility,
After Unduplication 2005

| State | After Unduplication (MAXEM) | | | | |
|-------------------------------|-----------------------------|-----------|-----------|------------|------------|
| | Total | Aged | Disabled | Child | Adult |
| Alabama | 910,743 | 99,829 | 202,678 | 440,697 | 167,539 |
| Alaska | 132,776 | 7,292 | 14,974 | 82,273 | 28,237 |
| Arizona | 1,462,166 | 76,825 | 136,147 | 670,166 | 579,028 |
| Arkansas | 724,017 | 62,190 | 109,973 | 397,490 | 154,364 |
| California | 10,526,038 | 740,502 | 1,108,095 | 4,292,592 | 4,384,849 |
| Colorado | 552,015 | 49,306 | 76,622 | 328,346 | 97,741 |
| Connecticut | 522,271 | 61,246 | 60,846 | 284,846 | 115,333 |
| Delaware | 173,295 | 12,274 | 20,015 | 77,120 | 63,886 |
| District of Columbia | 164,790 | 9,199 | 33,456 | 80,382 | 41,753 |
| Florida | 2,972,109 | 331,874 | 516,340 | 1,569,428 | 554,467 |
| Georgia | 1,820,550 | 127,642 | 285,250 | 1,090,979 | 316,679 |
| Hawaii | 231,076 | 21,933 | 25,268 | 107,620 | 76,255 |
| Idaho | 230,200 | 15,255 | 33,034 | 147,526 | 34,385 |
| Illinois | 2,330,339 | 316,180 | 326,431 | 1,286,215 | 401,513 |
| Indiana | 1,010,779 | 72,446 | 141,199 | 607,390 | 189,744 |
| Iowa | 424,391 | 39,382 | 66,574 | 222,128 | 96,307 |
| Kansas | 351,296 | 31,711 | 56,911 | 201,840 | 60,834 |
| Kentucky | 855,331 | 67,478 | 229,498 | 425,697 | 132,658 |
| Louisiana | 1,157,019 | 106,624 | 196,534 | 710,659 | 143,202 |
| Maine | 319,036 | 33,575 | 50,632 | 127,159 | 107,670 |
| Maryland | 825,859 | 66,922 | 132,504 | 470,186 | 156,247 |
| Massachusetts | 1,219,165 | 142,692 | 239,758 | 484,312 | 352,403 |
| Michigan | 1,844,400 | 129,882 | 286,876 | 989,709 | 437,933 |
| Minnesota | 760,294 | 89,828 | 107,439 | 387,967 | 175,060 |
| Mississippi | 755,301 | 81,898 | 167,400 | 393,607 | 112,396 |
| Missouri | 1,194,747 | 98,157 | 190,265 | 657,783 | 248,542 |
| Montana | 115,281 | 10,117 | 19,450 | 62,248 | 23,466 |
| Nebraska | 260,517 | 23,341 | 33,489 | 156,742 | 46,945 |
| Nevada | 266,244 | 21,727 | 36,974 | 154,392 | 53,151 |
| New Hampshire | 137,320 | 13,326 | 18,886 | 85,373 | 19,735 |
| New Jersey | 1,030,611 | 115,415 | 196,418 | 534,296 | 184,482 |
| New Mexico | 508,057 | 24,855 | 62,543 | 311,845 | 108,814 |
| New York | 4,981,214 | 429,328 | 720,218 | 2,035,686 | 1,795,982 |
| North Carolina | 1,583,936 | 177,573 | 278,784 | 832,795 | 294,784 |
| North Dakota | 73,762 | 8,989 | 9,992 | 38,133 | 16,648 |
| Ohio | 2,066,979 | 148,763 | 316,931 | 1,111,854 | 489,431 |
| Oklahoma | 713,228 | 59,899 | 98,238 | 454,410 | 100,681 |
| Oregon | 533,741 | 47,089 | 77,174 | 272,049 | 137,429 |
| Pennsylvania | 2,020,182 | 226,248 | 469,473 | 958,673 | 365,788 |
| Rhode Island | 217,645 | 20,569 | 42,766 | 99,440 | 54,870 |
| South Carolina | 972,804 | 128,134 | 153,949 | 489,667 | 201,054 |
| South Dakota | 126,498 | 9,849 | 17,925 | 77,441 | 21,283 |
| Tennessee | 1,570,220 | 109,004 | 351,886 | 705,517 | 403,813 |
| Texas | 4,078,321 | 406,053 | 497,215 | 2,619,181 | 555,872 |
| Utah | 306,270 | 13,158 | 33,465 | 172,102 | 87,545 |
| Vermont | 158,858 | 17,940 | 20,658 | 67,510 | 52,750 |
| Virginia | 864,942 | 95,911 | 151,898 | 495,264 | 121,869 |
| Washington | 1,170,398 | 82,104 | 160,153 | 605,007 | 323,134 |
| West Virginia | 381,234 | 30,347 | 103,756 | 188,237 | 58,894 |
| Wisconsin | 989,351 | 139,860 | 141,668 | 423,280 | 284,543 |
| Wyoming | 80,874 | 5,285 | 9,375 | 52,701 | 13,513 |
| United States | 58,678,490 | 5,257,026 | 8,838,003 | 29,537,960 | 15,045,501 |
| United States (across states) | 57,284,922 | 5,199,553 | 8,585,757 | 28,713,684 | 14,785,928 |

Table A.5 Medicaid Enrollees (Excluding Persons with Only Restricted Benefits) by Basis of Eligibility,
 Duplicates 2005

| State | Duplicates | | | | |
|----------------------|------------|--------|----------|---------|--------|
| | Total | Aged | Disabled | Child | Adult |
| Alabama | 1,213 | 87 | 211 | 731 | 184 |
| Alaska | 48 | 0 | 1 | 46 | 1 |
| Arizona | 2,879 | 2,052 | 440 | 218 | 169 |
| Arkansas | 1,157 | 257 | 531 | 161 | 208 |
| California | 457 | 154 | 33 | 208 | 62 |
| Colorado | 231 | 6 | 10 | 208 | 7 |
| Connecticut | 657 | 20 | 19 | 598 | 20 |
| Delaware | 23 | 2 | 2 | 17 | 2 |
| District of Columbia | 75 | 9 | 27 | 26 | 13 |
| Florida | 480 | 60 | 143 | 262 | 15 |
| Georgia | 1,926 | 40 | 100 | 1,719 | 67 |
| Hawaii | 168 | 6 | 4 | 125 | 33 |
| Idaho | 20 | 0 | 5 | 14 | 1 |
| Illinois | 50,864 | 30,224 | 1,657 | 15,970 | 3,013 |
| Indiana | 124 | 3 | 9 | 106 | 6 |
| Iowa | 535 | 2 | 8 | 518 | 7 |
| Kansas | 32 | 1 | 4 | 26 | 1 |
| Kentucky | 12,741 | 92 | 495 | 11,994 | 160 |
| Louisiana | 36 | 15 | 2 | 18 | 1 |
| Maine | 94 | 14 | 17 | 53 | 10 |
| Maryland | 18 | 4 | 2 | 9 | 3 |
| Massachusetts | 52 | 6 | 5 | 18 | 23 |
| Michigan | 76 | 22 | 14 | 32 | 8 |
| Minnesota | 97 | 87 | 8 | 2 | 0 |
| Mississippi | 1,810 | 65 | 972 | 436 | 337 |
| Missouri | 429 | 13 | 7 | 354 | 55 |
| Montana | 0 | 0 | 0 | 0 | 0 |
| Nebraska | 1 | 0 | 0 | 1 | 0 |
| Nevada | 47 | 1 | 1 | 44 | 1 |
| New Hampshire | 8 | 0 | 0 | 6 | 2 |
| New Jersey | 4,030 | 991 | 732 | 1,957 | 350 |
| New Mexico | 10 | 6 | 4 | 0 | 0 |
| New York | 75,324 | 4,186 | 13,682 | 38,700 | 18,756 |
| North Carolina | 663 | 19 | 376 | 222 | 46 |
| North Dakota | 380 | 248 | 127 | 4 | 1 |
| Ohio | 13,181 | 42 | 388 | 12,358 | 393 |
| Oklahoma | 2,806 | 108 | 277 | 2,011 | 410 |
| Oregon | 837 | 9 | 51 | 649 | 128 |
| Pennsylvania | 165 | 51 | 76 | 30 | 8 |
| Rhode Island | 1 | 0 | 0 | 0 | 1 |
| South Carolina | 133 | 81 | 21 | 24 | 7 |
| South Dakota | 2,036 | 2 | 31 | 2,001 | 2 |
| Tennessee | 381 | 37 | 101 | 184 | 59 |
| Texas | 7,128 | 207 | 450 | 5,896 | 575 |
| Utah | 13 | 1 | 1 | 6 | 5 |
| Vermont | 19 | 3 | 1 | 14 | 1 |
| Virginia | 636 | 7 | 62 | 532 | 35 |
| Washington | 150 | 8 | 39 | 56 | 47 |
| West Virginia | 112 | 12 | 40 | 53 | 7 |
| Wisconsin | 6,451 | 8 | 91 | 6,162 | 190 |
| Wyoming | 70 | 2 | 2 | 62 | 4 |
| United States | 190,824 | 39,270 | 21,279 | 104,841 | 25,434 |

Table A.5 Medicaid Enrollees (Excluding Persons with Only Restricted Benefits) by Basis of Eligibility,
Before Unduplication 2006

| State | Before Unduplication (MAX) | | | | |
|----------------------|----------------------------|-----------|-----------|------------|------------|
| | Total | Aged | Disabled | Child | Adult |
| Alabama | 926,684 | 101,845 | 208,009 | 438,997 | 177,833 |
| Alaska | 130,661 | 7,337 | 15,454 | 79,601 | 28,269 |
| Arizona | 1,450,131 | 72,782 | 137,468 | 671,642 | 568,239 |
| Arkansas | 738,122 | 59,227 | 115,801 | 425,338 | 137,756 |
| California | 10,544,503 | 752,973 | 1,121,140 | 4,256,145 | 4,414,245 |
| Colorado | 568,969 | 50,970 | 75,752 | 336,793 | 105,454 |
| Connecticut | 527,063 | 61,719 | 62,264 | 284,331 | 118,749 |
| Delaware | 177,267 | 12,724 | 20,858 | 78,893 | 64,792 |
| District of Columbia | 166,209 | 9,726 | 35,045 | 80,274 | 41,164 |
| Florida | 2,954,575 | 339,147 | 517,476 | 1,554,599 | 543,353 |
| Georgia | 1,748,291 | 131,972 | 284,260 | 1,031,541 | 300,518 |
| Hawaii | 230,982 | 21,942 | 25,541 | 109,235 | 74,264 |
| Idaho | 225,119 | 15,773 | 34,501 | 142,624 | 32,221 |
| Illinois | 2,318,097 | 186,964 | 327,881 | 1,366,233 | 437,019 |
| Indiana | 1,027,409 | 71,584 | 140,244 | 622,333 | 193,248 |
| Iowa | 457,074 | 39,976 | 68,639 | 230,023 | 118,436 |
| Kansas | 355,217 | 33,060 | 59,623 | 202,681 | 59,853 |
| Kentucky | 866,808 | 69,363 | 234,635 | 427,832 | 134,978 |
| Louisiana | 1,203,032 | 107,254 | 193,752 | 749,863 | 152,163 |
| Maine | 328,903 | 38,594 | 52,391 | 128,651 | 109,267 |
| Maryland | 803,208 | 61,020 | 134,549 | 474,771 | 132,868 |
| Massachusetts | 1,252,208 | 147,905 | 247,662 | 477,263 | 379,378 |
| Michigan | 1,920,604 | 129,247 | 295,276 | 1,024,711 | 471,370 |
| Minnesota | 773,388 | 90,911 | 110,931 | 389,941 | 181,605 |
| Mississippi | 744,797 | 79,574 | 164,013 | 387,765 | 113,445 |
| Missouri | 1,080,627 | 92,083 | 178,361 | 619,810 | 190,373 |
| Montana | 112,766 | 9,670 | 19,437 | 61,361 | 22,298 |
| Nebraska | 260,940 | 23,431 | 34,218 | 157,188 | 46,103 |
| Nevada | 253,088 | 22,257 | 37,616 | 143,173 | 50,042 |
| New Hampshire | 139,290 | 13,269 | 19,495 | 86,632 | 19,894 |
| New Jersey | 1,079,518 | 125,891 | 189,377 | 560,650 | 203,600 |
| New Mexico | 498,178 | 25,514 | 64,811 | 303,536 | 104,317 |
| New York | 5,061,022 | 434,323 | 737,990 | 2,024,391 | 1,864,318 |
| North Carolina | 1,641,239 | 176,749 | 282,566 | 883,684 | 298,240 |
| North Dakota | 73,775 | 9,341 | 10,346 | 37,871 | 16,217 |
| Ohio | 2,101,294 | 151,442 | 316,802 | 1,141,933 | 491,117 |
| Oklahoma | 749,691 | 63,448 | 106,456 | 466,696 | 113,091 |
| Oregon | 519,841 | 47,752 | 79,193 | 271,835 | 121,061 |
| Pennsylvania | 2,074,460 | 223,896 | 489,270 | 974,969 | 386,325 |
| Rhode Island | 218,540 | 20,412 | 43,542 | 99,913 | 54,673 |
| South Carolina | 912,040 | 75,917 | 156,100 | 481,880 | 198,143 |
| South Dakota | 130,128 | 10,055 | 18,567 | 80,364 | 21,142 |
| Tennessee | 1,456,372 | 98,682 | 340,501 | 725,968 | 291,221 |
| Texas | 4,133,189 | 414,398 | 530,370 | 2,650,570 | 537,851 |
| Utah | 297,593 | 13,517 | 35,055 | 166,960 | 82,061 |
| Vermont | 157,771 | 17,710 | 21,325 | 66,651 | 52,085 |
| Virginia | 887,334 | 96,496 | 156,706 | 507,138 | 126,994 |
| Washington | 1,156,527 | 81,026 | 161,711 | 621,542 | 292,248 |
| West Virginia | 389,468 | 35,739 | 108,215 | 187,208 | 58,306 |
| Wisconsin | 1,012,151 | 144,355 | 143,355 | 435,149 | 289,292 |
| Wyoming | 80,140 | 5,362 | 9,655 | 52,769 | 12,354 |
| United States | 58,916,303 | 5,126,324 | 8,974,205 | 29,781,921 | 15,033,853 |

Table A.5 Medicaid Enrollees (Excluding Persons with Only Restricted Benefits) by Basis of Eligibility,
After Unduplication 2006

| State | After Unduplication (MAXEM) | | | | |
|-------------------------------|-----------------------------|-----------|-----------|------------|------------|
| | Total | Aged | Disabled | Child | Adult |
| Alabama | 925,876 | 101,797 | 207,833 | 438,538 | 177,708 |
| Alaska | 130,656 | 7,337 | 15,454 | 79,596 | 28,269 |
| Arizona | 1,449,954 | 72,778 | 137,450 | 671,544 | 568,182 |
| Arkansas | 737,135 | 59,041 | 115,304 | 425,185 | 137,605 |
| California | 10,544,378 | 752,880 | 1,121,114 | 4,256,145 | 4,414,239 |
| Colorado | 568,697 | 50,965 | 75,739 | 336,556 | 105,437 |
| Connecticut | 526,465 | 61,705 | 62,245 | 283,797 | 118,718 |
| Delaware | 177,253 | 12,724 | 20,857 | 78,884 | 64,788 |
| District of Columbia | 166,116 | 9,719 | 35,016 | 80,232 | 41,149 |
| Florida | 2,954,213 | 339,077 | 517,382 | 1,554,414 | 543,340 |
| Georgia | 1,748,257 | 131,960 | 284,252 | 1,031,527 | 300,518 |
| Hawaii | 230,849 | 21,940 | 25,536 | 109,135 | 74,238 |
| Idaho | 225,100 | 15,773 | 34,501 | 142,606 | 32,220 |
| Illinois | 2,289,807 | 180,374 | 326,532 | 1,349,472 | 433,429 |
| Indiana | 1,027,274 | 71,580 | 140,237 | 622,218 | 193,239 |
| Iowa | 456,632 | 39,972 | 68,629 | 229,607 | 118,424 |
| Kansas | 355,197 | 33,060 | 59,622 | 202,662 | 59,853 |
| Kentucky | 866,804 | 69,362 | 234,633 | 427,831 | 134,978 |
| Louisiana | 1,203,010 | 107,238 | 193,748 | 749,863 | 152,161 |
| Maine | 328,900 | 38,593 | 52,389 | 128,651 | 109,267 |
| Maryland | 803,199 | 61,019 | 134,549 | 474,763 | 132,868 |
| Massachusetts | 1,252,101 | 147,893 | 247,647 | 477,229 | 379,332 |
| Michigan | 1,920,451 | 129,226 | 295,249 | 1,024,612 | 471,364 |
| Minnesota | 773,331 | 90,856 | 110,929 | 389,941 | 181,605 |
| Mississippi | 742,066 | 79,465 | 162,750 | 387,042 | 112,809 |
| Missouri | 1,080,606 | 92,078 | 178,356 | 619,799 | 190,373 |
| Montana | 112,766 | 9,670 | 19,437 | 61,361 | 22,298 |
| Nebraska | 260,867 | 23,429 | 34,208 | 157,129 | 46,101 |
| Nevada | 253,078 | 22,250 | 37,613 | 143,173 | 50,042 |
| New Hampshire | 139,283 | 13,269 | 19,495 | 86,625 | 19,894 |
| New Jersey | 1,078,241 | 125,107 | 188,905 | 560,642 | 203,587 |
| New Mexico | 498,168 | 25,508 | 64,807 | 303,536 | 104,317 |
| New York | 4,989,713 | 430,089 | 723,961 | 1,990,113 | 1,845,550 |
| North Carolina | 1,641,220 | 176,749 | 282,566 | 883,670 | 298,235 |
| North Dakota | 73,154 | 8,982 | 10,085 | 37,871 | 16,216 |
| Ohio | 2,088,426 | 151,404 | 316,446 | 1,129,609 | 490,967 |
| Oklahoma | 747,232 | 63,328 | 106,203 | 465,080 | 112,621 |
| Oregon | 519,196 | 47,737 | 79,152 | 271,316 | 120,991 |
| Pennsylvania | 2,074,304 | 223,840 | 489,211 | 974,931 | 386,322 |
| Rhode Island | 218,539 | 20,412 | 43,542 | 99,913 | 54,672 |
| South Carolina | 911,948 | 75,903 | 156,073 | 481,835 | 198,137 |
| South Dakota | 128,086 | 10,052 | 18,538 | 78,356 | 21,140 |
| Tennessee | 1,456,055 | 98,656 | 340,413 | 725,806 | 291,180 |
| Texas | 4,125,101 | 414,085 | 529,851 | 2,643,961 | 537,204 |
| Utah | 297,543 | 13,516 | 35,053 | 166,924 | 82,050 |
| Vermont | 157,768 | 17,708 | 21,324 | 66,651 | 52,085 |
| Virginia | 886,881 | 96,490 | 156,670 | 506,762 | 126,959 |
| Washington | 1,156,440 | 81,024 | 161,692 | 621,493 | 292,231 |
| West Virginia | 389,267 | 35,622 | 108,162 | 187,181 | 58,302 |
| Wisconsin | 1,010,009 | 144,343 | 143,300 | 433,184 | 289,182 |
| Wyoming | 80,116 | 5,358 | 9,654 | 52,755 | 12,349 |
| United States | 58,777,728 | 5,112,943 | 8,954,314 | 29,701,726 | 15,008,745 |
| United States (across states) | 57,435,059 | 5,055,697 | 8,705,972 | 28,910,612 | 14,762,778 |

Table A.5 Medicaid Enrollees (Excluding Persons with Only Restricted Benefits) by Basis of Eligibility,
 Duplicates 2006

| State | Duplicates | | | | |
|----------------------|------------|--------|----------|--------|--------|
| | Total | Aged | Disabled | Child | Adult |
| Alabama | 808 | 48 | 176 | 459 | 125 |
| Alaska | 5 | 0 | 0 | 5 | 0 |
| Arizona | 177 | 4 | 18 | 98 | 57 |
| Arkansas | 987 | 186 | 497 | 153 | 151 |
| California | 125 | 93 | 26 | 0 | 6 |
| Colorado | 272 | 5 | 13 | 237 | 17 |
| Connecticut | 598 | 14 | 19 | 534 | 31 |
| Delaware | 14 | 0 | 1 | 9 | 4 |
| District of Columbia | 93 | 7 | 29 | 42 | 15 |
| Florida | 362 | 70 | 94 | 185 | 13 |
| Georgia | 34 | 12 | 8 | 14 | 0 |
| Hawaii | 133 | 2 | 5 | 100 | 26 |
| Idaho | 19 | 0 | 0 | 18 | 1 |
| Illinois | 28,290 | 6,590 | 1,349 | 16,761 | 3,590 |
| Indiana | 135 | 4 | 7 | 115 | 9 |
| Iowa | 442 | 4 | 10 | 416 | 12 |
| Kansas | 20 | 0 | 1 | 19 | 0 |
| Kentucky | 4 | 1 | 2 | 1 | 0 |
| Louisiana | 22 | 16 | 4 | 0 | 2 |
| Maine | 3 | 1 | 2 | 0 | 0 |
| Maryland | 9 | 1 | 0 | 8 | 0 |
| Massachusetts | 107 | 12 | 15 | 34 | 46 |
| Michigan | 153 | 21 | 27 | 99 | 6 |
| Minnesota | 57 | 55 | 2 | 0 | 0 |
| Mississippi | 2,731 | 109 | 1,263 | 723 | 636 |
| Missouri | 21 | 5 | 5 | 11 | 0 |
| Montana | 0 | 0 | 0 | 0 | 0 |
| Nebraska | 73 | 2 | 10 | 59 | 2 |
| Nevada | 10 | 7 | 3 | 0 | 0 |
| New Hampshire | 7 | 0 | 0 | 7 | 0 |
| New Jersey | 1,277 | 784 | 472 | 8 | 13 |
| New Mexico | 10 | 6 | 4 | 0 | 0 |
| New York | 71,309 | 4,234 | 14,029 | 34,278 | 18,768 |
| North Carolina | 19 | 0 | 0 | 14 | 5 |
| North Dakota | 621 | 359 | 261 | 0 | 1 |
| Ohio | 12,868 | 38 | 356 | 12,324 | 150 |
| Oklahoma | 2,459 | 120 | 253 | 1,616 | 470 |
| Oregon | 645 | 15 | 41 | 519 | 70 |
| Pennsylvania | 156 | 56 | 59 | 38 | 3 |
| Rhode Island | 1 | 0 | 0 | 0 | 1 |
| South Carolina | 92 | 14 | 27 | 45 | 6 |
| South Dakota | 2,042 | 3 | 29 | 2,008 | 2 |
| Tennessee | 317 | 26 | 88 | 162 | 41 |
| Texas | 8,088 | 313 | 519 | 6,609 | 647 |
| Utah | 50 | 1 | 2 | 36 | 11 |
| Vermont | 3 | 2 | 1 | 0 | 0 |
| Virginia | 453 | 6 | 36 | 376 | 35 |
| Washington | 87 | 2 | 19 | 49 | 17 |
| West Virginia | 201 | 117 | 53 | 27 | 4 |
| Wisconsin | 2,142 | 12 | 55 | 1,965 | 110 |
| Wyoming | 24 | 4 | 1 | 14 | 5 |
| United States | 138,575 | 13,381 | 19,891 | 80,195 | 25,108 |

Table A.6 Medicaid Enrollees by Managed Care Premium Payment in Calendar Year 2005, Before Unduplication

| State | Before Unduplication (MAX) | | | |
|----------------------|----------------------------|------------|-----------------------------|--------------|
| | Total | HMO/HIO | PHP or PHP and PCCM only | PCCM only |
| Alabama | 1,036,682 | 0 | 597,153 | 439,529 |
| Alaska | 0 | 0 | 0 | 0 |
| Arizona | 1,889,355 | 943,281 | 946,074 | 0 |
| Arkansas | 462,403 | 0 | 0 | 462,403 |
| California | 10,730,539 | 4,149,147 | 6,581,392 | 0 |
| Colorado | 643,324 | 120,423 | 522,901 | 0 |
| Connecticut | 383,092 | 383,092 | 0 | 0 |
| Delaware | 283,061 | 127,465 | 155,596 | 0 |
| District of Columbia | 112,269 | 112,269 | 0 | 0 |
| Florida | 2,694,139 | 1,254,716 | 243,855 | 1,195,568 |
| Georgia | 2,910,402 | 0 | 1,624,392 | 1,286,010 |
| Hawaii | 190,950 | 181,610 | 9,340 | 0 |
| Idaho | 109,771 | 0 | 0 | 109,771 |
| Illinois | 249,899 | 222,497 | 27,402 | 0 |
| Indiana | 974,848 | 679,654 | 0 | 295,194 |
| Iowa | 562,588 | 30,621 | 351,401 | 180,566 |
| Kansas | 209,492 | 111,637 | 0 | 97,855 |
| Kentucky | 1,428,141 | 172,885 | 811,157 | 444,099 |
| Louisiana | 831,977 | 0 | 0 | 831,977 |
| Maine | 0 | 0 | 0 | 0 |
| Maryland | 602,730 | 602,730 | 0 | 0 |
| Massachusetts | 873,937 | 449,640 | 424,297 | 0 |
| Michigan | 2,820,353 | 1,191,467 | 1,628,886 | 0 |
| Minnesota | 529,268 | 529,268 | 0 | 0 |
| Mississippi | 0 | 0 | 0 | 0 |
| Missouri | 777,628 | 777,628 | 0 | 0 |
| Montana | 77,170 | 0 | 0 | 77,170 |
| Nebraska | 95,976 | 41,832 | 0 | 54,144 |
| Nevada | 381,271 | 146,433 | 234,838 | 0 |
| New Hampshire | 0 | 0 | 0 | 0 |
| New Jersey | 728,965 | 687,111 | 41,854 | 0 |
| New Mexico | 466,244 | 466,244 | 0 | 0 |
| New York | 3,230,422 | 2,974,787 | 255,635 | 0 |
| North Carolina | 1,189,826 | 17,756 | 78,815 | 1,093,255 |
| North Dakota | 40,064 | 1,459 | 0 | 38,605 |
| Ohio | 790,169 | 790,169 | 0 | 0 |
| Oklahoma | 667,817 | 0 | 654,809 | 13,008 |
| Oregon | 820,749 | 364,898 | 445,010 | 10,841 |
| Pennsylvania | 3,112,190 | 1,435,826 | 1,333,902 | 342,462 |
| Rhode Island | 151,891 | 151,891 | 0 | 0 |
| South Carolina | 179,179 | 89,046 | 39,334 | 50,799 |
| South Dakota | 190,588 | 0 | 129,084 | 61,504 |
| Tennessee | 3,127,013 | 1,565,493 | 1,561,520 | 0 |
| Texas | 3,104,395 | 1,365,977 | 439,099 | 1,299,319 |
| Utah | 226,588 | 1,076 | 225,512 | 0 |
| Vermont | 0 | 0 | 0 | 0 |
| Virginia | 586,706 | 472,719 | 0 | 113,987 |
| Washington | 683,322 | 677,936 | 0 | 5,386 |
| West Virginia | 222,977 | 171,623 | 0 | 51,354 |
| Wisconsin | 515,856 | 501,010 | 14,846 | 0 |
| Wyoming | 0 | 0 | 0 | 0 |
| United States | 51,896,226 | 23,963,316 | 19,378,104 | 8,554,806 |

Table A.6 Medicaid Enrollees by Managed Care Premium Payment in Calendar Year 2005, After Unduplication

| State | After Unduplication (MAXEM) | | | |
|---------------------------|-----------------------------|-------------|-----------------------------|--------------|
| | Total | HMO/ HIO | PHP or PHP and PCCM only | PCCM only |
| Alabama | 1,035,549 | 0 | 596,320 | 439,229 |
| Alaska | 0 | 0 | 0 | 0 |
| Arizona | 1,888,946 | 943,094 | 945,852 | 0 |
| Arkansas | 462,254 | 0 | 0 | 462,254 |
| California | 10,730,302 | 4,149,077 | 6,581,225 | 0 |
| Colorado | 643,100 | 120,417 | 522,683 | 0 |
| Connecticut | 382,543 | 382,543 | 0 | 0 |
| Delaware | 283,034 | 127,452 | 155,582 | 0 |
| District of Columbia | 112,256 | 112,256 | 0 | 0 |
| Florida | 2,693,952 | 1,254,626 | 243,844 | 1,195,482 |
| Georgia | 2,909,323 | 0 | 1,623,913 | 1,285,410 |
| Hawaii | 190,820 | 181,481 | 9,339 | 0 |
| Idaho | 109,771 | 0 | 0 | 109,771 |
| Illinois | 249,772 | 222,379 | 27,393 | 0 |
| Indiana | 974,828 | 679,634 | 0 | 295,194 |
| Iowa | 562,071 | 30,621 | 350,890 | 180,560 |
| Kansas | 209,483 | 111,632 | 0 | 97,851 |
| Kentucky | 1,406,940 | 168,581 | 800,034 | 438,325 |
| Louisiana | 831,967 | 0 | 0 | 831,967 |
| Maine | 0 | 0 | 0 | 0 |
| Maryland | 602,723 | 602,723 | 0 | 0 |
| Massachusetts | 873,918 | 449,631 | 424,287 | 0 |
| Michigan | 2,820,279 | 1,191,456 | 1,628,823 | 0 |
| Minnesota | 529,246 | 529,246 | 0 | 0 |
| Mississippi | 0 | 0 | 0 | 0 |
| Missouri | 777,426 | 777,426 | 0 | 0 |
| Montana | 77,170 | 0 | 0 | 77,170 |
| Nebraska | 95,976 | 41,832 | 0 | 54,144 |
| Nevada | 381,263 | 146,431 | 234,832 | 0 |
| New Hampshire | 0 | 0 | 0 | 0 |
| New Jersey | 727,972 | 686,260 | 41,712 | 0 |
| New Mexico | 466,242 | 466,242 | 0 | 0 |
| New York | 3,205,637 | 2,950,930 | 254,707 | 0 |
| North Carolina | 1,189,618 | 17,755 | 78,811 | 1,093,052 |
| North Dakota | 40,064 | 1,459 | 0 | 38,605 |
| Ohio | 790,072 | 790,072 | 0 | 0 |
| Oklahoma | 666,113 | 0 | 653,109 | 13,004 |
| Oregon | 820,021 | 364,602 | 444,586 | 10,833 |
| Pennsylvania | 3,111,991 | 1,435,736 | 1,333,800 | 342,455 |
| Rhode Island | 151,891 | 151,891 | 0 | 0 |
| South Carolina | 179,178 | 89,046 | 39,333 | 50,799 |
| South Dakota | 188,551 | 0 | 127,048 | 61,503 |
| Tennessee | 3,126,576 | 1,565,275 | 1,561,301 | 0 |
| Texas | 3,101,780 | 1,364,216 | 438,505 | 1,299,059 |
| Utah | 226,582 | 1,076 | 225,506 | 0 |
| Vermont | 0 | 0 | 0 | 0 |
| Virginia | 586,393 | 472,445 | 0 | 113,948 |
| Washington | 683,286 | 677,900 | 0 | 5,386 |
| West Virginia | 222,977 | 171,623 | 0 | 51,354 |
| Wisconsin | 512,406 | 497,562 | 14,844 | 0 |
| Wyoming | 0 | 0 | 0 | 0 |
| United States | 51,832,262 | 23,926,628 | 19,358,279 | 8,547,355 |
| United States(across stat | 50,579,409 | 23,399,359 | 18,898,242 | 8,281,808 |

Table A.6 Medicaid Enrollees by Managed Care Premium Payment in Calendar Year 2005, Duplicates

| State | Duplicates | | | |
|----------------------|------------|-------------|-----------------------------|--------------|
| | Total | HMO/ HIO | PHP or PHP and PCCM only | PCCM only |
| Alabama | 1,133 | 0 | 833 | 300 |
| Alaska | 0 | 0 | 0 | 0 |
| Arizona | 409 | 187 | 222 | 0 |
| Arkansas | 149 | 0 | 0 | 149 |
| California | 237 | 70 | 167 | 0 |
| Colorado | 224 | 6 | 218 | 0 |
| Connecticut | 549 | 549 | 0 | 0 |
| Delaware | 27 | 13 | 14 | 0 |
| District of Columbia | 13 | 13 | 0 | 0 |
| Florida | 187 | 90 | 11 | 86 |
| Georgia | 1,079 | 0 | 479 | 600 |
| Hawaii | 130 | 129 | 1 | 0 |
| Idaho | 0 | 0 | 0 | 0 |
| Illinois | 127 | 118 | 9 | 0 |
| Indiana | 20 | 20 | 0 | 0 |
| Iowa | 517 | 0 | 511 | 6 |
| Kansas | 9 | 5 | 0 | 4 |
| Kentucky | 21,201 | 4,304 | 11,123 | 5,774 |
| Louisiana | 10 | 0 | 0 | 10 |
| Maine | 0 | 0 | 0 | 0 |
| Maryland | 7 | 7 | 0 | 0 |
| Massachusetts | 19 | 9 | 10 | 0 |
| Michigan | 74 | 11 | 63 | 0 |
| Minnesota | 22 | 22 | 0 | 0 |
| Mississippi | 0 | 0 | 0 | 0 |
| Missouri | 202 | 202 | 0 | 0 |
| Montana | 0 | 0 | 0 | 0 |
| Nebraska | 0 | 0 | 0 | 0 |
| Nevada | 8 | 2 | 6 | 0 |
| New Hampshire | 0 | 0 | 0 | 0 |
| New Jersey | 993 | 851 | 142 | 0 |
| New Mexico | 2 | 2 | 0 | 0 |
| New York | 24,785 | 23,857 | 928 | 0 |
| North Carolina | 208 | 1 | 4 | 203 |
| North Dakota | 0 | 0 | 0 | 0 |
| Ohio | 97 | 97 | 0 | 0 |
| Oklahoma | 1,704 | 0 | 1,700 | 4 |
| Oregon | 728 | 296 | 424 | 8 |
| Pennsylvania | 199 | 90 | 102 | 7 |
| Rhode Island | 0 | 0 | 0 | 0 |
| South Carolina | 1 | 0 | 1 | 0 |
| South Dakota | 2,037 | 0 | 2,036 | 1 |
| Tennessee | 437 | 218 | 219 | 0 |
| Texas | 2,615 | 1,761 | 594 | 260 |
| Utah | 6 | 0 | 6 | 0 |
| Vermont | 0 | 0 | 0 | 0 |
| Virginia | 313 | 274 | 0 | 39 |
| Washington | 36 | 36 | 0 | 0 |
| West Virginia | 0 | 0 | 0 | 0 |
| Wisconsin | 3,450 | 3,448 | 2 | 0 |
| Wyoming | 0 | 0 | 0 | 0 |
| United States | 63,964 | 36,688 | 19,825 | 7,451 |

Table A.6 Medicaid Enrollees by Managed Care Premium Payment in Calendar Year 2006, Before Unduplication

| State | Before Unduplication (MAX) | | | |
|----------------------|----------------------------|-------------|-----------------------------|--------------|
| | Total | HMO/ HIO | PHP or PHP and PCCM only | PCCM only |
| Alabama | 1,040,659 | 0 | 596,874 | 443,785 |
| Alaska | 0 | 0 | 0 | 0 |
| Arizona | 1,836,012 | 899,761 | 936,251 | 0 |
| Arkansas | 481,640 | 0 | 0 | 481,640 |
| California | 10,693,820 | 4,142,519 | 6,551,301 | 0 |
| Colorado | 713,870 | 176,427 | 537,443 | 0 |
| Connecticut | 378,665 | 378,665 | 0 | 0 |
| Delaware | 289,306 | 131,056 | 158,250 | 0 |
| District of Columbia | 112,773 | 112,773 | 0 | 0 |
| Florida | 2,979,220 | 1,275,827 | 530,692 | 1,172,701 |
| Georgia | 3,606,179 | 970,633 | 1,571,374 | 1,064,172 |
| Hawaii | 186,043 | 181,318 | 4,725 | 0 |
| Idaho | 189,159 | 0 | 0 | 189,159 |
| Illinois | 202,082 | 169,410 | 32,551 | 121 |
| Indiana | 804,123 | 724,495 | 0 | 79,628 |
| Iowa | 545,405 | 7,673 | 356,978 | 180,754 |
| Kansas | 207,484 | 120,162 | 0 | 87,322 |
| Kentucky | 1,399,359 | 172,571 | 798,364 | 428,424 |
| Louisiana | 824,809 | 0 | 0 | 824,809 |
| Maine | 0 | 0 | 0 | 0 |
| Maryland | 588,452 | 588,452 | 0 | 0 |
| Massachusetts | 881,914 | 475,814 | 406,100 | 0 |
| Michigan | 2,899,687 | 1,221,750 | 1,677,937 | 0 |
| Minnesota | 531,216 | 531,216 | 0 | 0 |
| Mississippi | 2 | 0 | 2 | 0 |
| Missouri | 754,564 | 748,835 | 5,729 | 0 |
| Montana | 73,501 | 0 | 0 | 73,501 |
| Nebraska | 97,751 | 42,566 | 0 | 55,185 |
| Nevada | 354,378 | 134,995 | 219,383 | 0 |
| New Hampshire | 0 | 0 | 0 | 0 |
| New Jersey | 780,860 | 740,917 | 39,943 | 0 |
| New Mexico | 880,785 | 438,092 | 442,693 | 0 |
| New York | 3,433,650 | 3,214,581 | 219,058 | 11 |
| North Carolina | 1,237,931 | 12,329 | 88,333 | 1,137,269 |
| North Dakota | 39,480 | 1,303 | 0 | 38,177 |
| Ohio | 1,183,867 | 1,183,867 | 0 | 0 |
| Oklahoma | 686,846 | 0 | 673,907 | 12,939 |
| Oregon | 788,942 | 351,371 | 427,969 | 9,602 |
| Pennsylvania | 3,161,527 | 1,319,011 | 1,464,378 | 378,138 |
| Rhode Island | 150,954 | 150,954 | 0 | 0 |
| South Carolina | 243,073 | 125,342 | 42,275 | 75,456 |
| South Dakota | 191,793 | 0 | 130,651 | 61,142 |
| Tennessee | 1,432,963 | 382 | 1,432,581 | 0 |
| Texas | 3,489,654 | 1,714,227 | 451,976 | 1,323,451 |
| Utah | 589 | 589 | 0 | 0 |
| Vermont | 0 | 0 | 0 | 0 |
| Virginia | 586,763 | 504,112 | 0 | 82,651 |
| Washington | 697,523 | 692,036 | 0 | 5,487 |
| West Virginia | 226,281 | 194,381 | 0 | 31,900 |
| Wisconsin | 580,026 | 524,025 | 56,001 | 0 |
| Wyoming | 0 | 0 | 0 | 0 |
| United States | 52,465,580 | 24,374,437 | 19,853,719 | 8,237,424 |

Table A.6 Medicaid Enrollees by Managed Care Premium Payment in Calendar Year 2006, After Unduplication

| State | After Unduplication (MAXEM) | | | |
|---------------------------|-----------------------------|-------------|-----------------------------|--------------|
| | Total | HMO/ HIO | PHP or PHP and PCCM only | PCCM only |
| Alabama | 1,039,904 | 0 | 596,363 | 443,541 |
| Alaska | 0 | 0 | 0 | 0 |
| Arizona | 1,835,809 | 899,649 | 936,160 | 0 |
| Arkansas | 481,511 | 0 | 0 | 481,511 |
| California | 10,693,744 | 4,142,515 | 6,551,229 | 0 |
| Colorado | 713,598 | 176,416 | 537,182 | 0 |
| Connecticut | 378,161 | 378,161 | 0 | 0 |
| Delaware | 289,289 | 131,049 | 158,240 | 0 |
| District of Columbia | 112,746 | 112,746 | 0 | 0 |
| Florida | 2,979,064 | 1,275,750 | 530,680 | 1,172,634 |
| Georgia | 3,606,154 | 970,627 | 1,571,363 | 1,064,164 |
| Hawaii | 185,941 | 181,216 | 4,725 | 0 |
| Idaho | 189,142 | 0 | 0 | 189,142 |
| Illinois | 201,997 | 169,337 | 32,539 | 121 |
| Indiana | 804,067 | 724,440 | 0 | 79,627 |
| Iowa | 545,010 | 7,673 | 356,589 | 180,748 |
| Kansas | 207,480 | 120,160 | 0 | 87,320 |
| Kentucky | 1,399,359 | 172,571 | 798,364 | 428,424 |
| Louisiana | 824,809 | 0 | 0 | 824,809 |
| Maine | 0 | 0 | 0 | 0 |
| Maryland | 588,446 | 588,446 | 0 | 0 |
| Massachusetts | 881,896 | 475,806 | 406,090 | 0 |
| Michigan | 2,899,498 | 1,221,689 | 1,677,809 | 0 |
| Minnesota | 531,207 | 531,207 | 0 | 0 |
| Mississippi | 2 | 0 | 2 | 0 |
| Missouri | 754,556 | 748,827 | 5,729 | 0 |
| Montana | 73,501 | 0 | 0 | 73,501 |
| Nebraska | 97,747 | 42,564 | 0 | 55,183 |
| Nevada | 354,377 | 134,995 | 219,382 | 0 |
| New Hampshire | 0 | 0 | 0 | 0 |
| New Jersey | 780,704 | 740,913 | 39,791 | 0 |
| New Mexico | 880,785 | 438,092 | 442,693 | 0 |
| New York | 3,412,679 | 3,193,866 | 218,802 | 11 |
| North Carolina | 1,237,920 | 12,329 | 88,333 | 1,137,258 |
| North Dakota | 39,480 | 1,303 | 0 | 38,177 |
| Ohio | 1,183,782 | 1,183,782 | 0 | 0 |
| Oklahoma | 685,655 | 0 | 672,718 | 12,937 |
| Oregon | 788,278 | 351,100 | 427,584 | 9,594 |
| Pennsylvania | 3,161,399 | 1,318,968 | 1,464,299 | 378,132 |
| Rhode Island | 150,954 | 150,954 | 0 | 0 |
| South Carolina | 243,069 | 125,341 | 42,274 | 75,454 |
| South Dakota | 189,750 | 0 | 128,610 | 61,140 |
| Tennessee | 1,432,669 | 382 | 1,432,287 | 0 |
| Texas | 3,487,049 | 1,712,708 | 451,355 | 1,322,986 |
| Utah | 589 | 589 | 0 | 0 |
| Vermont | 0 | 0 | 0 | 0 |
| Virginia | 586,552 | 503,921 | 0 | 82,631 |
| Washington | 697,499 | 692,012 | 0 | 5,487 |
| West Virginia | 226,273 | 194,373 | 0 | 31,900 |
| Wisconsin | 579,360 | 523,420 | 55,940 | 0 |
| Wyoming | 0 | 0 | 0 | 0 |
| United States | 52,433,461 | 24,349,897 | 19,847,132 | 8,236,432 |
| United States(across stat | 51,219,341 | 23,836,492 | 19,391,263 | 7,991,586 |

Table A.6 Medicaid Enrollees by Managed Care Premium Payment in Calendar Year 2006, Duplicates

| State | Duplicates | | | |
|----------------------|------------|-------------|-----------------------------|--------------|
| | Total | HMO/ HIO | PHP or PHP and PCCM only | PCCM only |
| Alabama | 755 | 0 | 511 | 244 |
| Alaska | 0 | 0 | 0 | 0 |
| Arizona | 203 | 112 | 91 | 0 |
| Arkansas | 129 | 0 | 0 | 129 |
| California | 76 | 4 | 72 | 0 |
| Colorado | 272 | 11 | 261 | 0 |
| Connecticut | 504 | 504 | 0 | 0 |
| Delaware | 17 | 7 | 10 | 0 |
| District of Columbia | 27 | 27 | 0 | 0 |
| Florida | 156 | 77 | 12 | 67 |
| Georgia | 25 | 6 | 11 | 8 |
| Hawaii | 102 | 102 | 0 | 0 |
| Idaho | 17 | 0 | 0 | 17 |
| Illinois | 85 | 73 | 12 | 0 |
| Indiana | 56 | 55 | 0 | 1 |
| Iowa | 395 | 0 | 389 | 6 |
| Kansas | 4 | 2 | 0 | 2 |
| Kentucky | 0 | 0 | 0 | 0 |
| Louisiana | 0 | 0 | 0 | 0 |
| Maine | 0 | 0 | 0 | 0 |
| Maryland | 6 | 6 | 0 | 0 |
| Massachusetts | 18 | 8 | 10 | 0 |
| Michigan | 189 | 61 | 128 | 0 |
| Minnesota | 9 | 9 | 0 | 0 |
| Mississippi | 0 | 0 | 0 | 0 |
| Missouri | 8 | 8 | 0 | 0 |
| Montana | 0 | 0 | 0 | 0 |
| Nebraska | 4 | 2 | 0 | 2 |
| Nevada | 1 | 0 | 1 | 0 |
| New Hampshire | 0 | 0 | 0 | 0 |
| New Jersey | 156 | 4 | 152 | 0 |
| New Mexico | 0 | 0 | 0 | 0 |
| New York | 20,971 | 20,715 | 256 | 0 |
| North Carolina | 11 | 0 | 0 | 11 |
| North Dakota | 0 | 0 | 0 | 0 |
| Ohio | 85 | 85 | 0 | 0 |
| Oklahoma | 1,191 | 0 | 1,189 | 2 |
| Oregon | 664 | 271 | 385 | 8 |
| Pennsylvania | 128 | 43 | 79 | 6 |
| Rhode Island | 0 | 0 | 0 | 0 |
| South Carolina | 4 | 1 | 1 | 2 |
| South Dakota | 2,043 | 0 | 2,041 | 2 |
| Tennessee | 294 | 0 | 294 | 0 |
| Texas | 2,605 | 1,519 | 621 | 465 |
| Utah | 0 | 0 | 0 | 0 |
| Vermont | 0 | 0 | 0 | 0 |
| Virginia | 211 | 191 | 0 | 20 |
| Washington | 24 | 24 | 0 | 0 |
| West Virginia | 8 | 8 | 0 | 0 |
| Wisconsin | 666 | 605 | 61 | 0 |
| Wyoming | 0 | 0 | 0 | 0 |
| United States | 32,119 | 24,540 | 6,587 | 992 |

Table A.7 Medicaid Enrollees who Received Inpatient Hospital Services in Calendar Year 2005 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|--------------|
| Alabama | 113,587 | 113,563 | 24 |
| Alaska | 14,599 | 14,599 | 0 |
| Arizona | 187,132 | 187,123 | 9 |
| Arkansas | 85,549 | 85,532 | 17 |
| California | 588,772 | 588,771 | 1 |
| Colorado | 43,617 | 43,616 | 1 |
| Connecticut | 30,526 | 30,526 | 0 |
| Delaware | 12,348 | 12,348 | 0 |
| District of Columbia | 14,407 | 14,407 | 0 |
| Florida | 305,605 | 305,598 | 7 |
| Georgia | 241,321 | 241,319 | 2 |
| Hawaii | 23,593 | 23,591 | 2 |
| Idaho | 24,863 | 24,862 | 1 |
| Illinois | 190,860 | 190,691 | 169 |
| Indiana | 113,794 | 113,794 | 0 |
| Iowa | 54,247 | 54,247 | 0 |
| Kansas | 49,585 | 49,585 | 0 |
| Kentucky | 79,896 | 79,748 | 148 |
| Louisiana | 144,990 | 144,990 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 112,712 | 112,711 | 1 |
| Massachusetts | 73,741 | 73,740 | 1 |
| Michigan | 92,537 | 92,536 | 1 |
| Minnesota | 66,815 | 66,814 | 1 |
| Mississippi | 100,188 | 100,163 | 25 |
| Missouri | 135,371 | 135,369 | 2 |
| Montana | 16,829 | 16,829 | 0 |
| Nebraska | 32,101 | 32,101 | 0 |
| Nevada | 35,624 | 35,624 | 0 |
| New Hampshire | 14,454 | 14,454 | 0 |
| New Jersey | 115,787 | 115,772 | 15 |
| New Mexico | 47,295 | 47,295 | 0 |
| New York | 625,670 | 624,162 | 1,508 |
| North Carolina | 207,627 | 207,592 | 35 |
| North Dakota | 9,189 | 9,189 | 0 |
| Ohio | 216,842 | 216,766 | 76 |
| Oklahoma | 109,716 | 109,688 | 28 |
| Oregon | 58,051 | 58,046 | 5 |
| Pennsylvania | 84,584 | 84,584 | 0 |
| Rhode Island | 31,227 | 31,227 | 0 |
| South Carolina | 105,656 | 105,656 | 0 |
| South Dakota | 15,822 | 15,801 | 21 |
| Tennessee | 78,995 | 78,995 | 0 |
| Texas | 496,863 | 496,804 | 59 |
| Utah | 30,878 | 30,878 | 0 |
| Vermont | 10,677 | 10,677 | 0 |
| Virginia | 152,545 | 152,540 | 5 |
| Washington | 90,863 | 90,862 | 1 |
| West Virginia | 28,808 | 28,808 | 0 |
| Wisconsin | 102,977 | 102,813 | 164 |
| Wyoming | 11,300 | 11,298 | 2 |
| United States | 5,631,035 | 5,628,704 | 2,331 |
| United States (across states) | N/A | 5,542,755 | N/A |

Table A.7 Medicaid Enrollees who Received Mental Hospital Services for the Aged in Calendar Year 2005 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|------------|
| Alabama | 218 | 218 | 0 |
| Alaska | 6 | 6 | 0 |
| Arizona | 0 | 0 | 0 |
| Arkansas | 0 | 0 | 0 |
| California | 13 | 13 | 0 |
| Colorado | 12 | 12 | 0 |
| Connecticut | 1,166 | 1,165 | 1 |
| Delaware | 223 | 223 | 0 |
| District of Columbia | 86 | 86 | 0 |
| Florida | 161 | 161 | 0 |
| Georgia | 0 | 0 | 0 |
| Hawaii | 141 | 141 | 0 |
| Idaho | 841 | 841 | 0 |
| Illinois | 1,829 | 1,826 | 3 |
| Indiana | 134 | 134 | 0 |
| Iowa | 12 | 12 | 0 |
| Kansas | 184 | 184 | 0 |
| Kentucky | 307 | 307 | 0 |
| Louisiana | 6,562 | 6,562 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 53 | 53 | 0 |
| Massachusetts | 31 | 31 | 0 |
| Michigan | 68 | 68 | 0 |
| Minnesota | 156 | 156 | 0 |
| Mississippi | 247 | 247 | 0 |
| Missouri | 14 | 14 | 0 |
| Montana | 55 | 55 | 0 |
| Nebraska | 1 | 1 | 0 |
| Nevada | 8 | 8 | 0 |
| New Hampshire | 0 | 0 | 0 |
| New Jersey | 394 | 393 | 1 |
| New Mexico | 45 | 45 | 0 |
| New York | 4,319 | 4,286 | 33 |
| North Carolina | 176 | 176 | 0 |
| North Dakota | 11 | 11 | 0 |
| Ohio | 17 | 17 | 0 |
| Oklahoma | 110 | 110 | 0 |
| Oregon | 87 | 87 | 0 |
| Pennsylvania | 7,193 | 7,193 | 0 |
| Rhode Island | 167 | 167 | 0 |
| South Carolina | 247 | 247 | 0 |
| South Dakota | 45 | 45 | 0 |
| Tennessee | 34 | 34 | 0 |
| Texas | 556 | 556 | 0 |
| Utah | 5 | 5 | 0 |
| Vermont | 86 | 86 | 0 |
| Virginia | 831 | 831 | 0 |
| Washington | 1,009 | 1,009 | 0 |
| West Virginia | 217 | 217 | 0 |
| Wisconsin | 162 | 162 | 0 |
| Wyoming | 18 | 18 | 0 |
| United States | 28,257 | 28,219 | 38 |
| United States (across states) | N/A | 27,443 | N/A |

Table A.7 Medicaid Enrollees who Received Inpatient Psychiatric Facility Services (under Age 21) in Calendar Year 2005 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|------------|
| Alabama | 0 | 0 | 0 |
| Alaska | 1,423 | 1,423 | 0 |
| Arizona | 758 | 758 | 0 |
| Arkansas | 5,705 | 5,704 | 1 |
| California | 576 | 576 | 0 |
| Colorado | 166 | 166 | 0 |
| Connecticut | 152 | 152 | 0 |
| Delaware | 52 | 52 | 0 |
| District of Columbia | 239 | 239 | 0 |
| Florida | 0 | 0 | 0 |
| Georgia | 0 | 0 | 0 |
| Hawaii | 40 | 40 | 0 |
| Idaho | 1,024 | 1,024 | 0 |
| Illinois | 4,374 | 4,369 | 5 |
| Indiana | 2,803 | 2,803 | 0 |
| Iowa | 954 | 954 | 0 |
| Kansas | 409 | 409 | 0 |
| Kentucky | 3,502 | 3,494 | 8 |
| Louisiana | 3,272 | 3,272 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 2,624 | 2,624 | 0 |
| Massachusetts | 3,649 | 3,649 | 0 |
| Michigan | 312 | 312 | 0 |
| Minnesota | 684 | 684 | 0 |
| Mississippi | 2,377 | 2,377 | 0 |
| Missouri | 364 | 364 | 0 |
| Montana | 424 | 424 | 0 |
| Nebraska | 1,645 | 1,645 | 0 |
| Nevada | 880 | 880 | 0 |
| New Hampshire | 313 | 313 | 0 |
| New Jersey | 1,659 | 1,656 | 3 |
| New Mexico | 5,687 | 5,687 | 0 |
| New York | 11,409 | 11,183 | 226 |
| North Carolina | 2,226 | 2,226 | 0 |
| North Dakota | 52 | 52 | 0 |
| Ohio | 1,660 | 1,651 | 9 |
| Oklahoma | 3,639 | 3,633 | 6 |
| Oregon | 878 | 876 | 2 |
| Pennsylvania | 5,608 | 5,608 | 0 |
| Rhode Island | 176 | 176 | 0 |
| South Carolina | 1,038 | 1,038 | 0 |
| South Dakota | 489 | 481 | 8 |
| Tennessee | 2,466 | 2,466 | 0 |
| Texas | 6,606 | 6,604 | 2 |
| Utah | 109 | 109 | 0 |
| Vermont | 0 | 0 | 0 |
| Virginia | 714 | 714 | 0 |
| Washington | 0 | 0 | 0 |
| West Virginia | 1,902 | 1,902 | 0 |
| Wisconsin | 2,772 | 2,771 | 1 |
| Wyoming | 461 | 461 | 0 |
| United States | 88,272 | 88,001 | 271 |
| United States (across states) | N/A | 85,528 | N/A |

Table A.7 Medicaid Enrollees who Received Intermediate Care Facility Services for the Mentally Retarded in Calendar Year 2005 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|------------|
| Alabama | 245 | 245 | 0 |
| Alaska | 0 | 0 | 0 |
| Arizona | 212 | 212 | 0 |
| Arkansas | 1,691 | 1,691 | 0 |
| California | 9,980 | 9,980 | 0 |
| Colorado | 131 | 131 | 0 |
| Connecticut | 1,269 | 1,269 | 0 |
| Delaware | 181 | 181 | 0 |
| District of Columbia | 749 | 749 | 0 |
| Florida | 3,206 | 3,206 | 0 |
| Georgia | 1,146 | 1,146 | 0 |
| Hawaii | 105 | 105 | 0 |
| Idaho | 624 | 624 | 0 |
| Illinois | 9,636 | 9,633 | 3 |
| Indiana | 4,255 | 4,255 | 0 |
| Iowa | 2,343 | 2,343 | 0 |
| Kansas | 649 | 649 | 0 |
| Kentucky | 769 | 769 | 0 |
| Louisiana | 5,671 | 5,671 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 381 | 381 | 0 |
| Massachusetts | 1,062 | 1,062 | 0 |
| Michigan | 175 | 175 | 0 |
| Minnesota | 3,127 | 3,126 | 1 |
| Mississippi | 2,879 | 2,879 | 0 |
| Missouri | 1,168 | 1,168 | 0 |
| Montana | 95 | 95 | 0 |
| Nebraska | 641 | 641 | 0 |
| Nevada | 225 | 225 | 0 |
| New Hampshire | 34 | 34 | 0 |
| New Jersey | 3,110 | 3,109 | 1 |
| New Mexico | 274 | 274 | 0 |
| New York | 9,704 | 9,691 | 13 |
| North Carolina | 4,413 | 4,413 | 0 |
| North Dakota | 646 | 646 | 0 |
| Ohio | 7,840 | 7,839 | 1 |
| Oklahoma | 1,843 | 1,841 | 2 |
| Oregon | 45 | 45 | 0 |
| Pennsylvania | 4,146 | 4,146 | 0 |
| Rhode Island | 45 | 45 | 0 |
| South Carolina | 1,831 | 1,831 | 0 |
| South Dakota | 198 | 198 | 0 |
| Tennessee | 1,335 | 1,335 | 0 |
| Texas | 12,812 | 12,810 | 2 |
| Utah | 837 | 837 | 0 |
| Vermont | 7 | 7 | 0 |
| Virginia | 1,992 | 1,992 | 0 |
| Washington | 59 | 59 | 0 |
| West Virginia | 545 | 545 | 0 |
| Wisconsin | 2,144 | 2,144 | 0 |
| Wyoming | 89 | 89 | 0 |
| United States | 106,564 | 106,541 | 23 |
| United States (across states) | N/A | 106,208 | N/A |

Table A.7 Medicaid Enrollees who Received Nursing Facility Services in Calendar Year 2005 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|------------|
| Alabama | 26,543 | 26,526 | 17 |
| Alaska | 947 | 947 | 0 |
| Arizona | 17,010 | 17,010 | 0 |
| Arkansas | 18,518 | 18,509 | 9 |
| California | 128,051 | 128,021 | 30 |
| Colorado | 14,778 | 14,778 | 0 |
| Connecticut | 29,479 | 29,478 | 1 |
| Delaware | 3,673 | 3,673 | 0 |
| District of Columbia | 4,206 | 4,206 | 0 |
| Florida | 79,730 | 79,724 | 6 |
| Georgia | 39,255 | 39,254 | 1 |
| Hawaii | 4,895 | 4,894 | 1 |
| Idaho | 4,665 | 4,665 | 0 |
| Illinois | 77,097 | 77,057 | 40 |
| Indiana | 38,000 | 38,000 | 0 |
| Iowa | 19,332 | 19,332 | 0 |
| Kansas | 15,104 | 15,104 | 0 |
| Kentucky | 27,705 | 27,693 | 12 |
| Louisiana | 31,486 | 31,486 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 24,735 | 24,735 | 0 |
| Massachusetts | 51,536 | 51,536 | 0 |
| Michigan | 44,631 | 44,625 | 6 |
| Minnesota | 32,114 | 32,096 | 18 |
| Mississippi | 20,263 | 20,262 | 1 |
| Missouri | 38,472 | 38,471 | 1 |
| Montana | 5,228 | 5,228 | 0 |
| Nebraska | 11,320 | 11,320 | 0 |
| Nevada | 4,801 | 4,801 | 0 |
| New Hampshire | 7,190 | 7,190 | 0 |
| New Jersey | 42,649 | 42,505 | 144 |
| New Mexico | 6,718 | 6,717 | 1 |
| New York | 150,925 | 150,823 | 102 |
| North Carolina | 42,003 | 42,003 | 0 |
| North Dakota | 5,176 | 5,176 | 0 |
| Ohio | 85,099 | 85,093 | 6 |
| Oklahoma | 22,052 | 22,037 | 15 |
| Oregon | 9,910 | 9,910 | 0 |
| Pennsylvania | 80,102 | 80,101 | 1 |
| Rhode Island | 10,681 | 10,681 | 0 |
| South Carolina | 17,049 | 17,049 | 0 |
| South Dakota | 5,737 | 5,737 | 0 |
| Tennessee | 33,681 | 33,681 | 0 |
| Texas | 93,921 | 93,905 | 16 |
| Utah | 5,559 | 5,559 | 0 |
| Vermont | 3,539 | 3,539 | 0 |
| Virginia | 28,080 | 28,079 | 1 |
| Washington | 24,900 | 24,900 | 0 |
| West Virginia | 10,889 | 10,889 | 0 |
| Wisconsin | 34,232 | 34,232 | 0 |
| Wyoming | 2,436 | 2,436 | 0 |
| United States | 1,536,102 | 1,535,673 | 429 |
| United States (across states) | N/A | 1,522,948 | N/A |

Table A.7 Medicaid Enrollees who Received Physician Services in Calendar Year 2005 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|---------------|
| Alabama | 551,652 | 551,290 | 362 |
| Alaska | 84,856 | 84,850 | 6 |
| Arizona | 847,631 | 847,530 | 101 |
| Arkansas | 481,010 | 480,802 | 208 |
| California | 4,531,205 | 4,531,127 | 78 |
| Colorado | 54,835 | 54,832 | 3 |
| Connecticut | 92,243 | 92,234 | 9 |
| Delaware | 119,503 | 119,494 | 9 |
| District of Columbia | 22,943 | 22,942 | 1 |
| Florida | 1,245,365 | 1,245,278 | 87 |
| Georgia | 1,230,830 | 1,230,611 | 219 |
| Hawaii | 165,803 | 165,759 | 44 |
| Idaho | 147,303 | 147,298 | 5 |
| Illinois | 1,309,917 | 1,307,072 | 2,845 |
| Indiana | 598,862 | 598,853 | 9 |
| Iowa | 279,947 | 279,815 | 132 |
| Kansas | 232,940 | 232,932 | 8 |
| Kentucky | 617,420 | 611,333 | 6,087 |
| Louisiana | 769,586 | 769,581 | 5 |
| Maine | 0 | 0 | 0 |
| Maryland | 529,630 | 529,625 | 5 |
| Massachusetts | 485,649 | 485,643 | 6 |
| Michigan | 465,473 | 465,460 | 13 |
| Minnesota | 520,555 | 520,536 | 19 |
| Mississippi | 473,263 | 473,070 | 193 |
| Missouri | 630,463 | 630,399 | 64 |
| Montana | 71,668 | 71,668 | 0 |
| Nebraska | 190,973 | 190,973 | 0 |
| Nevada | 139,642 | 139,637 | 5 |
| New Hampshire | 84,756 | 84,754 | 2 |
| New Jersey | 630,984 | 630,446 | 538 |
| New Mexico | 312,167 | 312,166 | 1 |
| New York | 2,718,635 | 2,710,130 | 8,505 |
| North Carolina | 1,170,789 | 1,170,475 | 314 |
| North Dakota | 45,658 | 45,645 | 13 |
| Ohio | 1,143,138 | 1,140,243 | 2,895 |
| Oklahoma | 437,857 | 437,236 | 621 |
| Oregon | 309,411 | 309,264 | 147 |
| Pennsylvania | 367,935 | 367,931 | 4 |
| Rhode Island | 94,497 | 94,497 | 0 |
| South Carolina | 538,860 | 538,857 | 3 |
| South Dakota | 72,854 | 72,392 | 462 |
| Tennessee | 965,674 | 965,629 | 45 |
| Texas | 1,975,204 | 1,974,197 | 1,007 |
| Utah | 86,298 | 86,297 | 1 |
| Vermont | 107,553 | 107,553 | 0 |
| Virginia | 601,519 | 601,369 | 150 |
| Washington | 385,904 | 385,877 | 27 |
| West Virginia | 190,938 | 190,936 | 2 |
| Wisconsin | 443,842 | 440,618 | 3,224 |
| Wyoming | 52,857 | 52,829 | 28 |
| United States | 29,628,497 | 29,599,985 | 28,512 |
| United States (across states) | N/A | 29,040,167 | N/A |

Table A.7 Medicaid Enrollees who Received Dental Services in Calendar Year 2005 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|--------------|
| Alabama | 169,234 | 169,195 | 39 |
| Alaska | 40,764 | 40,760 | 4 |
| Arizona | 515 | 515 | 0 |
| Arkansas | 132,391 | 132,380 | 11 |
| California | 2,103,714 | 2,103,705 | 9 |
| Colorado | 115,031 | 115,023 | 8 |
| Connecticut | 35,673 | 35,671 | 2 |
| Delaware | 23,812 | 23,812 | 0 |
| District of Columbia | 2,528 | 2,528 | 0 |
| Florida | 342,055 | 342,055 | 0 |
| Georgia | 493,269 | 493,218 | 51 |
| Hawaii | 58,390 | 58,384 | 6 |
| Idaho | 72,994 | 72,993 | 1 |
| Illinois | 542,540 | 542,200 | 340 |
| Indiana | 336,379 | 336,378 | 1 |
| Iowa | 128,681 | 128,623 | 58 |
| Kansas | 75,426 | 75,424 | 2 |
| Kentucky | 235,862 | 235,359 | 503 |
| Louisiana | 232,865 | 232,865 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 127,566 | 127,566 | 0 |
| Massachusetts | 266,436 | 266,433 | 3 |
| Michigan | 333,143 | 333,142 | 1 |
| Minnesota | 230,310 | 230,306 | 4 |
| Mississippi | 159,998 | 159,990 | 8 |
| Missouri | 199,248 | 199,241 | 7 |
| Montana | 21,989 | 21,989 | 0 |
| Nebraska | 100,870 | 100,870 | 0 |
| Nevada | 40,401 | 40,400 | 1 |
| New Hampshire | 35,925 | 35,925 | 0 |
| New Jersey | 218,737 | 218,694 | 43 |
| New Mexico | 153,947 | 153,947 | 0 |
| New York | 1,158,054 | 1,156,790 | 1,264 |
| North Carolina | 458,590 | 458,575 | 15 |
| North Dakota | 19,397 | 19,397 | 0 |
| Ohio | 452,398 | 451,719 | 679 |
| Oklahoma | 181,319 | 181,226 | 93 |
| Oregon | 131,785 | 131,768 | 17 |
| Pennsylvania | 129,037 | 129,037 | 0 |
| Rhode Island | 58,912 | 58,912 | 0 |
| South Carolina | 264,977 | 264,977 | 0 |
| South Dakota | 17,032 | 16,996 | 36 |
| Tennessee | 279,994 | 279,986 | 8 |
| Texas | 1,195,153 | 1,194,877 | 276 |
| Utah | 83,030 | 83,030 | 0 |
| Vermont | 46,370 | 46,370 | 0 |
| Virginia | 139,783 | 139,773 | 10 |
| Washington | 384,271 | 384,268 | 3 |
| West Virginia | 97,914 | 97,913 | 1 |
| Wisconsin | 196,900 | 196,845 | 55 |
| Wyoming | 18,551 | 18,548 | 3 |
| United States | 12,344,160 | 12,340,598 | 3,562 |
| United States (across states) | N/A | 12,153,346 | N/A |

Table A.7 Medicaid Enrollees who Received Other Practitioner Services in Calendar Year 2005 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|------------|
| Alabama | 106,555 | 106,549 | 6 |
| Alaska | 21,047 | 21,045 | 2 |
| Arizona | 150,639 | 150,633 | 6 |
| Arkansas | 111,199 | 111,184 | 15 |
| California | 654,637 | 654,635 | 2 |
| Colorado | 14,864 | 14,864 | 0 |
| Connecticut | 35,496 | 35,494 | 2 |
| Delaware | 42,890 | 42,889 | 1 |
| District of Columbia | 7,109 | 7,109 | 0 |
| Florida | 204,811 | 204,809 | 2 |
| Georgia | 281,578 | 281,568 | 10 |
| Hawaii | 21,185 | 21,182 | 3 |
| Idaho | 46,559 | 46,558 | 1 |
| Illinois | 220,118 | 220,083 | 35 |
| Indiana | 38,628 | 38,628 | 0 |
| Iowa | 105,153 | 105,140 | 13 |
| Kansas | 40,002 | 40,002 | 0 |
| Kentucky | 206,268 | 206,116 | 152 |
| Louisiana | 167,412 | 167,411 | 1 |
| Maine | 0 | 0 | 0 |
| Maryland | 20,196 | 20,196 | 0 |
| Massachusetts | 84,203 | 84,203 | 0 |
| Michigan | 89,937 | 89,937 | 0 |
| Minnesota | 152,080 | 152,078 | 2 |
| Mississippi | 211,407 | 211,372 | 35 |
| Missouri | 158,535 | 158,535 | 0 |
| Montana | 20,708 | 20,708 | 0 |
| Nebraska | 68,136 | 68,136 | 0 |
| Nevada | 15,889 | 15,889 | 0 |
| New Hampshire | 22,048 | 22,048 | 0 |
| New Jersey | 129,617 | 129,610 | 7 |
| New Mexico | 66,411 | 66,411 | 0 |
| New York | 282,453 | 282,321 | 132 |
| North Carolina | 231,009 | 231,006 | 3 |
| North Dakota | 19,569 | 19,567 | 2 |
| Ohio | 335,039 | 334,930 | 109 |
| Oklahoma | 69,905 | 69,898 | 7 |
| Oregon | 63,447 | 63,441 | 6 |
| Pennsylvania | 72,246 | 72,246 | 0 |
| Rhode Island | 44,173 | 44,173 | 0 |
| South Carolina | 135,850 | 135,850 | 0 |
| South Dakota | 44,551 | 44,382 | 169 |
| Tennessee | 213,481 | 213,475 | 6 |
| Texas | 447,677 | 447,596 | 81 |
| Utah | 22,648 | 22,648 | 0 |
| Vermont | 14,513 | 14,513 | 0 |
| Virginia | 44,131 | 44,130 | 1 |
| Washington | 125,403 | 125,402 | 1 |
| West Virginia | 33,376 | 33,376 | 0 |
| Wisconsin | 140,938 | 140,790 | 148 |
| Wyoming | 11,787 | 11,787 | 0 |
| United States | 5,867,513 | 5,866,553 | 960 |
| United States (across states) | N/A | 5,769,166 | N/A |

Table A.7 Medicaid Enrollees who Received Outpatient Services in Calendar Year 2005 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|---------------|
| Alabama | 232,167 | 232,086 | 81 |
| Alaska | 43,986 | 43,980 | 6 |
| Arizona | 523,645 | 523,606 | 39 |
| Arkansas | 244,442 | 244,374 | 68 |
| California | 2,009,350 | 2,009,320 | 30 |
| Colorado | 147,543 | 147,531 | 12 |
| Connecticut | 81,036 | 81,028 | 8 |
| Delaware | 17,096 | 17,095 | 1 |
| District of Columbia | 19,454 | 19,453 | 1 |
| Florida | 617,200 | 617,180 | 20 |
| Georgia | 709,241 | 709,177 | 64 |
| Hawaii | 63,941 | 63,935 | 6 |
| Idaho | 73,827 | 73,826 | 1 |
| Illinois | 682,154 | 681,156 | 998 |
| Indiana | 371,295 | 371,291 | 4 |
| Iowa | 164,507 | 164,481 | 26 |
| Kansas | 107,921 | 107,917 | 4 |
| Kentucky | 399,789 | 398,456 | 1,333 |
| Louisiana | 435,591 | 435,589 | 2 |
| Maine | 0 | 0 | 0 |
| Maryland | 281,618 | 281,616 | 2 |
| Massachusetts | 389,695 | 389,687 | 8 |
| Michigan | 280,782 | 280,779 | 3 |
| Minnesota | 260,842 | 260,837 | 5 |
| Mississippi | 339,737 | 339,652 | 85 |
| Missouri | 558,425 | 558,374 | 51 |
| Montana | 41,858 | 41,858 | 0 |
| Nebraska | 95,983 | 95,983 | 0 |
| Nevada | 45,223 | 45,223 | 0 |
| New Hampshire | 48,415 | 48,412 | 3 |
| New Jersey | 362,171 | 361,949 | 222 |
| New Mexico | 170,644 | 170,644 | 0 |
| New York | 1,937,742 | 1,930,893 | 6,849 |
| North Carolina | 626,129 | 626,010 | 119 |
| North Dakota | 25,485 | 25,479 | 6 |
| Ohio | 824,155 | 822,518 | 1,637 |
| Oklahoma | 285,277 | 285,007 | 270 |
| Oregon | 181,181 | 181,136 | 45 |
| Pennsylvania | 195,339 | 195,339 | 0 |
| Rhode Island | 88,000 | 87,999 | 1 |
| South Carolina | 291,687 | 291,687 | 0 |
| South Dakota | 37,750 | 37,689 | 61 |
| Tennessee | 315,911 | 315,906 | 5 |
| Texas | 842,369 | 842,116 | 253 |
| Utah | 50,138 | 50,136 | 2 |
| Vermont | 56,030 | 56,030 | 0 |
| Virginia | 31,134 | 31,132 | 2 |
| Washington | 210,388 | 210,379 | 9 |
| West Virginia | 126,125 | 126,125 | 0 |
| Wisconsin | 368,676 | 367,446 | 1,230 |
| Wyoming | 29,699 | 29,690 | 9 |
| United States | 16,342,793 | 16,329,212 | 13,581 |
| United States (across states) | N/A | 16,002,060 | N/A |

Table A.7 Medicaid Enrollees who Received Clinic Services in Calendar Year 2005 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|--------------|
| Alabama | 225,315 | 225,221 | 94 |
| Alaska | 34,951 | 34,948 | 3 |
| Arizona | 124,014 | 124,010 | 4 |
| Arkansas | 206,444 | 206,391 | 53 |
| California | 2,561,336 | 2,561,315 | 21 |
| Colorado | 331,655 | 331,596 | 59 |
| Connecticut | 30,870 | 30,868 | 2 |
| Delaware | 8,812 | 8,812 | 0 |
| District of Columbia | 17,934 | 17,930 | 4 |
| Florida | 288,898 | 288,892 | 6 |
| Georgia | 462,344 | 462,310 | 34 |
| Hawaii | 24,157 | 24,154 | 3 |
| Idaho | 54,812 | 54,811 | 1 |
| Illinois | 296,581 | 296,234 | 347 |
| Indiana | 334,782 | 334,779 | 3 |
| Iowa | 147,092 | 147,053 | 39 |
| Kansas | 91,030 | 91,027 | 3 |
| Kentucky | 206,744 | 205,194 | 1,550 |
| Louisiana | 141,026 | 141,026 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 32,526 | 32,526 | 0 |
| Massachusetts | 88,411 | 88,410 | 1 |
| Michigan | 137,350 | 137,349 | 1 |
| Minnesota | 44,742 | 44,742 | 0 |
| Mississippi | 205,595 | 205,555 | 40 |
| Missouri | 506,537 | 506,481 | 56 |
| Montana | 17,275 | 17,275 | 0 |
| Nebraska | 38,517 | 38,517 | 0 |
| Nevada | 21,512 | 21,512 | 0 |
| New Hampshire | 35,056 | 35,056 | 0 |
| New Jersey | 67,555 | 67,512 | 43 |
| New Mexico | 45,835 | 45,835 | 0 |
| New York | 857,576 | 855,500 | 2,076 |
| North Carolina | 480,388 | 480,291 | 97 |
| North Dakota | 23,451 | 23,447 | 4 |
| Ohio | 248,441 | 248,126 | 315 |
| Oklahoma | 126,734 | 126,682 | 52 |
| Oregon | 68,520 | 68,500 | 20 |
| Pennsylvania | 69,850 | 69,848 | 2 |
| Rhode Island | 31,191 | 31,191 | 0 |
| South Carolina | 361,993 | 361,989 | 4 |
| South Dakota | 40,298 | 40,131 | 167 |
| Tennessee | 183,965 | 183,960 | 5 |
| Texas | 305,353 | 305,266 | 87 |
| Utah | 123,984 | 123,981 | 3 |
| Vermont | 26,605 | 26,605 | 0 |
| Virginia | 91,941 | 91,930 | 11 |
| Washington | 125,115 | 125,111 | 4 |
| West Virginia | 81,128 | 81,128 | 0 |
| Wisconsin | 395,981 | 394,921 | 1,060 |
| Wyoming | 15,716 | 15,712 | 4 |
| United States | 10,487,938 | 10,481,660 | 6,278 |
| United States (across states) | N/A | 10,290,418 | N/A |

Table A.7 Medicaid Enrollees who Received Home Health Services in Calendar Year 2005 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|------------|
| Alabama | 56,666 | 56,650 | 16 |
| Alaska | 379 | 379 | 0 |
| Arizona | 10,744 | 10,742 | 2 |
| Arkansas | 6,389 | 6,387 | 2 |
| California | 41,886 | 41,886 | 0 |
| Colorado | 10,332 | 10,330 | 2 |
| Connecticut | 21,633 | 21,631 | 2 |
| Delaware | 1,313 | 1,313 | 0 |
| District of Columbia | 2,895 | 2,895 | 0 |
| Florida | 27,563 | 27,559 | 4 |
| Georgia | 9,259 | 9,259 | 0 |
| Hawaii | 5,114 | 5,114 | 0 |
| Idaho | 1,832 | 1,831 | 1 |
| Illinois | 12,729 | 12,713 | 16 |
| Indiana | 13,217 | 13,217 | 0 |
| Iowa | 24,946 | 24,946 | 0 |
| Kansas | 5,448 | 5,448 | 0 |
| Kentucky | 19,765 | 19,718 | 47 |
| Louisiana | 10,198 | 10,198 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 19,267 | 19,267 | 0 |
| Massachusetts | 34,237 | 34,237 | 0 |
| Michigan | 6,973 | 6,973 | 0 |
| Minnesota | 62,163 | 62,158 | 5 |
| Mississippi | 8,223 | 8,222 | 1 |
| Missouri | 6,648 | 6,647 | 1 |
| Montana | 416 | 416 | 0 |
| Nebraska | 5,351 | 5,351 | 0 |
| Nevada | 799 | 799 | 0 |
| New Hampshire | 2,814 | 2,814 | 0 |
| New Jersey | 15,002 | 15,000 | 2 |
| New Mexico | 3,072 | 3,072 | 0 |
| New York | 274,200 | 273,737 | 463 |
| North Carolina | 37,855 | 37,834 | 21 |
| North Dakota | 1,496 | 1,496 | 0 |
| Ohio | 43,204 | 43,166 | 38 |
| Oklahoma | 6,252 | 6,250 | 2 |
| Oregon | 2,003 | 2,003 | 0 |
| Pennsylvania | 17,047 | 17,046 | 1 |
| Rhode Island | 8,881 | 8,881 | 0 |
| South Carolina | 3,411 | 3,411 | 0 |
| South Dakota | 432 | 432 | 0 |
| Tennessee | 20,164 | 20,162 | 2 |
| Texas | 22,527 | 22,521 | 6 |
| Utah | 1,985 | 1,985 | 0 |
| Vermont | 3,758 | 3,758 | 0 |
| Virginia | 6,276 | 6,276 | 0 |
| Washington | 21 | 21 | 0 |
| West Virginia | 2,134 | 2,134 | 0 |
| Wisconsin | 7,729 | 7,713 | 16 |
| Wyoming | 553 | 553 | 0 |
| United States | 907,201 | 906,551 | 650 |
| United States (across states) | N/A | 896,291 | N/A |

Table A.7 Medicaid Enrollees who Received Lab/Xray Services in Calendar Year 2005 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|---------------|
| Alabama | 485,520 | 485,285 | 235 |
| Alaska | 62,979 | 62,976 | 3 |
| Arizona | 663,750 | 663,688 | 62 |
| Arkansas | 353,199 | 353,072 | 127 |
| California | 4,525,217 | 4,525,180 | 37 |
| Colorado | 212,577 | 212,557 | 20 |
| Connecticut | 96,011 | 96,001 | 10 |
| Delaware | 86,245 | 86,243 | 2 |
| District of Columbia | 30,171 | 30,169 | 2 |
| Florida | 935,467 | 935,413 | 54 |
| Georgia | 914,456 | 914,343 | 113 |
| Hawaii | 118,322 | 118,303 | 19 |
| Idaho | 101,337 | 101,334 | 3 |
| Illinois | 1,067,685 | 1,065,464 | 2,221 |
| Indiana | 481,238 | 481,234 | 4 |
| Iowa | 223,290 | 223,243 | 47 |
| Kansas | 168,847 | 168,842 | 5 |
| Kentucky | 467,523 | 465,471 | 2,052 |
| Louisiana | 608,618 | 608,615 | 3 |
| Maine | 0 | 0 | 0 |
| Maryland | 214,746 | 214,745 | 1 |
| Massachusetts | 391,853 | 391,848 | 5 |
| Michigan | 225,343 | 225,339 | 4 |
| Minnesota | 397,181 | 397,171 | 10 |
| Mississippi | 423,539 | 423,384 | 155 |
| Missouri | 628,802 | 628,740 | 62 |
| Montana | 51,341 | 51,341 | 0 |
| Nebraska | 148,632 | 148,632 | 0 |
| Nevada | 92,123 | 92,122 | 1 |
| New Hampshire | 55,810 | 55,806 | 4 |
| New Jersey | 508,238 | 507,935 | 303 |
| New Mexico | 219,649 | 219,649 | 0 |
| New York | 2,144,854 | 2,139,603 | 5,251 |
| North Carolina | 913,181 | 912,990 | 191 |
| North Dakota | 32,612 | 32,612 | 0 |
| Ohio | 780,435 | 778,640 | 1,795 |
| Oklahoma | 341,621 | 341,305 | 316 |
| Oregon | 239,879 | 239,816 | 63 |
| Pennsylvania | 277,035 | 277,033 | 2 |
| Rhode Island | 131,869 | 131,869 | 0 |
| South Carolina | 421,662 | 421,659 | 3 |
| South Dakota | 58,925 | 58,604 | 321 |
| Tennessee | 823,427 | 823,391 | 36 |
| Texas | 1,727,345 | 1,726,612 | 733 |
| Utah | 102,861 | 102,859 | 2 |
| Vermont | 79,605 | 79,605 | 0 |
| Virginia | 429,729 | 429,625 | 104 |
| Washington | 525,753 | 525,726 | 27 |
| West Virginia | 154,120 | 154,120 | 0 |
| Wisconsin | 503,184 | 501,859 | 1,325 |
| Wyoming | 38,866 | 38,854 | 12 |
| United States | 24,686,672 | 24,670,927 | 15,745 |
| United States (across states) | N/A | 24,232,568 | N/A |

Table A.7 Medicaid Enrollees who Received Drug Services in Calendar Year 2005 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|---------------|
| Alabama | 548,899 | 548,512 | 387 |
| Alaska | 77,759 | 77,753 | 6 |
| Arizona | 731,940 | 731,878 | 62 |
| Arkansas | 455,727 | 455,532 | 195 |
| California | 5,263,706 | 5,263,572 | 134 |
| Colorado | 240,494 | 240,461 | 33 |
| Connecticut | 120,626 | 120,613 | 13 |
| Delaware | 110,970 | 110,966 | 4 |
| District of Columbia | 36,968 | 36,963 | 5 |
| Florida | 1,306,628 | 1,306,539 | 89 |
| Georgia | 1,175,475 | 1,175,293 | 182 |
| Hawaii | 152,883 | 152,849 | 34 |
| Idaho | 146,091 | 146,085 | 6 |
| Illinois | 1,674,854 | 1,661,347 | 13,507 |
| Indiana | 626,806 | 626,797 | 9 |
| Iowa | 290,352 | 290,128 | 224 |
| Kansas | 236,243 | 236,234 | 9 |
| Kentucky | 635,350 | 630,881 | 4,469 |
| Louisiana | 767,987 | 767,983 | 4 |
| Maine | 226,209 | 226,194 | 15 |
| Maryland | 487,844 | 487,841 | 3 |
| Massachusetts | 576,344 | 576,338 | 6 |
| Michigan | 661,304 | 661,283 | 21 |
| Minnesota | 483,947 | 483,917 | 30 |
| Mississippi | 543,865 | 543,667 | 198 |
| Missouri | 856,035 | 855,924 | 111 |
| Montana | 70,760 | 70,760 | 0 |
| Nebraska | 194,251 | 194,251 | 0 |
| Nevada | 76,812 | 76,811 | 1 |
| New Hampshire | 92,805 | 92,801 | 4 |
| New Jersey | 702,430 | 701,830 | 600 |
| New Mexico | 305,061 | 305,061 | 0 |
| New York | 3,101,220 | 3,087,943 | 13,277 |
| North Carolina | 1,107,208 | 1,106,959 | 249 |
| North Dakota | 47,219 | 47,218 | 1 |
| Ohio | 1,115,961 | 1,112,952 | 3,009 |
| Oklahoma | 469,250 | 468,565 | 685 |
| Oregon | 173,726 | 173,663 | 63 |
| Pennsylvania | 449,244 | 449,234 | 10 |
| Rhode Island | 150,776 | 150,775 | 1 |
| South Carolina | 622,254 | 622,243 | 11 |
| South Dakota | 75,234 | 74,709 | 525 |
| Tennessee | 1,179,088 | 1,179,024 | 64 |
| Texas | 2,760,015 | 2,758,679 | 1,336 |
| Utah | 201,158 | 201,154 | 4 |
| Vermont | 116,408 | 116,408 | 0 |
| Virginia | 516,958 | 516,823 | 135 |
| Washington | 483,474 | 483,453 | 21 |
| West Virginia | 288,779 | 288,771 | 8 |
| Wisconsin | 684,309 | 681,777 | 2,532 |
| Wyoming | 50,008 | 49,985 | 23 |
| United States | 33,469,714 | 33,427,399 | 42,315 |
| United States (across states) | N/A | 32,822,921 | N/A |

Table A.7 Medicaid Enrollees who Received Other Services in Calendar Year 2005 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|--------------|
| Alabama | 40,192 | 40,186 | 6 |
| Alaska | 8,186 | 8,186 | 0 |
| Arizona | 104,105 | 104,101 | 4 |
| Arkansas | 58,982 | 58,930 | 52 |
| California | 1,477,393 | 1,477,364 | 29 |
| Colorado | 26,829 | 26,828 | 1 |
| Connecticut | 52,160 | 52,147 | 13 |
| Delaware | 26,613 | 26,612 | 1 |
| District of Columbia | 18,752 | 18,750 | 2 |
| Florida | 580,820 | 580,791 | 29 |
| Georgia | 84,499 | 84,489 | 10 |
| Hawaii | 31,660 | 31,660 | 0 |
| Idaho | 26,732 | 26,729 | 3 |
| Illinois | 108,481 | 108,427 | 54 |
| Indiana | 202,744 | 202,744 | 0 |
| Iowa | 45,551 | 45,540 | 11 |
| Kansas | 52,696 | 52,694 | 2 |
| Kentucky | 244,125 | 242,134 | 1,991 |
| Louisiana | 426,745 | 426,744 | 1 |
| Maine | 0 | 0 | 0 |
| Maryland | 55,561 | 55,561 | 0 |
| Massachusetts | 95,217 | 95,216 | 1 |
| Michigan | 34,858 | 34,857 | 1 |
| Minnesota | 108,724 | 108,721 | 3 |
| Mississippi | 120,573 | 120,554 | 19 |
| Missouri | 309,908 | 309,866 | 42 |
| Montana | 99,569 | 99,569 | 0 |
| Nebraska | 33,189 | 33,189 | 0 |
| Nevada | 14,609 | 14,609 | 0 |
| New Hampshire | 10,743 | 10,743 | 0 |
| New Jersey | 133,913 | 133,885 | 28 |
| New Mexico | 82,820 | 82,819 | 1 |
| New York | 931,513 | 929,606 | 1,907 |
| North Carolina | 212,366 | 212,335 | 31 |
| North Dakota | 8,413 | 8,412 | 1 |
| Ohio | 271,523 | 271,323 | 200 |
| Oklahoma | 56,937 | 56,920 | 17 |
| Oregon | 35,060 | 35,055 | 5 |
| Pennsylvania | 111,815 | 111,813 | 2 |
| Rhode Island | 42,165 | 42,165 | 0 |
| South Carolina | 9,222 | 9,222 | 0 |
| South Dakota | 12,340 | 12,328 | 12 |
| Tennessee | 15,902 | 15,902 | 0 |
| Texas | 546,739 | 546,630 | 109 |
| Utah | 10,974 | 10,974 | 0 |
| Vermont | 24,336 | 24,336 | 0 |
| Virginia | 58,316 | 58,312 | 4 |
| Washington | 168,064 | 168,056 | 8 |
| West Virginia | 59,182 | 59,180 | 2 |
| Wisconsin | 155,173 | 155,087 | 86 |
| Wyoming | 19,280 | 19,273 | 7 |
| United States | 7,466,269 | 7,461,574 | 4,695 |
| United States (across states) | N/A | 7,345,784 | N/A |

Table A.7 Medicaid Enrollees who Received Sterilization Services in Calendar Year 2005 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|------------|
| Alabama | 2,925 | 2,925 | 0 |
| Alaska | 351 | 351 | 0 |
| Arizona | 3,439 | 3,439 | 0 |
| Arkansas | 4,115 | 4,115 | 0 |
| California | 21,557 | 21,557 | 0 |
| Colorado | 1,853 | 1,853 | 0 |
| Connecticut | 275 | 275 | 0 |
| Delaware | 683 | 683 | 0 |
| District of Columbia | 61 | 61 | 0 |
| Florida | 7,641 | 7,641 | 0 |
| Georgia | 8,233 | 8,233 | 0 |
| Hawaii | 986 | 986 | 0 |
| Idaho | 1,089 | 1,089 | 0 |
| Illinois | 5,810 | 5,809 | 1 |
| Indiana | 2,321 | 2,321 | 0 |
| Iowa | 0 | 0 | 0 |
| Kansas | 1,263 | 1,263 | 0 |
| Kentucky | 4,718 | 4,717 | 1 |
| Louisiana | 5,727 | 5,727 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 1,048 | 1,048 | 0 |
| Massachusetts | 1,547 | 1,547 | 0 |
| Michigan | 2,795 | 2,795 | 0 |
| Minnesota | 1,804 | 1,804 | 0 |
| Mississippi | 4,937 | 4,937 | 0 |
| Missouri | 2,109 | 2,109 | 0 |
| Montana | 3 | 3 | 0 |
| Nebraska | 1,479 | 1,479 | 0 |
| Nevada | 4,269 | 4,269 | 0 |
| New Hampshire | 717 | 717 | 0 |
| New Jersey | 406 | 406 | 0 |
| New Mexico | 795 | 795 | 0 |
| New York | 4,313 | 4,313 | 0 |
| North Carolina | 7,517 | 7,517 | 0 |
| North Dakota | 296 | 296 | 0 |
| Ohio | 7,174 | 7,174 | 0 |
| Oklahoma | 5,463 | 5,461 | 2 |
| Oregon | 1,888 | 1,888 | 0 |
| Pennsylvania | 1,570 | 1,570 | 0 |
| Rhode Island | 527 | 527 | 0 |
| South Carolina | 5,302 | 5,302 | 0 |
| South Dakota | 0 | 0 | 0 |
| Tennessee | 11,843 | 11,843 | 0 |
| Texas | 21,480 | 21,477 | 3 |
| Utah | 1,050 | 1,050 | 0 |
| Vermont | 706 | 706 | 0 |
| Virginia | 4,358 | 4,358 | 0 |
| Washington | 1,235 | 1,235 | 0 |
| West Virginia | 0 | 0 | 0 |
| Wisconsin | 3,696 | 3,696 | 0 |
| Wyoming | 463 | 463 | 0 |
| United States | 173,837 | 173,830 | 7 |
| United States (across states) | N/A | 170,791 | N/A |

Table A.7 Medicaid Enrollees who Received Abortion Services in Calendar Year 2005 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|------------|
| Alabama | 1,465 | 1,465 | 0 |
| Alaska | 0 | 0 | 0 |
| Arizona | 4,205 | 4,205 | 0 |
| Arkansas | 0 | 0 | 0 |
| California | 0 | 0 | 0 |
| Colorado | 9 | 9 | 0 |
| Connecticut | 41 | 41 | 0 |
| Delaware | 109 | 109 | 0 |
| District of Columbia | 6 | 6 | 0 |
| Florida | 63 | 63 | 0 |
| Georgia | 103 | 103 | 0 |
| Hawaii | 1,561 | 1,561 | 0 |
| Idaho | 0 | 0 | 0 |
| Illinois | 64 | 64 | 0 |
| Indiana | 0 | 0 | 0 |
| Iowa | 0 | 0 | 0 |
| Kansas | 5 | 5 | 0 |
| Kentucky | 1,180 | 1,180 | 0 |
| Louisiana | 4 | 4 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 3,340 | 3,340 | 0 |
| Massachusetts | 0 | 0 | 0 |
| Michigan | 23 | 23 | 0 |
| Minnesota | 8 | 8 | 0 |
| Mississippi | 2 | 2 | 0 |
| Missouri | 33 | 33 | 0 |
| Montana | 1,221 | 1,221 | 0 |
| Nebraska | 0 | 0 | 0 |
| Nevada | 0 | 0 | 0 |
| New Hampshire | 1 | 1 | 0 |
| New Jersey | 0 | 0 | 0 |
| New Mexico | 287 | 287 | 0 |
| New York | 540 | 540 | 0 |
| North Carolina | 19 | 19 | 0 |
| North Dakota | 57 | 57 | 0 |
| Ohio | 18 | 18 | 0 |
| Oklahoma | 55 | 55 | 0 |
| Oregon | 3,338 | 3,338 | 0 |
| Pennsylvania | 0 | 0 | 0 |
| Rhode Island | 456 | 456 | 0 |
| South Carolina | 12 | 12 | 0 |
| South Dakota | 0 | 0 | 0 |
| Tennessee | 7,681 | 7,681 | 0 |
| Texas | 5,976 | 5,975 | 1 |
| Utah | 0 | 0 | 0 |
| Vermont | 142 | 142 | 0 |
| Virginia | 103 | 103 | 0 |
| Washington | 133 | 133 | 0 |
| West Virginia | 2 | 2 | 0 |
| Wisconsin | 0 | 0 | 0 |
| Wyoming | 2 | 2 | 0 |
| United States | 32,264 | 32,263 | 1 |
| United States (across states) | N/A | 31,606 | N/A |

Table A.7 Medicaid Enrollees who Received Transportation Services in Calendar Year 2005 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|--------------|
| Alabama | 45,672 | 45,659 | 13 |
| Alaska | 22,657 | 22,655 | 2 |
| Arizona | 162,838 | 162,823 | 15 |
| Arkansas | 536,144 | 535,803 | 341 |
| California | 292,050 | 292,045 | 5 |
| Colorado | 21,865 | 21,865 | 0 |
| Connecticut | 33,305 | 33,304 | 1 |
| Delaware | 16,003 | 16,003 | 0 |
| District of Columbia | 13,915 | 13,912 | 3 |
| Florida | 202,820 | 202,818 | 2 |
| Georgia | 93,959 | 93,957 | 2 |
| Hawaii | 15,355 | 15,355 | 0 |
| Idaho | 14,668 | 14,667 | 1 |
| Illinois | 170,920 | 170,753 | 167 |
| Indiana | 82,399 | 82,399 | 0 |
| Iowa | 15,174 | 15,174 | 0 |
| Kansas | 22,009 | 22,009 | 0 |
| Kentucky | 77,402 | 77,338 | 64 |
| Louisiana | 102,726 | 102,726 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 26,806 | 26,806 | 0 |
| Massachusetts | 101,443 | 101,441 | 2 |
| Michigan | 28,236 | 28,236 | 0 |
| Minnesota | 64,670 | 64,668 | 2 |
| Mississippi | 70,939 | 70,921 | 18 |
| Missouri | 81,564 | 81,559 | 5 |
| Montana | 6,324 | 6,324 | 0 |
| Nebraska | 23,078 | 23,078 | 0 |
| Nevada | 17,450 | 17,450 | 0 |
| New Hampshire | 6,616 | 6,616 | 0 |
| New Jersey | 85,470 | 85,411 | 59 |
| New Mexico | 28,975 | 28,975 | 0 |
| New York | 419,864 | 418,943 | 921 |
| North Carolina | 126,004 | 125,992 | 12 |
| North Dakota | 5,944 | 5,944 | 0 |
| Ohio | 160,921 | 160,872 | 49 |
| Oklahoma | 36,602 | 36,595 | 7 |
| Oregon | 45,390 | 45,383 | 7 |
| Pennsylvania | 26,366 | 26,366 | 0 |
| Rhode Island | 11,789 | 11,789 | 0 |
| South Carolina | 58,028 | 58,028 | 0 |
| South Dakota | 11,286 | 11,258 | 28 |
| Tennessee | 121,845 | 121,844 | 1 |
| Texas | 169,999 | 169,974 | 25 |
| Utah | 12,990 | 12,990 | 0 |
| Vermont | 15,435 | 15,435 | 0 |
| Virginia | 88,050 | 88,041 | 9 |
| Washington | 30,621 | 30,620 | 1 |
| West Virginia | 38,605 | 38,605 | 0 |
| Wisconsin | 73,701 | 73,663 | 38 |
| Wyoming | 3,011 | 3,011 | 0 |
| United States | 3,939,903 | 3,938,103 | 1,800 |
| United States (across states) | N/A | 3,852,652 | N/A |

Table A.7 Medicaid Enrollees who Received Personal Care Services in Calendar Year 2005 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|------------|
| Alabama | 0 | 0 | 0 |
| Alaska | 4,768 | 4,767 | 1 |
| Arizona | 10,978 | 10,978 | 0 |
| Arkansas | 15,300 | 15,297 | 3 |
| California | 372,763 | 372,753 | 10 |
| Colorado | 0 | 0 | 0 |
| Connecticut | 12,846 | 12,846 | 0 |
| Delaware | 0 | 0 | 0 |
| District of Columbia | 0 | 0 | 0 |
| Florida | 6,498 | 6,497 | 1 |
| Georgia | 0 | 0 | 0 |
| Hawaii | 0 | 0 | 0 |
| Idaho | 6,558 | 6,557 | 1 |
| Illinois | 22,232 | 22,229 | 3 |
| Indiana | 0 | 0 | 0 |
| Iowa | 0 | 0 | 0 |
| Kansas | 375 | 375 | 0 |
| Kentucky | 0 | 0 | 0 |
| Louisiana | 7,293 | 7,293 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 4,976 | 4,976 | 0 |
| Massachusetts | 8,980 | 8,980 | 0 |
| Michigan | 0 | 0 | 0 |
| Minnesota | 40,295 | 40,283 | 12 |
| Mississippi | 360 | 360 | 0 |
| Missouri | 47,719 | 47,719 | 0 |
| Montana | 3,119 | 3,119 | 0 |
| Nebraska | 1,574 | 1,574 | 0 |
| Nevada | 4,858 | 4,858 | 0 |
| New Hampshire | 189 | 189 | 0 |
| New Jersey | 27,369 | 27,363 | 6 |
| New Mexico | 10,217 | 10,217 | 0 |
| New York | 100,315 | 100,227 | 88 |
| North Carolina | 81,549 | 81,546 | 3 |
| North Dakota | 1,387 | 1,387 | 0 |
| Ohio | 0 | 0 | 0 |
| Oklahoma | 5,259 | 5,257 | 2 |
| Oregon | 8,777 | 8,777 | 0 |
| Pennsylvania | 0 | 0 | 0 |
| Rhode Island | 1,768 | 1,768 | 0 |
| South Carolina | 17,112 | 17,112 | 0 |
| South Dakota | 2,343 | 2,343 | 0 |
| Tennessee | 0 | 0 | 0 |
| Texas | 1,497 | 1,496 | 1 |
| Utah | 483 | 483 | 0 |
| Vermont | 1,938 | 1,938 | 0 |
| Virginia | 12,370 | 12,370 | 0 |
| Washington | 42,071 | 42,070 | 1 |
| West Virginia | 4,284 | 4,284 | 0 |
| Wisconsin | 12,920 | 12,919 | 1 |
| Wyoming | 0 | 0 | 0 |
| United States | 903,340 | 903,207 | 133 |
| United States (across states) | N/A | 895,244 | N/A |

Table A.7 Medicaid Enrollees who Received Targeted Case Management Services in Calendar Year 2005 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|--------------|
| Alabama | 30,550 | 30,509 | 41 |
| Alaska | 4,664 | 4,664 | 0 |
| Arizona | 0 | 0 | 0 |
| Arkansas | 37,755 | 37,750 | 5 |
| California | 200,266 | 200,264 | 2 |
| Colorado | 0 | 0 | 0 |
| Connecticut | 14,395 | 14,393 | 2 |
| Delaware | 0 | 0 | 0 |
| District of Columbia | 0 | 0 | 0 |
| Florida | 84,023 | 84,013 | 10 |
| Georgia | 205,519 | 205,507 | 12 |
| Hawaii | 3,265 | 3,265 | 0 |
| Idaho | 7,996 | 7,992 | 4 |
| Illinois | 770,451 | 769,000 | 1,451 |
| Indiana | 14,106 | 14,106 | 0 |
| Iowa | 10,747 | 10,740 | 7 |
| Kansas | 23,760 | 23,760 | 0 |
| Kentucky | 15,956 | 15,882 | 74 |
| Louisiana | 11,579 | 11,579 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 16,105 | 16,105 | 0 |
| Massachusetts | 32,131 | 32,130 | 1 |
| Michigan | 52,426 | 52,426 | 0 |
| Minnesota | 103,745 | 103,731 | 14 |
| Mississippi | 39,172 | 39,157 | 15 |
| Missouri | 39,027 | 39,022 | 5 |
| Montana | 11,031 | 11,031 | 0 |
| Nebraska | 0 | 0 | 0 |
| Nevada | 9,519 | 9,519 | 0 |
| New Hampshire | 0 | 0 | 0 |
| New Jersey | 2,752 | 2,750 | 2 |
| New Mexico | 19,042 | 19,042 | 0 |
| New York | 32,417 | 32,370 | 47 |
| North Carolina | 145,680 | 145,587 | 93 |
| North Dakota | 3,723 | 3,723 | 0 |
| Ohio | 0 | 0 | 0 |
| Oklahoma | 38,816 | 38,731 | 85 |
| Oregon | 45,976 | 45,935 | 41 |
| Pennsylvania | 56,186 | 56,183 | 3 |
| Rhode Island | 9,535 | 9,535 | 0 |
| South Carolina | 46,653 | 46,652 | 1 |
| South Dakota | 0 | 0 | 0 |
| Tennessee | 0 | 0 | 0 |
| Texas | 161,336 | 161,268 | 68 |
| Utah | 7,317 | 7,317 | 0 |
| Vermont | 6,385 | 6,385 | 0 |
| Virginia | 4,474 | 4,474 | 0 |
| Washington | 2,542 | 2,542 | 0 |
| West Virginia | 7,468 | 7,468 | 0 |
| Wisconsin | 35,090 | 34,976 | 114 |
| Wyoming | 2,258 | 2,258 | 0 |
| United States | 2,365,838 | 2,363,741 | 2,097 |
| United States (across states) | N/A | 2,319,109 | N/A |

Table A.7 Medicaid Enrollees who Received Rehabilitation Services in Calendar Year 2005 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|------------|
| Alabama | 4,486 | 4,483 | 3 |
| Alaska | 163 | 163 | 0 |
| Arizona | 21,713 | 21,712 | 1 |
| Arkansas | 40 | 40 | 0 |
| California | 90,891 | 90,891 | 0 |
| Colorado | 0 | 0 | 0 |
| Connecticut | 5,799 | 5,799 | 0 |
| Delaware | 537 | 537 | 0 |
| District of Columbia | 119 | 119 | 0 |
| Florida | 0 | 0 | 0 |
| Georgia | 0 | 0 | 0 |
| Hawaii | 227 | 227 | 0 |
| Idaho | 2,012 | 2,012 | 0 |
| Illinois | 13,277 | 13,274 | 3 |
| Indiana | 64,139 | 64,139 | 0 |
| Iowa | 2,234 | 2,226 | 8 |
| Kansas | 3,871 | 3,871 | 0 |
| Kentucky | 129 | 129 | 0 |
| Louisiana | 4,983 | 4,983 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 3,571 | 3,571 | 0 |
| Massachusetts | 69,588 | 69,588 | 0 |
| Michigan | 12 | 12 | 0 |
| Minnesota | 9,857 | 9,857 | 0 |
| Mississippi | 125 | 125 | 0 |
| Missouri | 13,524 | 13,524 | 0 |
| Montana | 339 | 339 | 0 |
| Nebraska | 0 | 0 | 0 |
| Nevada | 7,295 | 7,295 | 0 |
| New Hampshire | 2,119 | 2,119 | 0 |
| New Jersey | 20,280 | 20,269 | 11 |
| New Mexico | 960 | 960 | 0 |
| New York | 119,832 | 119,642 | 190 |
| North Carolina | 0 | 0 | 0 |
| North Dakota | 9,207 | 9,206 | 1 |
| Ohio | 107,451 | 107,363 | 88 |
| Oklahoma | 0 | 0 | 0 |
| Oregon | 41,517 | 41,506 | 11 |
| Pennsylvania | 1,284 | 1,284 | 0 |
| Rhode Island | 6,842 | 6,842 | 0 |
| South Carolina | 6,168 | 6,168 | 0 |
| South Dakota | 895 | 895 | 0 |
| Tennessee | 5,917 | 5,916 | 1 |
| Texas | 39,880 | 39,866 | 14 |
| Utah | 488 | 488 | 0 |
| Vermont | 0 | 0 | 0 |
| Virginia | 3,290 | 3,290 | 0 |
| Washington | 4,820 | 4,820 | 0 |
| West Virginia | 23,483 | 23,481 | 2 |
| Wisconsin | 8,361 | 8,327 | 34 |
| Wyoming | 3,408 | 3,408 | 0 |
| United States | 725,133 | 724,766 | 367 |
| United States (across states) | N/A | 713,826 | N/A |

Table A.7 Medicaid Enrollees who Received PT/OT/Hearing/Speech Services in Calendar Year 2005 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|------------|
| Alabama | 4,661 | 4,656 | 5 |
| Alaska | 6,519 | 6,518 | 1 |
| Arizona | 8,166 | 8,166 | 0 |
| Arkansas | 18,439 | 18,435 | 4 |
| California | 59,058 | 59,058 | 0 |
| Colorado | 1,303 | 1,303 | 0 |
| Connecticut | 2,094 | 2,094 | 0 |
| Delaware | 7,414 | 7,414 | 0 |
| District of Columbia | 0 | 0 | 0 |
| Florida | 71,624 | 71,615 | 9 |
| Georgia | 1,683 | 1,683 | 0 |
| Hawaii | 3,295 | 3,295 | 0 |
| Idaho | 9,757 | 9,756 | 1 |
| Illinois | 91,118 | 90,921 | 197 |
| Indiana | 24,564 | 24,564 | 0 |
| Iowa | 4,957 | 4,956 | 1 |
| Kansas | 1,638 | 1,638 | 0 |
| Kentucky | 3,107 | 3,098 | 9 |
| Louisiana | 70,628 | 70,627 | 1 |
| Maine | 0 | 0 | 0 |
| Maryland | 59,340 | 59,340 | 0 |
| Massachusetts | 7,672 | 7,672 | 0 |
| Michigan | 76 | 76 | 0 |
| Minnesota | 24,897 | 24,897 | 0 |
| Mississippi | 7,343 | 7,342 | 1 |
| Missouri | 5,021 | 5,021 | 0 |
| Montana | 3 | 3 | 0 |
| Nebraska | 13,757 | 13,757 | 0 |
| Nevada | 3,460 | 3,460 | 0 |
| New Hampshire | 1,562 | 1,562 | 0 |
| New Jersey | 0 | 0 | 0 |
| New Mexico | 22,230 | 22,230 | 0 |
| New York | 24,298 | 24,296 | 2 |
| North Carolina | 24,299 | 24,293 | 6 |
| North Dakota | 1,807 | 1,807 | 0 |
| Ohio | 15,000 | 14,995 | 5 |
| Oklahoma | 2,192 | 2,192 | 0 |
| Oregon | 5,840 | 5,839 | 1 |
| Pennsylvania | 11,641 | 11,640 | 1 |
| Rhode Island | 422 | 422 | 0 |
| South Carolina | 8,155 | 8,155 | 0 |
| South Dakota | 5,142 | 5,120 | 22 |
| Tennessee | 15,050 | 15,049 | 1 |
| Texas | 8,875 | 8,875 | 0 |
| Utah | 6,089 | 6,089 | 0 |
| Vermont | 3,708 | 3,708 | 0 |
| Virginia | 4,460 | 4,458 | 2 |
| Washington | 16,113 | 16,111 | 2 |
| West Virginia | 15,918 | 15,917 | 1 |
| Wisconsin | 14,844 | 14,808 | 36 |
| Wyoming | 620 | 620 | 0 |
| United States | 719,859 | 719,551 | 308 |
| United States (across states) | N/A | 707,000 | N/A |

Table A.7 Medicaid Enrollees who Received Hospice Services in Calendar Year 2005 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|------------|
| Alabama | 3,687 | 3,687 | 0 |
| Alaska | 24 | 24 | 0 |
| Arizona | 0 | 0 | 0 |
| Arkansas | 1,624 | 1,624 | 0 |
| California | 13,725 | 13,725 | 0 |
| Colorado | 2,669 | 2,669 | 0 |
| Connecticut | 42 | 42 | 0 |
| Delaware | 428 | 428 | 0 |
| District of Columbia | 165 | 165 | 0 |
| Florida | 16,612 | 16,612 | 0 |
| Georgia | 5,854 | 5,854 | 0 |
| Hawaii | 122 | 122 | 0 |
| Idaho | 230 | 230 | 0 |
| Illinois | 6,939 | 6,938 | 1 |
| Indiana | 4,590 | 4,590 | 0 |
| Iowa | 0 | 0 | 0 |
| Kansas | 2,510 | 2,510 | 0 |
| Kentucky | 3,069 | 3,069 | 0 |
| Louisiana | 3,756 | 3,756 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 1,604 | 1,604 | 0 |
| Massachusetts | 3,962 | 3,962 | 0 |
| Michigan | 828 | 828 | 0 |
| Minnesota | 2,621 | 2,620 | 1 |
| Mississippi | 2,339 | 2,339 | 0 |
| Missouri | 1,057 | 1,057 | 0 |
| Montana | 218 | 218 | 0 |
| Nebraska | 1,097 | 1,097 | 0 |
| Nevada | 779 | 779 | 0 |
| New Hampshire | 0 | 0 | 0 |
| New Jersey | 3,532 | 3,532 | 0 |
| New Mexico | 1,051 | 1,051 | 0 |
| New York | 6,872 | 6,870 | 2 |
| North Carolina | 5,132 | 5,132 | 0 |
| North Dakota | 328 | 328 | 0 |
| Ohio | 2,007 | 2,007 | 0 |
| Oklahoma | 50 | 50 | 0 |
| Oregon | 555 | 555 | 0 |
| Pennsylvania | 895 | 895 | 0 |
| Rhode Island | 99 | 99 | 0 |
| South Carolina | 1,821 | 1,821 | 0 |
| South Dakota | 259 | 259 | 0 |
| Tennessee | 3,542 | 3,542 | 0 |
| Texas | 15,769 | 15,768 | 1 |
| Utah | 1,030 | 1,030 | 0 |
| Vermont | 77 | 77 | 0 |
| Virginia | 1,762 | 1,762 | 0 |
| Washington | 2,279 | 2,279 | 0 |
| West Virginia | 644 | 644 | 0 |
| Wisconsin | 3,141 | 3,141 | 0 |
| Wyoming | 78 | 78 | 0 |
| United States | 131,474 | 131,469 | 5 |
| United States (across states) | N/A | 130,447 | N/A |

Table A.7 Medicaid Enrollees who Received Nurse Midwife Services in Calendar Year 2005 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|------------|
| Alabama | 4,357 | 4,357 | 0 |
| Alaska | 2,434 | 2,434 | 0 |
| Arizona | 7,287 | 7,286 | 1 |
| Arkansas | 842 | 842 | 0 |
| California | 13,884 | 13,884 | 0 |
| Colorado | 539 | 539 | 0 |
| Connecticut | 1,136 | 1,136 | 0 |
| Delaware | 236 | 236 | 0 |
| District of Columbia | 0 | 0 | 0 |
| Florida | 1,136 | 1,136 | 0 |
| Georgia | 20,398 | 20,397 | 1 |
| Hawaii | 0 | 0 | 0 |
| Idaho | 0 | 0 | 0 |
| Illinois | 714 | 711 | 3 |
| Indiana | 925 | 925 | 0 |
| Iowa | 1,509 | 1,509 | 0 |
| Kansas | 579 | 579 | 0 |
| Kentucky | 0 | 0 | 0 |
| Louisiana | 76,297 | 76,297 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 7,119 | 7,119 | 0 |
| Massachusetts | 2,190 | 2,190 | 0 |
| Michigan | 3,150 | 3,150 | 0 |
| Minnesota | 7,796 | 7,796 | 0 |
| Mississippi | 0 | 0 | 0 |
| Missouri | 1,208 | 1,208 | 0 |
| Montana | 0 | 0 | 0 |
| Nebraska | 0 | 0 | 0 |
| Nevada | 269 | 269 | 0 |
| New Hampshire | 0 | 0 | 0 |
| New Jersey | 1,221 | 1,221 | 0 |
| New Mexico | 10,561 | 10,561 | 0 |
| New York | 7,088 | 7,088 | 0 |
| North Carolina | 1,501 | 1,501 | 0 |
| North Dakota | 347 | 347 | 0 |
| Ohio | 0 | 0 | 0 |
| Oklahoma | 130 | 130 | 0 |
| Oregon | 1,597 | 1,597 | 0 |
| Pennsylvania | 2,265 | 2,265 | 0 |
| Rhode Island | 0 | 0 | 0 |
| South Carolina | 7,235 | 7,235 | 0 |
| South Dakota | 776 | 775 | 1 |
| Tennessee | 2,343 | 2,343 | 0 |
| Texas | 9,855 | 9,852 | 3 |
| Utah | 0 | 0 | 0 |
| Vermont | 0 | 0 | 0 |
| Virginia | 1,807 | 1,807 | 0 |
| Washington | 2,136 | 2,136 | 0 |
| West Virginia | 2,879 | 2,879 | 0 |
| Wisconsin | 415 | 415 | 0 |
| Wyoming | 0 | 0 | 0 |
| United States | 206,161 | 206,152 | 9 |
| United States (across states) | N/A | 200,646 | N/A |

Table A.7 Medicaid Enrollees who Received Nurse Practitioner Services in Calendar Year 2005 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|------------|
| Alabama | 0 | 0 | 0 |
| Alaska | 12,271 | 12,269 | 2 |
| Arizona | 105,222 | 105,218 | 4 |
| Arkansas | 6,432 | 6,432 | 0 |
| California | 52,060 | 52,059 | 1 |
| Colorado | 672 | 672 | 0 |
| Connecticut | 9,290 | 9,290 | 0 |
| Delaware | 1,214 | 1,214 | 0 |
| District of Columbia | 958 | 958 | 0 |
| Florida | 159,236 | 159,231 | 5 |
| Georgia | 183,898 | 183,889 | 9 |
| Hawaii | 11,768 | 11,766 | 2 |
| Idaho | 26,162 | 26,162 | 0 |
| Illinois | 12,012 | 12,010 | 2 |
| Indiana | 2,443 | 2,443 | 0 |
| Iowa | 23,327 | 23,322 | 5 |
| Kansas | 20,276 | 20,275 | 1 |
| Kentucky | 98,978 | 98,595 | 383 |
| Louisiana | 6,163 | 6,163 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 33,841 | 33,841 | 0 |
| Massachusetts | 24,387 | 24,387 | 0 |
| Michigan | 19,488 | 19,488 | 0 |
| Minnesota | 101,669 | 101,663 | 6 |
| Mississippi | 116,620 | 116,602 | 18 |
| Missouri | 20,810 | 20,810 | 0 |
| Montana | 27,743 | 27,743 | 0 |
| Nebraska | 8,486 | 8,486 | 0 |
| Nevada | 19,387 | 19,387 | 0 |
| New Hampshire | 1,168 | 1,168 | 0 |
| New Jersey | 7,335 | 7,335 | 0 |
| New Mexico | 47,220 | 47,220 | 0 |
| New York | 106,548 | 106,519 | 29 |
| North Carolina | 0 | 0 | 0 |
| North Dakota | 5,367 | 5,367 | 0 |
| Ohio | 148,841 | 148,749 | 92 |
| Oklahoma | 13,062 | 13,061 | 1 |
| Oregon | 60,452 | 60,441 | 11 |
| Pennsylvania | 452 | 452 | 0 |
| Rhode Island | 365 | 365 | 0 |
| South Carolina | 20,920 | 20,920 | 0 |
| South Dakota | 0 | 0 | 0 |
| Tennessee | 93,055 | 93,052 | 3 |
| Texas | 108,142 | 108,115 | 27 |
| Utah | 13,462 | 13,462 | 0 |
| Vermont | 2,358 | 2,358 | 0 |
| Virginia | 16,344 | 16,343 | 1 |
| Washington | 11,323 | 11,323 | 0 |
| West Virginia | 31,907 | 31,907 | 0 |
| Wisconsin | 34,676 | 34,597 | 79 |
| Wyoming | 8,671 | 8,668 | 3 |
| United States | 1,836,481 | 1,835,797 | 684 |
| United States (across states) | N/A | 1,799,518 | N/A |

Table A.7 Medicaid Enrollees who Received Private Nursing Services in Calendar Year 2005 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|------------|
| Alabama | 36 | 36 | 0 |
| Alaska | 144 | 144 | 0 |
| Arizona | 6 | 6 | 0 |
| Arkansas | 136 | 136 | 0 |
| California | 1,820 | 1,820 | 0 |
| Colorado | 195 | 195 | 0 |
| Connecticut | 0 | 0 | 0 |
| Delaware | 2,856 | 2,856 | 0 |
| District of Columbia | 0 | 0 | 0 |
| Florida | 0 | 0 | 0 |
| Georgia | 559 | 559 | 0 |
| Hawaii | 803 | 803 | 0 |
| Idaho | 1,203 | 1,203 | 0 |
| Illinois | 13,965 | 13,965 | 0 |
| Indiana | 0 | 0 | 0 |
| Iowa | 0 | 0 | 0 |
| Kansas | 0 | 0 | 0 |
| Kentucky | 0 | 0 | 0 |
| Louisiana | 0 | 0 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 677 | 677 | 0 |
| Massachusetts | 0 | 0 | 0 |
| Michigan | 0 | 0 | 0 |
| Minnesota | 1,532 | 1,532 | 0 |
| Mississippi | 0 | 0 | 0 |
| Missouri | 53 | 53 | 0 |
| Montana | 0 | 0 | 0 |
| Nebraska | 233 | 233 | 0 |
| Nevada | 0 | 0 | 0 |
| New Hampshire | 136 | 136 | 0 |
| New Jersey | 234 | 234 | 0 |
| New Mexico | 3 | 3 | 0 |
| New York | 6,860 | 6,849 | 11 |
| North Carolina | 0 | 0 | 0 |
| North Dakota | 0 | 0 | 0 |
| Ohio | 16,679 | 16,644 | 35 |
| Oklahoma | 0 | 0 | 0 |
| Oregon | 254 | 254 | 0 |
| Pennsylvania | 287 | 287 | 0 |
| Rhode Island | 0 | 0 | 0 |
| South Carolina | 13 | 13 | 0 |
| South Dakota | 5 | 5 | 0 |
| Tennessee | 0 | 0 | 0 |
| Texas | 41 | 41 | 0 |
| Utah | 21 | 21 | 0 |
| Vermont | 0 | 0 | 0 |
| Virginia | 464 | 463 | 1 |
| Washington | 533 | 533 | 0 |
| West Virginia | 644 | 644 | 0 |
| Wisconsin | 349 | 347 | 2 |
| Wyoming | 0 | 0 | 0 |
| United States | 50,741 | 50,692 | 49 |
| United States (across states) | N/A | 49,878 | N/A |

Table A.7 Medicaid Enrollees who Received Religious Non-Medical Services in Calendar Year 2005 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|------------|
| Alabama | 0 | 0 | 0 |
| Alaska | 0 | 0 | 0 |
| Arizona | 0 | 0 | 0 |
| Arkansas | 0 | 0 | 0 |
| California | 0 | 0 | 0 |
| Colorado | 0 | 0 | 0 |
| Connecticut | 0 | 0 | 0 |
| Delaware | 0 | 0 | 0 |
| District of Columbia | 0 | 0 | 0 |
| Florida | 0 | 0 | 0 |
| Georgia | 0 | 0 | 0 |
| Hawaii | 0 | 0 | 0 |
| Idaho | 0 | 0 | 0 |
| Illinois | 0 | 0 | 0 |
| Indiana | 0 | 0 | 0 |
| Iowa | 0 | 0 | 0 |
| Kansas | 0 | 0 | 0 |
| Kentucky | 0 | 0 | 0 |
| Louisiana | 0 | 0 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 0 | 0 | 0 |
| Massachusetts | 0 | 0 | 0 |
| Michigan | 0 | 0 | 0 |
| Minnesota | 0 | 0 | 0 |
| Mississippi | 0 | 0 | 0 |
| Missouri | 0 | 0 | 0 |
| Montana | 0 | 0 | 0 |
| Nebraska | 0 | 0 | 0 |
| Nevada | 0 | 0 | 0 |
| New Hampshire | 0 | 0 | 0 |
| New Jersey | 0 | 0 | 0 |
| New Mexico | 0 | 0 | 0 |
| New York | 0 | 0 | 0 |
| North Carolina | 0 | 0 | 0 |
| North Dakota | 0 | 0 | 0 |
| Ohio | 0 | 0 | 0 |
| Oklahoma | 0 | 0 | 0 |
| Oregon | 0 | 0 | 0 |
| Pennsylvania | 0 | 0 | 0 |
| Rhode Island | 0 | 0 | 0 |
| South Carolina | 0 | 0 | 0 |
| South Dakota | 0 | 0 | 0 |
| Tennessee | 0 | 0 | 0 |
| Texas | 0 | 0 | 0 |
| Utah | 0 | 0 | 0 |
| Vermont | 0 | 0 | 0 |
| Virginia | 0 | 0 | 0 |
| Washington | 0 | 0 | 0 |
| West Virginia | 0 | 0 | 0 |
| Wisconsin | 0 | 0 | 0 |
| Wyoming | 0 | 0 | 0 |
| United States | 0 | 0 | 0 |
| United States (across states) | N/A | 0 | N/A |

Table A.7 Medicaid Enrollees who Received Durable Medical Equipment Services in Calendar Year 2005 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|--------------|
| Alabama | 145,628 | 145,609 | 19 |
| Alaska | 30,394 | 30,392 | 2 |
| Arizona | 259,774 | 259,766 | 8 |
| Arkansas | 140,940 | 140,918 | 22 |
| California | 3,465,836 | 3,465,814 | 22 |
| Colorado | 111,308 | 111,303 | 5 |
| Connecticut | 64,486 | 64,483 | 3 |
| Delaware | 26,119 | 26,119 | 0 |
| District of Columbia | 19,660 | 19,659 | 1 |
| Florida | 282,353 | 282,341 | 12 |
| Georgia | 488,240 | 488,220 | 20 |
| Hawaii | 43,764 | 43,761 | 3 |
| Idaho | 41,415 | 41,413 | 2 |
| Illinois | 397,705 | 397,498 | 207 |
| Indiana | 227,825 | 227,824 | 1 |
| Iowa | 132,611 | 132,588 | 23 |
| Kansas | 65,074 | 65,073 | 1 |
| Kentucky | 189,519 | 189,198 | 321 |
| Louisiana | 284,155 | 284,154 | 1 |
| Maine | 0 | 0 | 0 |
| Maryland | 152,442 | 152,442 | 0 |
| Massachusetts | 117,849 | 117,848 | 1 |
| Michigan | 137,297 | 137,296 | 1 |
| Minnesota | 184,937 | 184,926 | 11 |
| Mississippi | 224,834 | 224,803 | 31 |
| Missouri | 267,495 | 267,485 | 10 |
| Montana | 29,944 | 29,944 | 0 |
| Nebraska | 93,937 | 93,937 | 0 |
| Nevada | 33,531 | 33,531 | 0 |
| New Hampshire | 32,789 | 32,788 | 1 |
| New Jersey | 221,359 | 221,292 | 67 |
| New Mexico | 119,281 | 119,281 | 0 |
| New York | 633,627 | 633,149 | 478 |
| North Carolina | 451,068 | 450,997 | 71 |
| North Dakota | 21,190 | 21,188 | 2 |
| Ohio | 320,531 | 320,324 | 207 |
| Oklahoma | 167,905 | 167,834 | 71 |
| Oregon | 125,526 | 125,514 | 12 |
| Pennsylvania | 79,432 | 79,431 | 1 |
| Rhode Island | 31,154 | 31,154 | 0 |
| South Carolina | 187,780 | 187,778 | 2 |
| South Dakota | 30,016 | 29,937 | 79 |
| Tennessee | 204,848 | 204,842 | 6 |
| Texas | 698,347 | 698,218 | 129 |
| Utah | 40,663 | 40,663 | 0 |
| Vermont | 19,295 | 19,295 | 0 |
| Virginia | 81,860 | 81,854 | 6 |
| Washington | 282,802 | 282,793 | 9 |
| West Virginia | 55,895 | 55,895 | 0 |
| Wisconsin | 236,933 | 236,684 | 249 |
| Wyoming | 21,348 | 21,345 | 3 |
| United States | 11,722,721 | 11,720,601 | 2,120 |
| United States (across states) | N/A | 11,542,898 | N/A |

Table A.7 Medicaid Enrollees who Received Residential Care Services in Calendar Year 2005 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|------------|
| Alabama | 2,828 | 2,828 | 0 |
| Alaska | 861 | 861 | 0 |
| Arizona | 11,177 | 11,177 | 0 |
| Arkansas | 0 | 0 | 0 |
| California | 61,088 | 61,087 | 1 |
| Colorado | 4,412 | 4,412 | 0 |
| Connecticut | 6,500 | 6,499 | 1 |
| Delaware | 309 | 309 | 0 |
| District of Columbia | 0 | 0 | 0 |
| Florida | 8,611 | 8,610 | 1 |
| Georgia | 4,266 | 4,266 | 0 |
| Hawaii | 244 | 244 | 0 |
| Idaho | 4,613 | 4,613 | 0 |
| Illinois | 9,015 | 9,007 | 8 |
| Indiana | 5,345 | 5,345 | 0 |
| Iowa | 11,580 | 11,574 | 6 |
| Kansas | 4,261 | 4,261 | 0 |
| Kentucky | 2,214 | 2,212 | 2 |
| Louisiana | 0 | 0 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 54,493 | 54,493 | 0 |
| Massachusetts | 12,794 | 12,794 | 0 |
| Michigan | 5,356 | 5,356 | 0 |
| Minnesota | 9,158 | 9,157 | 1 |
| Mississippi | 100 | 100 | 0 |
| Missouri | 10,690 | 10,690 | 0 |
| Montana | 91 | 91 | 0 |
| Nebraska | 2,783 | 2,783 | 0 |
| Nevada | 1,536 | 1,536 | 0 |
| New Hampshire | 459 | 459 | 0 |
| New Jersey | 8,374 | 8,372 | 2 |
| New Mexico | 2,527 | 2,527 | 0 |
| New York | 47,061 | 47,003 | 58 |
| North Carolina | 31 | 31 | 0 |
| North Dakota | 659 | 659 | 0 |
| Ohio | 16,498 | 16,498 | 0 |
| Oklahoma | 3,863 | 3,860 | 3 |
| Oregon | 9,443 | 9,443 | 0 |
| Pennsylvania | 1,044 | 1,044 | 0 |
| Rhode Island | 3,070 | 3,070 | 0 |
| South Carolina | 383 | 383 | 0 |
| South Dakota | 1,268 | 1,258 | 10 |
| Tennessee | 3,841 | 3,841 | 0 |
| Texas | 3,173 | 3,173 | 0 |
| Utah | 1,053 | 1,053 | 0 |
| Vermont | 62 | 62 | 0 |
| Virginia | 0 | 0 | 0 |
| Washington | 18,516 | 18,516 | 0 |
| West Virginia | 3,468 | 3,468 | 0 |
| Wisconsin | 10,881 | 10,880 | 1 |
| Wyoming | 1,022 | 1,022 | 0 |
| United States | 371,021 | 370,927 | 94 |
| United States (across states) | N/A | 368,194 | N/A |

Table A.7 Medicaid Enrollees who Received Psychiatric Services in Calendar Year 2005 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|--------------|
| Alabama | 91,564 | 91,495 | 69 |
| Alaska | 17,398 | 17,398 | 0 |
| Arizona | 192,171 | 192,163 | 8 |
| Arkansas | 80,531 | 80,467 | 64 |
| California | 1,013,293 | 1,013,289 | 4 |
| Colorado | 29,365 | 29,365 | 0 |
| Connecticut | 30,348 | 30,347 | 1 |
| Delaware | 24,425 | 24,425 | 0 |
| District of Columbia | 17,139 | 17,138 | 1 |
| Florida | 240,513 | 240,508 | 5 |
| Georgia | 199,088 | 199,082 | 6 |
| Hawaii | 33,060 | 33,055 | 5 |
| Idaho | 30,788 | 30,784 | 4 |
| Illinois | 269,854 | 269,427 | 427 |
| Indiana | 142,649 | 142,648 | 1 |
| Iowa | 63,776 | 63,743 | 33 |
| Kansas | 66,385 | 66,382 | 3 |
| Kentucky | 148,427 | 147,793 | 634 |
| Louisiana | 69,918 | 69,918 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 152,633 | 152,632 | 1 |
| Massachusetts | 137,688 | 137,687 | 1 |
| Michigan | 64,111 | 64,111 | 0 |
| Minnesota | 131,169 | 131,169 | 0 |
| Mississippi | 89,919 | 89,891 | 28 |
| Missouri | 139,028 | 139,021 | 7 |
| Montana | 17,824 | 17,824 | 0 |
| Nebraska | 48,217 | 48,217 | 0 |
| Nevada | 17,328 | 17,328 | 0 |
| New Hampshire | 27,904 | 27,903 | 1 |
| New Jersey | 114,797 | 114,743 | 54 |
| New Mexico | 57,142 | 57,142 | 0 |
| New York | 780,227 | 777,450 | 2,777 |
| North Carolina | 198,205 | 198,149 | 56 |
| North Dakota | 11,017 | 11,016 | 1 |
| Ohio | 340,653 | 338,617 | 2,036 |
| Oklahoma | 76,922 | 76,813 | 109 |
| Oregon | 82,404 | 82,376 | 28 |
| Pennsylvania | 143,525 | 143,521 | 4 |
| Rhode Island | 40,384 | 40,384 | 0 |
| South Carolina | 111,931 | 111,930 | 1 |
| South Dakota | 14,364 | 14,052 | 312 |
| Tennessee | 306,782 | 306,763 | 19 |
| Texas | 251,733 | 251,664 | 69 |
| Utah | 16,372 | 16,371 | 1 |
| Vermont | 34,562 | 34,562 | 0 |
| Virginia | 95,748 | 95,714 | 34 |
| Washington | 104,215 | 104,215 | 0 |
| West Virginia | 83,192 | 83,189 | 3 |
| Wisconsin | 109,035 | 108,997 | 38 |
| Wyoming | 9,895 | 9,895 | 0 |
| United States | 6,569,618 | 6,562,773 | 6,845 |
| United States (across states) | N/A | 6,442,839 | N/A |

Table A.7 Medicaid Enrollees who Received Adult Day Care Services in Calendar Year 2005 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|------------|
| Alabama | 238 | 238 | 0 |
| Alaska | 439 | 439 | 0 |
| Arizona | 929 | 929 | 0 |
| Arkansas | 490 | 490 | 0 |
| California | 80,926 | 80,923 | 3 |
| Colorado | 1,200 | 1,200 | 0 |
| Connecticut | 4,809 | 4,808 | 1 |
| Delaware | 203 | 203 | 0 |
| District of Columbia | 0 | 0 | 0 |
| Florida | 12,869 | 12,868 | 1 |
| Georgia | 5,411 | 5,411 | 0 |
| Hawaii | 1,427 | 1,427 | 0 |
| Idaho | 445 | 445 | 0 |
| Illinois | 1,815 | 1,815 | 0 |
| Indiana | 209 | 209 | 0 |
| Iowa | 3,557 | 3,557 | 0 |
| Kansas | 88 | 88 | 0 |
| Kentucky | 3,296 | 3,295 | 1 |
| Louisiana | 0 | 0 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 85,617 | 85,617 | 0 |
| Massachusetts | 6,513 | 6,513 | 0 |
| Michigan | 407 | 407 | 0 |
| Minnesota | 12,204 | 12,204 | 0 |
| Mississippi | 734 | 734 | 0 |
| Missouri | 1,449 | 1,449 | 0 |
| Montana | 281 | 281 | 0 |
| Nebraska | 371 | 371 | 0 |
| Nevada | 286 | 286 | 0 |
| New Hampshire | 480 | 480 | 0 |
| New Jersey | 14,692 | 14,689 | 3 |
| New Mexico | 31 | 31 | 0 |
| New York | 62,751 | 62,595 | 156 |
| North Carolina | 467 | 467 | 0 |
| North Dakota | 1,045 | 1,045 | 0 |
| Ohio | 2,894 | 2,894 | 0 |
| Oklahoma | 516 | 516 | 0 |
| Oregon | 204 | 204 | 0 |
| Pennsylvania | 2,222 | 2,222 | 0 |
| Rhode Island | 4,463 | 4,463 | 0 |
| South Carolina | 9,029 | 9,028 | 1 |
| South Dakota | 3 | 3 | 0 |
| Tennessee | 56 | 56 | 0 |
| Texas | 22,673 | 22,670 | 3 |
| Utah | 60 | 60 | 0 |
| Vermont | 0 | 0 | 0 |
| Virginia | 620 | 620 | 0 |
| Washington | 2,736 | 2,736 | 0 |
| West Virginia | 3 | 3 | 0 |
| Wisconsin | 2,953 | 2,953 | 0 |
| Wyoming | 52 | 52 | 0 |
| United States | 354,163 | 353,994 | 169 |
| United States (across states) | N/A | 350,615 | N/A |

Table A.7 Medicaid Enrollees who Received Unknown Services in Calendar Year 2005 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|--------------|
| Alabama | 144,893 | 144,819 | 74 |
| Alaska | 2,741 | 2,741 | 0 |
| Arizona | 215,309 | 215,299 | 10 |
| Arkansas | 104,071 | 104,065 | 6 |
| California | 934,387 | 934,364 | 23 |
| Colorado | 58,671 | 58,658 | 13 |
| Connecticut | 5,828 | 5,828 | 0 |
| Delaware | 63,812 | 63,810 | 2 |
| District of Columbia | 2,122 | 2,121 | 1 |
| Florida | 220,747 | 220,731 | 16 |
| Georgia | 359,987 | 359,964 | 23 |
| Hawaii | 17,549 | 17,548 | 1 |
| Idaho | 8,250 | 8,250 | 0 |
| Illinois | 130,999 | 130,941 | 58 |
| Indiana | 134,126 | 134,124 | 2 |
| Iowa | 37,323 | 37,322 | 1 |
| Kansas | 31,670 | 31,670 | 0 |
| Kentucky | 123,105 | 120,661 | 2,444 |
| Louisiana | 4,569 | 4,569 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 16,098 | 16,098 | 0 |
| Massachusetts | 19,889 | 19,888 | 1 |
| Michigan | 16,625 | 16,625 | 0 |
| Minnesota | 103,948 | 103,947 | 1 |
| Mississippi | 19,353 | 19,352 | 1 |
| Missouri | 154,967 | 154,934 | 33 |
| Montana | 3,146 | 3,146 | 0 |
| Nebraska | 47,350 | 47,350 | 0 |
| Nevada | 16,996 | 16,996 | 0 |
| New Hampshire | 4,978 | 4,978 | 0 |
| New Jersey | 156,521 | 156,430 | 91 |
| New Mexico | 92,119 | 92,119 | 0 |
| New York | 498,890 | 498,453 | 437 |
| North Carolina | 27,809 | 27,809 | 0 |
| North Dakota | 2,540 | 2,540 | 0 |
| Ohio | 184,244 | 184,013 | 231 |
| Oklahoma | 31,446 | 31,437 | 9 |
| Oregon | 159,353 | 159,306 | 47 |
| Pennsylvania | 61,963 | 61,962 | 1 |
| Rhode Island | 16,803 | 16,803 | 0 |
| South Carolina | 19,289 | 19,289 | 0 |
| South Dakota | 13,675 | 13,659 | 16 |
| Tennessee | 168,420 | 168,418 | 2 |
| Texas | 47,800 | 47,791 | 9 |
| Utah | 7,930 | 7,930 | 0 |
| Vermont | 9,271 | 9,271 | 0 |
| Virginia | 139,927 | 139,904 | 23 |
| Washington | 336,595 | 336,584 | 11 |
| West Virginia | 8,106 | 8,106 | 0 |
| Wisconsin | 158,924 | 156,491 | 2,433 |
| Wyoming | 9,890 | 9,888 | 2 |
| United States | 5,155,024 | 5,149,002 | 6,022 |
| United States (across states) | N/A | 5,069,607 | N/A |

Table A.7 Medicaid Enrollees who Received Inpatient Hospital Services in Calendar Year 2006 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|--------------|
| Alabama | 115,408 | 115,391 | 17 |
| Alaska | 15,514 | 15,514 | 0 |
| Arizona | 191,536 | 191,530 | 6 |
| Arkansas | 88,379 | 88,365 | 14 |
| California | 586,236 | 586,236 | 0 |
| Colorado | 46,032 | 46,030 | 2 |
| Connecticut | 32,091 | 32,088 | 3 |
| Delaware | 10,158 | 10,158 | 0 |
| District of Columbia | 15,150 | 15,150 | 0 |
| Florida | 317,039 | 317,033 | 6 |
| Georgia | 193,389 | 193,388 | 1 |
| Hawaii | 22,355 | 22,354 | 1 |
| Idaho | 24,539 | 24,539 | 0 |
| Illinois | 191,439 | 191,287 | 152 |
| Indiana | 119,550 | 119,549 | 1 |
| Iowa | 59,769 | 59,769 | 0 |
| Kansas | 50,009 | 50,009 | 0 |
| Kentucky | 84,907 | 84,907 | 0 |
| Louisiana | 134,351 | 134,351 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 117,194 | 117,194 | 0 |
| Massachusetts | 76,534 | 76,533 | 1 |
| Michigan | 94,486 | 94,485 | 1 |
| Minnesota | 72,569 | 72,568 | 1 |
| Mississippi | 97,155 | 97,107 | 48 |
| Missouri | 123,947 | 123,947 | 0 |
| Montana | 16,962 | 16,962 | 0 |
| Nebraska | 32,579 | 32,579 | 0 |
| Nevada | 36,614 | 36,614 | 0 |
| New Hampshire | 15,265 | 15,265 | 0 |
| New Jersey | 109,396 | 109,394 | 2 |
| New Mexico | 52,247 | 52,247 | 0 |
| New York | 650,867 | 649,429 | 1,438 |
| North Carolina | 211,929 | 211,928 | 1 |
| North Dakota | 8,860 | 8,860 | 0 |
| Ohio | 166,956 | 166,890 | 66 |
| Oklahoma | 114,230 | 114,202 | 28 |
| Oregon | 63,852 | 63,849 | 3 |
| Pennsylvania | 108,163 | 108,161 | 2 |
| Rhode Island | 31,343 | 31,343 | 0 |
| South Carolina | 107,042 | 107,041 | 1 |
| South Dakota | 16,600 | 16,584 | 16 |
| Tennessee | 116,583 | 116,581 | 2 |
| Texas | 518,183 | 518,076 | 107 |
| Utah | 31,515 | 31,515 | 0 |
| Vermont | 10,897 | 10,897 | 0 |
| Virginia | 157,855 | 157,847 | 8 |
| Washington | 89,891 | 89,888 | 3 |
| West Virginia | 23,985 | 23,985 | 0 |
| Wisconsin | 102,905 | 102,796 | 109 |
| Wyoming | 11,189 | 11,189 | 0 |
| United States | | | 2,040 |
| United States (across states) | N/A | 5,601,255 | N/A |

Table A.7 Medicaid Enrollees who Received Mental Hospital Services for the Aged in Calendar Year 2006 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|------------|
| Alabama | 218 | 218 | 0 |
| Alaska | 2 | 2 | 0 |
| Arizona | 0 | 0 | 0 |
| Arkansas | 0 | 0 | 0 |
| California | 7 | 7 | 0 |
| Colorado | 11 | 11 | 0 |
| Connecticut | 1,101 | 1,101 | 0 |
| Delaware | 184 | 184 | 0 |
| District of Columbia | 151 | 151 | 0 |
| Florida | 174 | 174 | 0 |
| Georgia | 0 | 0 | 0 |
| Hawaii | 129 | 129 | 0 |
| Idaho | 838 | 838 | 0 |
| Illinois | 1,784 | 1,781 | 3 |
| Indiana | 316 | 316 | 0 |
| Iowa | 10 | 10 | 0 |
| Kansas | 166 | 166 | 0 |
| Kentucky | 338 | 338 | 0 |
| Louisiana | 6,117 | 6,117 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 48 | 48 | 0 |
| Massachusetts | 21 | 21 | 0 |
| Michigan | 49 | 49 | 0 |
| Minnesota | 118 | 118 | 0 |
| Mississippi | 239 | 239 | 0 |
| Missouri | 5 | 5 | 0 |
| Montana | 54 | 54 | 0 |
| Nebraska | 1 | 1 | 0 |
| Nevada | 7 | 7 | 0 |
| New Hampshire | 0 | 0 | 0 |
| New Jersey | 359 | 359 | 0 |
| New Mexico | 73 | 73 | 0 |
| New York | 4,155 | 4,143 | 12 |
| North Carolina | 183 | 183 | 0 |
| North Dakota | 14 | 14 | 0 |
| Ohio | 12 | 12 | 0 |
| Oklahoma | 98 | 98 | 0 |
| Oregon | 87 | 87 | 0 |
| Pennsylvania | 6,999 | 6,999 | 0 |
| Rhode Island | 167 | 167 | 0 |
| South Carolina | 229 | 229 | 0 |
| South Dakota | 55 | 55 | 0 |
| Tennessee | 103 | 103 | 0 |
| Texas | 460 | 460 | 0 |
| Utah | 1 | 1 | 0 |
| Vermont | 164 | 164 | 0 |
| Virginia | 904 | 904 | 0 |
| Washington | 928 | 928 | 0 |
| West Virginia | 199 | 199 | 0 |
| Wisconsin | 158 | 158 | 0 |
| Wyoming | 11 | 11 | 0 |
| United States | | | 15 |
| United States (across states) | N/A | 26,839 | N/A |

Table A.7 Medicaid Enrollees who Received Inpatient Psychiatric Facility Services (under Age 21) in Calendar Year 2006 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|------------|
| Alabama | 0 | 0 | 0 |
| Alaska | 1,435 | 1,435 | 0 |
| Arizona | 740 | 740 | 0 |
| Arkansas | 6,085 | 6,083 | 2 |
| California | 631 | 631 | 0 |
| Colorado | 136 | 136 | 0 |
| Connecticut | 866 | 866 | 0 |
| Delaware | 36 | 36 | 0 |
| District of Columbia | 212 | 212 | 0 |
| Florida | 0 | 0 | 0 |
| Georgia | 0 | 0 | 0 |
| Hawaii | 16 | 16 | 0 |
| Idaho | 948 | 948 | 0 |
| Illinois | 5,177 | 5,172 | 5 |
| Indiana | 2,798 | 2,798 | 0 |
| Iowa | 967 | 967 | 0 |
| Kansas | 333 | 333 | 0 |
| Kentucky | 3,324 | 3,324 | 0 |
| Louisiana | 3,349 | 3,349 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 2,846 | 2,846 | 0 |
| Massachusetts | 3,840 | 3,840 | 0 |
| Michigan | 543 | 543 | 0 |
| Minnesota | 643 | 643 | 0 |
| Mississippi | 2,510 | 2,505 | 5 |
| Missouri | 399 | 399 | 0 |
| Montana | 422 | 422 | 0 |
| Nebraska | 1,683 | 1,683 | 0 |
| Nevada | 903 | 903 | 0 |
| New Hampshire | 283 | 283 | 0 |
| New Jersey | 1,794 | 1,792 | 2 |
| New Mexico | 4,742 | 4,742 | 0 |
| New York | 11,308 | 11,114 | 194 |
| North Carolina | 2,257 | 2,257 | 0 |
| North Dakota | 50 | 50 | 0 |
| Ohio | 1,677 | 1,666 | 11 |
| Oklahoma | 3,667 | 3,659 | 8 |
| Oregon | 450 | 450 | 0 |
| Pennsylvania | 5,213 | 5,213 | 0 |
| Rhode Island | 190 | 190 | 0 |
| South Carolina | 1,003 | 1,003 | 0 |
| South Dakota | 488 | 480 | 8 |
| Tennessee | 3,343 | 3,343 | 0 |
| Texas | 7,124 | 7,116 | 8 |
| Utah | 112 | 112 | 0 |
| Vermont | 0 | 0 | 0 |
| Virginia | 757 | 757 | 0 |
| Washington | 0 | 0 | 0 |
| West Virginia | 1,858 | 1,858 | 0 |
| Wisconsin | 2,801 | 2,801 | 0 |
| Wyoming | 497 | 497 | 0 |
| United States | | | 243 |
| United States (across states) | N/A | 87,684 | N/A |

Table A.7 Medicaid Enrollees who Received Intermediate Care Facility Services for the Mentally Retarded in Calendar Year 2006 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|------------|
| Alabama | 254 | 254 | 0 |
| Alaska | 0 | 0 | 0 |
| Arizona | 0 | 0 | 0 |
| Arkansas | 1,717 | 1,717 | 0 |
| California | 9,856 | 9,856 | 0 |
| Colorado | 137 | 137 | 0 |
| Connecticut | 1,257 | 1,256 | 1 |
| Delaware | 150 | 150 | 0 |
| District of Columbia | 706 | 706 | 0 |
| Florida | 3,127 | 3,127 | 0 |
| Georgia | 1,097 | 1,097 | 0 |
| Hawaii | 88 | 88 | 0 |
| Idaho | 593 | 593 | 0 |
| Illinois | 9,504 | 9,502 | 2 |
| Indiana | 4,261 | 4,261 | 0 |
| Iowa | 2,316 | 2,316 | 0 |
| Kansas | 646 | 646 | 0 |
| Kentucky | 712 | 712 | 0 |
| Louisiana | 5,539 | 5,539 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 346 | 346 | 0 |
| Massachusetts | 1,032 | 1,032 | 0 |
| Michigan | 160 | 160 | 0 |
| Minnesota | 2,823 | 2,823 | 0 |
| Mississippi | 2,865 | 2,865 | 0 |
| Missouri | 1,050 | 1,050 | 0 |
| Montana | 86 | 86 | 0 |
| Nebraska | 641 | 641 | 0 |
| Nevada | 162 | 162 | 0 |
| New Hampshire | 38 | 38 | 0 |
| New Jersey | 3,056 | 3,056 | 0 |
| New Mexico | 259 | 259 | 0 |
| New York | 8,678 | 8,655 | 23 |
| North Carolina | 4,158 | 4,158 | 0 |
| North Dakota | 636 | 636 | 0 |
| Ohio | 7,772 | 7,770 | 2 |
| Oklahoma | 1,829 | 1,829 | 0 |
| Oregon | 43 | 43 | 0 |
| Pennsylvania | 4,060 | 4,060 | 0 |
| Rhode Island | 45 | 45 | 0 |
| South Carolina | 1,736 | 1,736 | 0 |
| South Dakota | 191 | 191 | 0 |
| Tennessee | 1,292 | 1,292 | 0 |
| Texas | 12,513 | 12,512 | 1 |
| Utah | 826 | 826 | 0 |
| Vermont | 6 | 6 | 0 |
| Virginia | 1,923 | 1,923 | 0 |
| Washington | 59 | 59 | 0 |
| West Virginia | 547 | 547 | 0 |
| Wisconsin | 1,667 | 1,667 | 0 |
| Wyoming | 96 | 96 | 0 |
| United States | | | 29 |
| United States (across states) | N/A | 102,163 | N/A |

Table A.7 Medicaid Enrollees who Received Nursing Facility Services in Calendar Year 2006 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|------------|
| Alabama | 26,100 | 26,085 | 15 |
| Alaska | 1,263 | 1,263 | 0 |
| Arizona | 15,244 | 15,244 | 0 |
| Arkansas | 18,434 | 18,424 | 10 |
| California | 127,512 | 127,501 | 11 |
| Colorado | 14,831 | 14,831 | 0 |
| Connecticut | 29,578 | 29,578 | 0 |
| Delaware | 3,647 | 3,647 | 0 |
| District of Columbia | 3,835 | 3,835 | 0 |
| Florida | 78,418 | 78,412 | 6 |
| Georgia | 38,255 | 38,255 | 0 |
| Hawaii | 4,711 | 4,711 | 0 |
| Idaho | 4,528 | 4,528 | 0 |
| Illinois | 73,913 | 73,887 | 26 |
| Indiana | 37,202 | 37,202 | 0 |
| Iowa | 18,969 | 18,969 | 0 |
| Kansas | 14,622 | 14,622 | 0 |
| Kentucky | 27,261 | 27,261 | 0 |
| Louisiana | 29,007 | 29,006 | 1 |
| Maine | 0 | 0 | 0 |
| Maryland | 24,150 | 24,150 | 0 |
| Massachusetts | 50,799 | 50,799 | 0 |
| Michigan | 43,828 | 43,824 | 4 |
| Minnesota | 30,400 | 30,392 | 8 |
| Mississippi | 21,705 | 21,703 | 2 |
| Missouri | 37,920 | 37,920 | 0 |
| Montana | 5,039 | 5,039 | 0 |
| Nebraska | 11,065 | 11,065 | 0 |
| Nevada | 4,564 | 4,564 | 0 |
| New Hampshire | 7,124 | 7,124 | 0 |
| New Jersey | 41,834 | 41,663 | 171 |
| New Mexico | 6,359 | 6,359 | 0 |
| New York | 148,004 | 147,897 | 107 |
| North Carolina | 41,335 | 41,335 | 0 |
| North Dakota | 5,156 | 5,156 | 0 |
| Ohio | 83,399 | 83,396 | 3 |
| Oklahoma | 21,545 | 21,532 | 13 |
| Oregon | 9,683 | 9,683 | 0 |
| Pennsylvania | 79,195 | 79,192 | 3 |
| Rhode Island | 10,284 | 10,284 | 0 |
| South Carolina | 16,229 | 16,228 | 1 |
| South Dakota | 5,736 | 5,736 | 0 |
| Tennessee | 32,893 | 32,892 | 1 |
| Texas | 95,602 | 95,578 | 24 |
| Utah | 5,381 | 5,381 | 0 |
| Vermont | 3,497 | 3,497 | 0 |
| Virginia | 28,035 | 28,034 | 1 |
| Washington | 21,068 | 21,068 | 0 |
| West Virginia | 10,799 | 10,791 | 8 |
| Wisconsin | 32,783 | 32,783 | 0 |
| Wyoming | 2,303 | 2,303 | 0 |
| United States | | | 415 |
| United States (across states) | N/A | 1,492,162 | N/A |

Table A.7 Medicaid Enrollees who Received Physician Services in Calendar Year 2006 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|---------------|
| Alabama | 561,111 | 560,864 | 247 |
| Alaska | 82,240 | 82,239 | 1 |
| Arizona | 843,459 | 843,427 | 32 |
| Arkansas | 494,326 | 494,076 | 250 |
| California | 4,507,908 | 4,507,897 | 11 |
| Colorado | 55,026 | 55,021 | 5 |
| Connecticut | 99,997 | 99,992 | 5 |
| Delaware | 124,673 | 124,669 | 4 |
| District of Columbia | 22,703 | 22,702 | 1 |
| Florida | 1,206,330 | 1,206,264 | 66 |
| Georgia | 1,089,426 | 1,089,422 | 4 |
| Hawaii | 158,203 | 158,178 | 25 |
| Idaho | 147,399 | 147,397 | 2 |
| Illinois | 1,319,532 | 1,316,572 | 2,960 |
| Indiana | 595,099 | 595,072 | 27 |
| Iowa | 289,194 | 289,096 | 98 |
| Kansas | 238,627 | 238,621 | 6 |
| Kentucky | 611,281 | 611,281 | 0 |
| Louisiana | 756,344 | 756,344 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 557,765 | 557,759 | 6 |
| Massachusetts | 488,229 | 488,218 | 11 |
| Michigan | 495,199 | 495,182 | 17 |
| Minnesota | 539,843 | 539,834 | 9 |
| Mississippi | 445,413 | 444,963 | 450 |
| Missouri | 453,732 | 453,732 | 0 |
| Montana | 70,962 | 70,962 | 0 |
| Nebraska | 192,260 | 192,249 | 11 |
| Nevada | 134,459 | 134,458 | 1 |
| New Hampshire | 89,912 | 89,910 | 2 |
| New Jersey | 658,405 | 658,378 | 27 |
| New Mexico | 315,157 | 315,156 | 1 |
| New York | 2,779,270 | 2,770,393 | 8,877 |
| North Carolina | 1,229,813 | 1,229,812 | 1 |
| North Dakota | 45,236 | 45,202 | 34 |
| Ohio | 1,035,752 | 1,033,111 | 2,641 |
| Oklahoma | 464,418 | 463,994 | 424 |
| Oregon | 300,643 | 300,507 | 136 |
| Pennsylvania | 431,759 | 431,753 | 6 |
| Rhode Island | 92,199 | 92,199 | 0 |
| South Carolina | 532,146 | 532,125 | 21 |
| South Dakota | 73,335 | 72,927 | 408 |
| Tennessee | 836,556 | 836,509 | 47 |
| Texas | 2,231,742 | 2,230,533 | 1,209 |
| Utah | 81,535 | 81,533 | 2 |
| Vermont | 108,575 | 108,575 | 0 |
| Virginia | 625,876 | 625,743 | 133 |
| Washington | 371,532 | 371,518 | 14 |
| West Virginia | 168,158 | 168,152 | 6 |
| Wisconsin | 462,576 | 461,582 | 994 |
| Wyoming | 52,590 | 52,583 | 7 |
| United States | | | 19,239 |
| United States (across states) | N/A | 29,030,771 | N/A |

Table A.7 Medicaid Enrollees who Received Dental Services in Calendar Year 2006 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|--------------|
| Alabama | 173,815 | 173,788 | 27 |
| Alaska | 40,811 | 40,808 | 3 |
| Arizona | 472 | 472 | 0 |
| Arkansas | 127,844 | 127,833 | 11 |
| California | 2,063,131 | 2,063,130 | 1 |
| Colorado | 122,192 | 122,171 | 21 |
| Connecticut | 37,876 | 37,874 | 2 |
| Delaware | 25,954 | 25,952 | 2 |
| District of Columbia | 2,587 | 2,587 | 0 |
| Florida | 333,788 | 333,786 | 2 |
| Georgia | 382,862 | 382,862 | 0 |
| Hawaii | 59,444 | 59,439 | 5 |
| Idaho | 76,368 | 76,366 | 2 |
| Illinois | 605,146 | 604,717 | 429 |
| Indiana | 349,317 | 349,311 | 6 |
| Iowa | 131,483 | 131,432 | 51 |
| Kansas | 79,312 | 79,311 | 1 |
| Kentucky | 237,388 | 237,388 | 0 |
| Louisiana | 227,266 | 227,266 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 140,875 | 140,875 | 0 |
| Massachusetts | 358,951 | 358,949 | 2 |
| Michigan | 396,869 | 396,863 | 6 |
| Minnesota | 225,159 | 225,156 | 3 |
| Mississippi | 149,336 | 149,311 | 25 |
| Missouri | 150,873 | 150,873 | 0 |
| Montana | 21,711 | 21,711 | 0 |
| Nebraska | 103,178 | 103,165 | 13 |
| Nevada | 43,391 | 43,391 | 0 |
| New Hampshire | 41,502 | 41,499 | 3 |
| New Jersey | 255,061 | 255,041 | 20 |
| New Mexico | 161,936 | 161,936 | 0 |
| New York | 1,301,431 | 1,299,850 | 1,581 |
| North Carolina | 493,488 | 493,486 | 2 |
| North Dakota | 18,742 | 18,742 | 0 |
| Ohio | 376,188 | 375,530 | 658 |
| Oklahoma | 201,496 | 201,434 | 62 |
| Oregon | 143,057 | 143,038 | 19 |
| Pennsylvania | 157,106 | 157,105 | 1 |
| Rhode Island | 59,011 | 59,011 | 0 |
| South Carolina | 264,556 | 264,551 | 5 |
| South Dakota | 16,878 | 16,846 | 32 |
| Tennessee | 288,768 | 288,751 | 17 |
| Texas | 1,243,760 | 1,243,470 | 290 |
| Utah | 86,032 | 86,030 | 2 |
| Vermont | 46,974 | 46,974 | 0 |
| Virginia | 179,229 | 179,203 | 26 |
| Washington | 386,072 | 386,065 | 7 |
| West Virginia | 96,074 | 96,072 | 2 |
| Wisconsin | 198,299 | 198,285 | 14 |
| Wyoming | 20,095 | 20,094 | 1 |
| United States | | | 3,354 |
| United States (across states) | N/A | 12,514,495 | N/A |

Table A.7 Medicaid Enrollees who Received Other Practitioner Services in Calendar Year 2006 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|------------|
| Alabama | 110,025 | 110,018 | 7 |
| Alaska | 19,250 | 19,249 | 1 |
| Arizona | 157,241 | 157,241 | 0 |
| Arkansas | 116,043 | 116,029 | 14 |
| California | 676,826 | 676,824 | 2 |
| Colorado | 14,757 | 14,757 | 0 |
| Connecticut | 36,500 | 36,498 | 2 |
| Delaware | 48,464 | 48,464 | 0 |
| District of Columbia | 7,530 | 7,529 | 1 |
| Florida | 218,941 | 218,941 | 0 |
| Georgia | 252,191 | 252,191 | 0 |
| Hawaii | 18,872 | 18,872 | 0 |
| Idaho | 48,608 | 48,608 | 0 |
| Illinois | 219,406 | 219,373 | 33 |
| Indiana | 59,617 | 59,617 | 0 |
| Iowa | 121,934 | 121,920 | 14 |
| Kansas | 41,644 | 41,644 | 0 |
| Kentucky | 214,293 | 214,293 | 0 |
| Louisiana | 168,140 | 168,140 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 21,928 | 21,928 | 0 |
| Massachusetts | 105,263 | 105,263 | 0 |
| Michigan | 91,112 | 91,112 | 0 |
| Minnesota | 166,579 | 166,574 | 5 |
| Mississippi | 200,945 | 200,869 | 76 |
| Missouri | 124,836 | 124,836 | 0 |
| Montana | 21,312 | 21,312 | 0 |
| Nebraska | 70,856 | 70,855 | 1 |
| Nevada | 14,854 | 14,854 | 0 |
| New Hampshire | 22,104 | 22,104 | 0 |
| New Jersey | 87,020 | 87,016 | 4 |
| New Mexico | 66,200 | 66,200 | 0 |
| New York | 291,979 | 291,832 | 147 |
| North Carolina | 231,911 | 231,911 | 0 |
| North Dakota | 19,685 | 19,682 | 3 |
| Ohio | 297,387 | 297,264 | 123 |
| Oklahoma | 66,253 | 66,247 | 6 |
| Oregon | 65,293 | 65,285 | 8 |
| Pennsylvania | 79,456 | 79,456 | 0 |
| Rhode Island | 44,921 | 44,921 | 0 |
| South Carolina | 145,401 | 145,401 | 0 |
| South Dakota | 46,325 | 46,182 | 143 |
| Tennessee | 227,459 | 227,455 | 4 |
| Texas | 429,190 | 429,145 | 45 |
| Utah | 21,434 | 21,433 | 1 |
| Vermont | 14,816 | 14,816 | 0 |
| Virginia | 43,120 | 43,120 | 0 |
| Washington | 123,770 | 123,770 | 0 |
| West Virginia | 36,189 | 36,189 | 0 |
| Wisconsin | 145,231 | 145,197 | 34 |
| Wyoming | 11,680 | 11,679 | 1 |
| United States | | | 675 |
| United States (across states) | N/A | 5,790,694 | N/A |

Table A.7 Medicaid Enrollees who Received Outpatient Services in Calendar Year 2006 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|---------------|
| Alabama | 233,014 | 232,962 | 52 |
| Alaska | 42,658 | 42,658 | 0 |
| Arizona | 501,354 | 501,348 | 6 |
| Arkansas | 248,599 | 248,523 | 76 |
| California | 2,021,747 | 2,021,744 | 3 |
| Colorado | 159,699 | 159,682 | 17 |
| Connecticut | 88,340 | 88,331 | 9 |
| Delaware | 18,527 | 18,527 | 0 |
| District of Columbia | 19,179 | 19,176 | 3 |
| Florida | 581,484 | 581,477 | 7 |
| Georgia | 560,260 | 560,259 | 1 |
| Hawaii | 59,243 | 59,240 | 3 |
| Idaho | 77,056 | 77,056 | 0 |
| Illinois | 696,268 | 695,224 | 1,044 |
| Indiana | 385,342 | 385,336 | 6 |
| Iowa | 173,109 | 173,070 | 39 |
| Kansas | 112,211 | 112,211 | 0 |
| Kentucky | 397,912 | 397,912 | 0 |
| Louisiana | 435,899 | 435,899 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 286,375 | 286,371 | 4 |
| Massachusetts | 391,262 | 391,253 | 9 |
| Michigan | 289,214 | 289,209 | 5 |
| Minnesota | 280,175 | 280,172 | 3 |
| Mississippi | 322,114 | 321,873 | 241 |
| Missouri | 517,614 | 517,613 | 1 |
| Montana | 42,465 | 42,465 | 0 |
| Nebraska | 97,711 | 97,707 | 4 |
| Nevada | 41,021 | 41,021 | 0 |
| New Hampshire | 55,643 | 55,643 | 0 |
| New Jersey | 380,505 | 380,480 | 25 |
| New Mexico | 184,683 | 184,683 | 0 |
| New York | 1,913,229 | 1,906,686 | 6,543 |
| North Carolina | 665,175 | 665,175 | 0 |
| North Dakota | 24,884 | 24,873 | 11 |
| Ohio | 743,037 | 741,586 | 1,451 |
| Oklahoma | 308,363 | 308,161 | 202 |
| Oregon | 172,907 | 172,879 | 28 |
| Pennsylvania | 220,501 | 220,499 | 2 |
| Rhode Island | 90,177 | 90,176 | 1 |
| South Carolina | 284,059 | 284,054 | 5 |
| South Dakota | 38,233 | 38,187 | 46 |
| Tennessee | 404,770 | 404,764 | 6 |
| Texas | 918,456 | 918,156 | 300 |
| Utah | 48,687 | 48,686 | 1 |
| Vermont | 55,056 | 55,056 | 0 |
| Virginia | 17,076 | 17,075 | 1 |
| Washington | 209,692 | 209,689 | 3 |
| West Virginia | 111,961 | 111,959 | 2 |
| Wisconsin | 373,213 | 372,827 | 386 |
| Wyoming | 29,640 | 29,639 | 1 |
| United States | | | 10,547 |
| United States (across states) | N/A | 16,010,188 | N/A |

Table A.7 Medicaid Enrollees who Received Clinic Services in Calendar Year 2006 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|--------------|
| Alabama | 221,410 | 221,348 | 62 |
| Alaska | 35,530 | 35,530 | 0 |
| Arizona | 128,691 | 128,684 | 7 |
| Arkansas | 228,581 | 228,520 | 61 |
| California | 2,661,687 | 2,661,685 | 2 |
| Colorado | 364,481 | 364,411 | 70 |
| Connecticut | 42,746 | 42,739 | 7 |
| Delaware | 9,009 | 9,009 | 0 |
| District of Columbia | 17,970 | 17,967 | 3 |
| Florida | 276,752 | 276,751 | 1 |
| Georgia | 385,091 | 385,091 | 0 |
| Hawaii | 23,211 | 23,209 | 2 |
| Idaho | 57,464 | 57,463 | 1 |
| Illinois | 469,640 | 468,952 | 688 |
| Indiana | 312,715 | 312,707 | 8 |
| Iowa | 171,974 | 171,935 | 39 |
| Kansas | 93,841 | 93,839 | 2 |
| Kentucky | 221,827 | 221,827 | 0 |
| Louisiana | 157,527 | 157,527 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 33,529 | 33,529 | 0 |
| Massachusetts | 95,769 | 95,767 | 2 |
| Michigan | 164,028 | 164,025 | 3 |
| Minnesota | 49,004 | 49,004 | 0 |
| Mississippi | 203,537 | 203,410 | 127 |
| Missouri | 508,068 | 508,064 | 4 |
| Montana | 16,806 | 16,806 | 0 |
| Nebraska | 41,198 | 41,193 | 5 |
| Nevada | 20,167 | 20,167 | 0 |
| New Hampshire | 37,294 | 37,293 | 1 |
| New Jersey | 68,928 | 68,923 | 5 |
| New Mexico | 45,611 | 45,611 | 0 |
| New York | 965,971 | 963,642 | 2,329 |
| North Carolina | 458,240 | 458,238 | 2 |
| North Dakota | 22,321 | 22,312 | 9 |
| Ohio | 232,578 | 232,336 | 242 |
| Oklahoma | 141,624 | 141,565 | 59 |
| Oregon | 70,970 | 70,961 | 9 |
| Pennsylvania | 79,125 | 79,125 | 0 |
| Rhode Island | 47,001 | 47,001 | 0 |
| South Carolina | 344,609 | 344,602 | 7 |
| South Dakota | 41,986 | 41,841 | 145 |
| Tennessee | 214,809 | 214,797 | 12 |
| Texas | 304,282 | 304,195 | 87 |
| Utah | 120,973 | 120,967 | 6 |
| Vermont | 31,318 | 31,318 | 0 |
| Virginia | 90,280 | 90,271 | 9 |
| Washington | 110,929 | 110,928 | 1 |
| West Virginia | 71,428 | 71,425 | 3 |
| Wisconsin | 404,368 | 404,035 | 333 |
| Wyoming | 16,101 | 16,099 | 2 |
| United States | | | 4,355 |
| United States (across states) | N/A | 10,740,336 | N/A |

Table A.7 Medicaid Enrollees who Received Home Health Services in Calendar Year 2006 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|------------|
| Alabama | 51,213 | 51,203 | 10 |
| Alaska | 351 | 351 | 0 |
| Arizona | 9,798 | 9,798 | 0 |
| Arkansas | 6,491 | 6,490 | 1 |
| California | 38,604 | 38,604 | 0 |
| Colorado | 10,220 | 10,214 | 6 |
| Connecticut | 22,030 | 22,029 | 1 |
| Delaware | 1,321 | 1,321 | 0 |
| District of Columbia | 3,390 | 3,390 | 0 |
| Florida | 27,218 | 27,218 | 0 |
| Georgia | 7,259 | 7,259 | 0 |
| Hawaii | 5,286 | 5,286 | 0 |
| Idaho | 1,825 | 1,825 | 0 |
| Illinois | 13,393 | 13,365 | 28 |
| Indiana | 22,278 | 22,278 | 0 |
| Iowa | 27,860 | 27,855 | 5 |
| Kansas | 6,000 | 6,000 | 0 |
| Kentucky | 20,190 | 20,190 | 0 |
| Louisiana | 10,428 | 10,428 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 19,663 | 19,663 | 0 |
| Massachusetts | 35,198 | 35,197 | 1 |
| Michigan | 7,068 | 7,068 | 0 |
| Minnesota | 74,579 | 74,578 | 1 |
| Mississippi | 7,687 | 7,683 | 4 |
| Missouri | 6,023 | 6,023 | 0 |
| Montana | 415 | 415 | 0 |
| Nebraska | 5,633 | 5,633 | 0 |
| Nevada | 825 | 825 | 0 |
| New Hampshire | 2,882 | 2,882 | 0 |
| New Jersey | 14,426 | 14,424 | 2 |
| New Mexico | 3,857 | 3,857 | 0 |
| New York | 267,084 | 266,650 | 434 |
| North Carolina | 38,229 | 38,229 | 0 |
| North Dakota | 1,393 | 1,391 | 2 |
| Ohio | 43,415 | 43,346 | 69 |
| Oklahoma | 7,293 | 7,290 | 3 |
| Oregon | 2,533 | 2,533 | 0 |
| Pennsylvania | 16,760 | 16,759 | 1 |
| Rhode Island | 9,377 | 9,377 | 0 |
| South Carolina | 3,232 | 3,232 | 0 |
| South Dakota | 457 | 455 | 2 |
| Tennessee | 20,621 | 20,620 | 1 |
| Texas | 23,388 | 23,383 | 5 |
| Utah | 1,970 | 1,970 | 0 |
| Vermont | 3,542 | 3,542 | 0 |
| Virginia | 5,709 | 5,709 | 0 |
| Washington | 18 | 18 | 0 |
| West Virginia | 1,988 | 1,988 | 0 |
| Wisconsin | 7,997 | 7,984 | 13 |
| Wyoming | 591 | 591 | 0 |
| United States | | | 589 |
| United States (across states) | N/A | 908,455 | N/A |

Table A.7 Medicaid Enrollees who Received Lab/Xray Services in Calendar Year 2006 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|---------------|
| Alabama | 490,566 | 490,394 | 172 |
| Alaska | 61,206 | 61,206 | 0 |
| Arizona | 668,591 | 668,575 | 16 |
| Arkansas | 375,854 | 375,699 | 155 |
| California | 4,538,162 | 4,538,159 | 3 |
| Colorado | 228,050 | 228,024 | 26 |
| Connecticut | 98,632 | 98,624 | 8 |
| Delaware | 92,320 | 92,319 | 1 |
| District of Columbia | 31,871 | 31,864 | 7 |
| Florida | 966,648 | 966,610 | 38 |
| Georgia | 797,856 | 797,852 | 4 |
| Hawaii | 110,958 | 110,945 | 13 |
| Idaho | 102,446 | 102,444 | 2 |
| Illinois | 1,096,952 | 1,094,462 | 2,490 |
| Indiana | 490,596 | 490,585 | 11 |
| Iowa | 247,933 | 247,886 | 47 |
| Kansas | 174,111 | 174,109 | 2 |
| Kentucky | 495,555 | 495,555 | 0 |
| Louisiana | 609,005 | 609,005 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 315,915 | 315,914 | 1 |
| Massachusetts | 417,809 | 417,800 | 9 |
| Michigan | 273,450 | 273,445 | 5 |
| Minnesota | 425,800 | 425,795 | 5 |
| Mississippi | 403,028 | 402,639 | 389 |
| Missouri | 579,806 | 579,806 | 0 |
| Montana | 49,897 | 49,897 | 0 |
| Nebraska | 150,575 | 150,569 | 6 |
| Nevada | 91,183 | 91,183 | 0 |
| New Hampshire | 61,282 | 61,282 | 0 |
| New Jersey | 512,168 | 512,141 | 27 |
| New Mexico | 225,939 | 225,939 | 0 |
| New York | 2,210,127 | 2,204,618 | 5,509 |
| North Carolina | 971,587 | 971,587 | 0 |
| North Dakota | 34,695 | 34,684 | 11 |
| Ohio | 695,728 | 694,200 | 1,528 |
| Oklahoma | 367,171 | 366,938 | 233 |
| Oregon | 233,419 | 233,369 | 50 |
| Pennsylvania | 324,427 | 324,425 | 2 |
| Rhode Island | 131,373 | 131,373 | 0 |
| South Carolina | 413,996 | 413,990 | 6 |
| South Dakota | 59,072 | 58,770 | 302 |
| Tennessee | 744,703 | 744,676 | 27 |
| Texas | 1,807,844 | 1,807,017 | 827 |
| Utah | 100,425 | 100,419 | 6 |
| Vermont | 83,095 | 83,095 | 0 |
| Virginia | 432,415 | 432,320 | 95 |
| Washington | 506,543 | 506,532 | 11 |
| West Virginia | 138,475 | 138,468 | 7 |
| Wisconsin | 519,706 | 519,368 | 338 |
| Wyoming | 39,220 | 39,216 | 4 |
| United States | | | 12,393 |
| United States (across states) | N/A | 24,568,469 | N/A |

Table A.7 Medicaid Enrollees who Received Drug Services in Calendar Year 2006 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|---------------|
| Alabama | 531,227 | 530,982 | 245 |
| Alaska | 67,854 | 67,853 | 1 |
| Arizona | 729,327 | 729,299 | 28 |
| Arkansas | 457,535 | 457,408 | 127 |
| California | 5,188,379 | 5,188,363 | 16 |
| Colorado | 254,945 | 254,878 | 67 |
| Connecticut | 116,428 | 116,422 | 6 |
| Delaware | 112,897 | 112,894 | 3 |
| District of Columbia | 31,586 | 31,582 | 4 |
| Florida | 1,080,996 | 1,080,948 | 48 |
| Georgia | 1,038,665 | 1,038,663 | 2 |
| Hawaii | 152,102 | 152,080 | 22 |
| Idaho | 129,588 | 129,582 | 6 |
| Illinois | 1,467,608 | 1,463,976 | 3,632 |
| Indiana | 610,276 | 610,252 | 24 |
| Iowa | 278,239 | 278,067 | 172 |
| Kansas | 223,415 | 223,411 | 4 |
| Kentucky | 629,366 | 629,366 | 0 |
| Louisiana | 707,806 | 707,806 | 0 |
| Maine | 210,669 | 210,669 | 0 |
| Maryland | 463,974 | 463,969 | 5 |
| Massachusetts | 521,231 | 521,219 | 12 |
| Michigan | 589,121 | 589,103 | 18 |
| Minnesota | 493,560 | 493,559 | 1 |
| Mississippi | 428,193 | 427,733 | 460 |
| Missouri | 741,211 | 741,209 | 2 |
| Montana | 60,651 | 60,651 | 0 |
| Nebraska | 192,161 | 192,134 | 27 |
| Nevada | 81,851 | 81,850 | 1 |
| New Hampshire | 88,129 | 88,125 | 4 |
| New Jersey | 715,713 | 715,639 | 74 |
| New Mexico | 310,991 | 310,991 | 0 |
| New York | 3,053,643 | 3,041,074 | 12,569 |
| North Carolina | 1,034,092 | 1,034,091 | 1 |
| North Dakota | 41,858 | 41,858 | 0 |
| Ohio | 967,421 | 964,424 | 2,997 |
| Oklahoma | 431,938 | 431,487 | 451 |
| Oregon | 222,338 | 222,245 | 93 |
| Pennsylvania | 489,167 | 489,160 | 7 |
| Rhode Island | 154,845 | 154,844 | 1 |
| South Carolina | 519,461 | 519,440 | 21 |
| South Dakota | 71,137 | 70,598 | 539 |
| Tennessee | 847,233 | 847,176 | 57 |
| Texas | 2,625,505 | 2,624,001 | 1,504 |
| Utah | 184,247 | 184,234 | 13 |
| Vermont | 113,901 | 113,901 | 0 |
| Virginia | 538,699 | 538,569 | 130 |
| Washington | 739,279 | 739,249 | 30 |
| West Virginia | 269,610 | 269,594 | 16 |
| Wisconsin | 684,398 | 683,271 | 1,127 |
| Wyoming | 47,005 | 46,999 | 6 |
| United States | | | 24,573 |
| United States (across states) | N/A | 31,170,168 | N/A |

Table A.7 Medicaid Enrollees who Received Other Services in Calendar Year 2006 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|--------------|
| Alabama | 36,283 | 36,280 | 3 |
| Alaska | 7,611 | 7,611 | 0 |
| Arizona | 103,829 | 103,827 | 2 |
| Arkansas | 62,952 | 62,877 | 75 |
| California | 1,280,646 | 1,280,642 | 4 |
| Colorado | 29,309 | 29,305 | 4 |
| Connecticut | 30,306 | 30,295 | 11 |
| Delaware | 24,454 | 24,454 | 0 |
| District of Columbia | 20,851 | 20,844 | 7 |
| Florida | 573,225 | 573,213 | 12 |
| Georgia | 77,546 | 77,546 | 0 |
| Hawaii | 28,276 | 28,274 | 2 |
| Idaho | 26,395 | 26,394 | 1 |
| Illinois | 114,194 | 114,124 | 70 |
| Indiana | 187,358 | 187,353 | 5 |
| Iowa | 50,299 | 50,278 | 21 |
| Kansas | 53,864 | 53,863 | 1 |
| Kentucky | 243,598 | 243,598 | 0 |
| Louisiana | 429,126 | 429,126 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 61,005 | 61,005 | 0 |
| Massachusetts | 111,543 | 111,542 | 1 |
| Michigan | 42,697 | 42,696 | 1 |
| Minnesota | 122,586 | 122,585 | 1 |
| Mississippi | 101,826 | 101,799 | 27 |
| Missouri | 272,867 | 272,867 | 0 |
| Montana | 97,518 | 97,518 | 0 |
| Nebraska | 32,818 | 32,818 | 0 |
| Nevada | 14,394 | 14,394 | 0 |
| New Hampshire | 11,366 | 11,365 | 1 |
| New Jersey | 183,640 | 183,625 | 15 |
| New Mexico | 89,720 | 89,720 | 0 |
| New York | 946,331 | 944,276 | 2,055 |
| North Carolina | 241,445 | 241,445 | 0 |
| North Dakota | 8,599 | 8,595 | 4 |
| Ohio | 127,719 | 127,685 | 34 |
| Oklahoma | 61,679 | 61,658 | 21 |
| Oregon | 34,847 | 34,844 | 3 |
| Pennsylvania | 119,550 | 119,544 | 6 |
| Rhode Island | 43,832 | 43,832 | 0 |
| South Carolina | 10,325 | 10,325 | 0 |
| South Dakota | 6,823 | 6,821 | 2 |
| Tennessee | 17,120 | 17,120 | 0 |
| Texas | 551,510 | 551,424 | 86 |
| Utah | 11,655 | 11,654 | 1 |
| Vermont | 21,424 | 21,424 | 0 |
| Virginia | 56,758 | 56,752 | 6 |
| Washington | 161,415 | 161,408 | 7 |
| West Virginia | 48,940 | 48,935 | 5 |
| Wisconsin | 153,014 | 152,958 | 56 |
| Wyoming | 19,896 | 19,892 | 4 |
| United States | | | 2,554 |
| United States (across states) | N/A | 7,061,097 | N/A |

Table A.7 Medicaid Enrollees who Received Sterilization Services in Calendar Year 2006 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|------------|
| Alabama | 2,896 | 2,896 | 0 |
| Alaska | 386 | 386 | 0 |
| Arizona | 3,801 | 3,801 | 0 |
| Arkansas | 4,034 | 4,034 | 0 |
| California | 22,613 | 22,613 | 0 |
| Colorado | 1,948 | 1,948 | 0 |
| Connecticut | 278 | 278 | 0 |
| Delaware | 733 | 733 | 0 |
| District of Columbia | 50 | 50 | 0 |
| Florida | 7,258 | 7,258 | 0 |
| Georgia | 4,558 | 4,558 | 0 |
| Hawaii | 650 | 650 | 0 |
| Idaho | 1,095 | 1,095 | 0 |
| Illinois | 5,536 | 5,536 | 0 |
| Indiana | 1,796 | 1,796 | 0 |
| Iowa | 0 | 0 | 0 |
| Kansas | 1,158 | 1,158 | 0 |
| Kentucky | 4,881 | 4,881 | 0 |
| Louisiana | 6,233 | 6,233 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 1,196 | 1,196 | 0 |
| Massachusetts | 1,246 | 1,246 | 0 |
| Michigan | 2,806 | 2,806 | 0 |
| Minnesota | 1,841 | 1,841 | 0 |
| Mississippi | 5,546 | 5,546 | 0 |
| Missouri | 1,920 | 1,920 | 0 |
| Montana | 3 | 3 | 0 |
| Nebraska | 1,518 | 1,518 | 0 |
| Nevada | 4,486 | 4,486 | 0 |
| New Hampshire | 688 | 688 | 0 |
| New Jersey | 413 | 413 | 0 |
| New Mexico | 804 | 804 | 0 |
| New York | 3,162 | 3,162 | 0 |
| North Carolina | 8,149 | 8,149 | 0 |
| North Dakota | 286 | 286 | 0 |
| Ohio | 5,333 | 5,333 | 0 |
| Oklahoma | 5,971 | 5,971 | 0 |
| Oregon | 1,993 | 1,993 | 0 |
| Pennsylvania | 1,810 | 1,810 | 0 |
| Rhode Island | 482 | 482 | 0 |
| South Carolina | 5,116 | 5,116 | 0 |
| South Dakota | 0 | 0 | 0 |
| Tennessee | 10,255 | 10,255 | 0 |
| Texas | 22,921 | 22,918 | 3 |
| Utah | 947 | 947 | 0 |
| Vermont | 683 | 683 | 0 |
| Virginia | 4,687 | 4,687 | 0 |
| Washington | 1,119 | 1,119 | 0 |
| West Virginia | 0 | 0 | 0 |
| Wisconsin | 3,772 | 3,772 | 0 |
| Wyoming | 480 | 480 | 0 |
| United States | | | 3 |
| United States (across states) | N/A | 166,669 | N/A |

Table A.7 Medicaid Enrollees who Received Abortion Services in Calendar Year 2006 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|------------|
| Alabama | 1,421 | 1,421 | 0 |
| Alaska | 1 | 1 | 0 |
| Arizona | 4,182 | 4,182 | 0 |
| Arkansas | 1 | 1 | 0 |
| California | 0 | 0 | 0 |
| Colorado | 13 | 13 | 0 |
| Connecticut | 0 | 0 | 0 |
| Delaware | 61 | 61 | 0 |
| District of Columbia | 1 | 1 | 0 |
| Florida | 66 | 66 | 0 |
| Georgia | 131 | 131 | 0 |
| Hawaii | 1,538 | 1,538 | 0 |
| Idaho | 0 | 0 | 0 |
| Illinois | 328 | 328 | 0 |
| Indiana | 0 | 0 | 0 |
| Iowa | 0 | 0 | 0 |
| Kansas | 2 | 2 | 0 |
| Kentucky | 859 | 859 | 0 |
| Louisiana | 18 | 18 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 3,351 | 3,351 | 0 |
| Massachusetts | 0 | 0 | 0 |
| Michigan | 20 | 20 | 0 |
| Minnesota | 23 | 23 | 0 |
| Mississippi | 0 | 0 | 0 |
| Missouri | 30 | 30 | 0 |
| Montana | 1,265 | 1,265 | 0 |
| Nebraska | 0 | 0 | 0 |
| Nevada | 0 | 0 | 0 |
| New Hampshire | 2 | 2 | 0 |
| New Jersey | 0 | 0 | 0 |
| New Mexico | 11 | 11 | 0 |
| New York | 9 | 9 | 0 |
| North Carolina | 15 | 15 | 0 |
| North Dakota | 75 | 75 | 0 |
| Ohio | 14 | 14 | 0 |
| Oklahoma | 175 | 175 | 0 |
| Oregon | 3,236 | 3,236 | 0 |
| Pennsylvania | 0 | 0 | 0 |
| Rhode Island | 402 | 402 | 0 |
| South Carolina | 5 | 5 | 0 |
| South Dakota | 0 | 0 | 0 |
| Tennessee | 8,451 | 8,451 | 0 |
| Texas | 6,081 | 6,081 | 0 |
| Utah | 0 | 0 | 0 |
| Vermont | 42 | 42 | 0 |
| Virginia | 115 | 115 | 0 |
| Washington | 140 | 140 | 0 |
| West Virginia | 1 | 1 | 0 |
| Wisconsin | 0 | 0 | 0 |
| Wyoming | 1 | 1 | 0 |
| United States | | | 0 |
| United States (across states) | N/A | 31,464 | N/A |

Table A.7 Medicaid Enrollees who Received Transportation Services in Calendar Year 2006 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|--------------|
| Alabama | 46,790 | 46,782 | 8 |
| Alaska | 22,958 | 22,958 | 0 |
| Arizona | 154,541 | 154,540 | 1 |
| Arkansas | 551,352 | 551,061 | 291 |
| California | 291,028 | 291,024 | 4 |
| Colorado | 17,618 | 17,618 | 0 |
| Connecticut | 34,074 | 34,073 | 1 |
| Delaware | 15,745 | 15,745 | 0 |
| District of Columbia | 13,394 | 13,392 | 2 |
| Florida | 173,938 | 173,930 | 8 |
| Georgia | 76,896 | 76,896 | 0 |
| Hawaii | 14,218 | 14,218 | 0 |
| Idaho | 15,611 | 15,611 | 0 |
| Illinois | 160,212 | 160,076 | 136 |
| Indiana | 73,698 | 73,698 | 0 |
| Iowa | 16,891 | 16,891 | 0 |
| Kansas | 22,105 | 22,105 | 0 |
| Kentucky | 76,200 | 76,200 | 0 |
| Louisiana | 96,301 | 96,301 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 27,402 | 27,402 | 0 |
| Massachusetts | 92,805 | 92,804 | 1 |
| Michigan | 30,766 | 30,766 | 0 |
| Minnesota | 66,127 | 66,124 | 3 |
| Mississippi | 63,358 | 63,312 | 46 |
| Missouri | 80,506 | 80,506 | 0 |
| Montana | 5,211 | 5,211 | 0 |
| Nebraska | 22,950 | 22,950 | 0 |
| Nevada | 16,604 | 16,604 | 0 |
| New Hampshire | 7,287 | 7,287 | 0 |
| New Jersey | 90,358 | 90,307 | 51 |
| New Mexico | 30,122 | 30,122 | 0 |
| New York | 446,686 | 445,757 | 929 |
| North Carolina | 132,438 | 132,438 | 0 |
| North Dakota | 5,384 | 5,381 | 3 |
| Ohio | 157,435 | 157,387 | 48 |
| Oklahoma | 39,384 | 39,376 | 8 |
| Oregon | 51,890 | 51,884 | 6 |
| Pennsylvania | 29,171 | 29,170 | 1 |
| Rhode Island | 12,888 | 12,888 | 0 |
| South Carolina | 55,210 | 55,209 | 1 |
| South Dakota | 9,662 | 9,656 | 6 |
| Tennessee | 113,438 | 113,437 | 1 |
| Texas | 231,390 | 231,353 | 37 |
| Utah | 12,346 | 12,346 | 0 |
| Vermont | 15,718 | 15,717 | 1 |
| Virginia | 90,928 | 90,922 | 6 |
| Washington | 29,906 | 29,906 | 0 |
| West Virginia | 35,471 | 35,468 | 3 |
| Wisconsin | 70,214 | 70,202 | 12 |
| Wyoming | 3,010 | 3,010 | 0 |
| United States | | | 1,614 |
| United States (across states) | N/A | 3,864,848 | N/A |

Table A.7 Medicaid Enrollees who Received Personal Care Services in Calendar Year 2006 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|------------|
| Alabama | 0 | 0 | 0 |
| Alaska | 4,600 | 4,600 | 0 |
| Arizona | 8,656 | 8,656 | 0 |
| Arkansas | 14,816 | 14,814 | 2 |
| California | 392,778 | 392,770 | 8 |
| Colorado | 0 | 0 | 0 |
| Connecticut | 13,257 | 13,257 | 0 |
| Delaware | 0 | 0 | 0 |
| District of Columbia | 0 | 0 | 0 |
| Florida | 7,095 | 7,093 | 2 |
| Georgia | 0 | 0 | 0 |
| Hawaii | 0 | 0 | 0 |
| Idaho | 6,628 | 6,628 | 0 |
| Illinois | 22,261 | 22,257 | 4 |
| Indiana | 0 | 0 | 0 |
| Iowa | 0 | 0 | 0 |
| Kansas | 359 | 359 | 0 |
| Kentucky | 0 | 0 | 0 |
| Louisiana | 8,792 | 8,792 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 4,727 | 4,727 | 0 |
| Massachusetts | 10,279 | 10,279 | 0 |
| Michigan | 0 | 0 | 0 |
| Minnesota | 44,441 | 44,438 | 3 |
| Mississippi | 356 | 356 | 0 |
| Missouri | 45,497 | 45,497 | 0 |
| Montana | 3,104 | 3,104 | 0 |
| Nebraska | 2,017 | 2,016 | 1 |
| Nevada | 5,441 | 5,441 | 0 |
| New Hampshire | 171 | 171 | 0 |
| New Jersey | 27,562 | 27,553 | 9 |
| New Mexico | 11,263 | 11,263 | 0 |
| New York | 97,568 | 97,467 | 101 |
| North Carolina | 78,675 | 78,675 | 0 |
| North Dakota | 1,445 | 1,445 | 0 |
| Ohio | 0 | 0 | 0 |
| Oklahoma | 4,016 | 4,016 | 0 |
| Oregon | 7,967 | 7,967 | 0 |
| Pennsylvania | 1 | 1 | 0 |
| Rhode Island | 1,418 | 1,418 | 0 |
| South Carolina | 17,721 | 17,721 | 0 |
| South Dakota | 2,326 | 2,326 | 0 |
| Tennessee | 0 | 0 | 0 |
| Texas | 1,603 | 1,603 | 0 |
| Utah | 473 | 473 | 0 |
| Vermont | 2,007 | 2,007 | 0 |
| Virginia | 12,537 | 12,537 | 0 |
| Washington | 25,342 | 25,342 | 0 |
| West Virginia | 5,528 | 5,527 | 1 |
| Wisconsin | 13,920 | 13,920 | 0 |
| Wyoming | 0 | 0 | 0 |
| United States | | | 131 |
| United States (across states) | N/A | 898,768 | N/A |

Table A.7 Medicaid Enrollees who Received Targeted Case Management Services in Calendar Year 2006 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|--------------|
| Alabama | 30,536 | 30,499 | 37 |
| Alaska | 5,150 | 5,150 | 0 |
| Arizona | 0 | 0 | 0 |
| Arkansas | 16,670 | 16,663 | 7 |
| California | 202,281 | 202,280 | 1 |
| Colorado | 0 | 0 | 0 |
| Connecticut | 15,004 | 15,002 | 2 |
| Delaware | 0 | 0 | 0 |
| District of Columbia | 0 | 0 | 0 |
| Florida | 73,607 | 73,605 | 2 |
| Georgia | 213,010 | 213,008 | 2 |
| Hawaii | 1,992 | 1,992 | 0 |
| Idaho | 8,476 | 8,476 | 0 |
| Illinois | 748,829 | 747,785 | 1,044 |
| Indiana | 12,056 | 12,056 | 0 |
| Iowa | 11,379 | 11,372 | 7 |
| Kansas | 18,926 | 18,924 | 2 |
| Kentucky | 16,115 | 16,115 | 0 |
| Louisiana | 11,878 | 11,878 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 10,597 | 10,597 | 0 |
| Massachusetts | 33,346 | 33,346 | 0 |
| Michigan | 52,281 | 52,281 | 0 |
| Minnesota | 104,404 | 104,399 | 5 |
| Mississippi | 36,117 | 36,073 | 44 |
| Missouri | 38,211 | 38,210 | 1 |
| Montana | 10,557 | 10,557 | 0 |
| Nebraska | 0 | 0 | 0 |
| Nevada | 10,084 | 10,084 | 0 |
| New Hampshire | 0 | 0 | 0 |
| New Jersey | 4,105 | 4,104 | 1 |
| New Mexico | 21,938 | 21,938 | 0 |
| New York | 35,252 | 35,155 | 97 |
| North Carolina | 141,390 | 141,390 | 0 |
| North Dakota | 3,876 | 3,875 | 1 |
| Ohio | 1 | 1 | 0 |
| Oklahoma | 40,505 | 40,449 | 56 |
| Oregon | 45,430 | 45,393 | 37 |
| Pennsylvania | 72,592 | 72,590 | 2 |
| Rhode Island | 8,049 | 8,049 | 0 |
| South Carolina | 42,035 | 42,032 | 3 |
| South Dakota | 0 | 0 | 0 |
| Tennessee | 0 | 0 | 0 |
| Texas | 201,227 | 201,079 | 148 |
| Utah | 150 | 150 | 0 |
| Vermont | 6,354 | 6,354 | 0 |
| Virginia | 5,376 | 5,376 | 0 |
| Washington | 2,591 | 2,591 | 0 |
| West Virginia | 5,686 | 5,686 | 0 |
| Wisconsin | 36,920 | 36,889 | 31 |
| Wyoming | 2,307 | 2,307 | 0 |
| United States | | | 1,530 |
| United States (across states) | N/A | 2,312,953 | N/A |

Table A.7 Medicaid Enrollees who Received Rehabilitation Services in Calendar Year 2006 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|------------|
| Alabama | 4,543 | 4,540 | 3 |
| Alaska | 162 | 162 | 0 |
| Arizona | 22,919 | 22,918 | 1 |
| Arkansas | 59 | 59 | 0 |
| California | 115,693 | 115,693 | 0 |
| Colorado | 0 | 0 | 0 |
| Connecticut | 6,665 | 6,664 | 1 |
| Delaware | 580 | 580 | 0 |
| District of Columbia | 144 | 144 | 0 |
| Florida | 0 | 0 | 0 |
| Georgia | 0 | 0 | 0 |
| Hawaii | 170 | 170 | 0 |
| Idaho | 4,083 | 4,083 | 0 |
| Illinois | 13,344 | 13,338 | 6 |
| Indiana | 63,433 | 63,428 | 5 |
| Iowa | 2,482 | 2,477 | 5 |
| Kansas | 4,054 | 4,054 | 0 |
| Kentucky | 120 | 120 | 0 |
| Louisiana | 4,875 | 4,875 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 3,415 | 3,415 | 0 |
| Massachusetts | 69,987 | 69,987 | 0 |
| Michigan | 24 | 24 | 0 |
| Minnesota | 10,677 | 10,676 | 1 |
| Mississippi | 125 | 125 | 0 |
| Missouri | 11,673 | 11,673 | 0 |
| Montana | 377 | 377 | 0 |
| Nebraska | 1 | 1 | 0 |
| Nevada | 7,108 | 7,108 | 0 |
| New Hampshire | 2,285 | 2,285 | 0 |
| New Jersey | 27,887 | 27,887 | 0 |
| New Mexico | 841 | 841 | 0 |
| New York | 119,090 | 118,799 | 291 |
| North Carolina | 0 | 0 | 0 |
| North Dakota | 9,453 | 9,453 | 0 |
| Ohio | 43,254 | 43,229 | 25 |
| Oklahoma | 0 | 0 | 0 |
| Oregon | 28,468 | 28,461 | 7 |
| Pennsylvania | 9,371 | 9,370 | 1 |
| Rhode Island | 6,711 | 6,711 | 0 |
| South Carolina | 7,095 | 7,093 | 2 |
| South Dakota | 767 | 765 | 2 |
| Tennessee | 8,165 | 8,165 | 0 |
| Texas | 44,431 | 44,423 | 8 |
| Utah | 478 | 478 | 0 |
| Vermont | 6 | 6 | 0 |
| Virginia | 3,694 | 3,694 | 0 |
| Washington | 4,986 | 4,986 | 0 |
| West Virginia | 20,966 | 20,965 | 1 |
| Wisconsin | 7,791 | 7,782 | 9 |
| Wyoming | 3,480 | 3,480 | 0 |
| United States | | | 368 |
| United States (across states) | N/A | 685,542 | N/A |

Table A.7 Medicaid Enrollees who Received PT/OT/Hearing/Speech Services in Calendar Year 2006 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|------------|
| Alabama | 4,925 | 4,922 | 3 |
| Alaska | 5,973 | 5,973 | 0 |
| Arizona | 9,430 | 9,430 | 0 |
| Arkansas | 19,775 | 19,772 | 3 |
| California | 50,672 | 50,672 | 0 |
| Colorado | 1,896 | 1,891 | 5 |
| Connecticut | 3,043 | 3,043 | 0 |
| Delaware | 7,496 | 7,496 | 0 |
| District of Columbia | 0 | 0 | 0 |
| Florida | 72,857 | 72,854 | 3 |
| Georgia | 1,651 | 1,651 | 0 |
| Hawaii | 2,957 | 2,957 | 0 |
| Idaho | 9,625 | 9,625 | 0 |
| Illinois | 101,145 | 100,911 | 234 |
| Indiana | 23,720 | 23,720 | 0 |
| Iowa | 4,985 | 4,985 | 0 |
| Kansas | 1,927 | 1,927 | 0 |
| Kentucky | 3,524 | 3,524 | 0 |
| Louisiana | 68,729 | 68,729 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 59,698 | 59,698 | 0 |
| Massachusetts | 8,072 | 8,072 | 0 |
| Michigan | 82 | 82 | 0 |
| Minnesota | 27,382 | 27,381 | 1 |
| Mississippi | 5,488 | 5,481 | 7 |
| Missouri | 3,994 | 3,994 | 0 |
| Montana | 9 | 9 | 0 |
| Nebraska | 14,058 | 14,056 | 2 |
| Nevada | 3,067 | 3,067 | 0 |
| New Hampshire | 1,849 | 1,849 | 0 |
| New Jersey | 0 | 0 | 0 |
| New Mexico | 23,762 | 23,762 | 0 |
| New York | 33,205 | 33,201 | 4 |
| North Carolina | 25,975 | 25,975 | 0 |
| North Dakota | 2,040 | 2,040 | 0 |
| Ohio | 16,307 | 16,306 | 1 |
| Oklahoma | 1,897 | 1,897 | 0 |
| Oregon | 6,612 | 6,606 | 6 |
| Pennsylvania | 9,362 | 9,362 | 0 |
| Rhode Island | 390 | 390 | 0 |
| South Carolina | 7,346 | 7,346 | 0 |
| South Dakota | 5,135 | 5,117 | 18 |
| Tennessee | 14,420 | 14,420 | 0 |
| Texas | 12,120 | 12,120 | 0 |
| Utah | 5,699 | 5,699 | 0 |
| Vermont | 4,192 | 4,192 | 0 |
| Virginia | 4,733 | 4,733 | 0 |
| Washington | 16,361 | 16,360 | 1 |
| West Virginia | 15,496 | 15,496 | 0 |
| Wisconsin | 15,745 | 15,736 | 9 |
| Wyoming | 499 | 499 | 0 |
| United States | | | 297 |
| United States (across states) | N/A | 727,875 | N/A |

Table A.7 Medicaid Enrollees who Received Hospice Services in Calendar Year 2006 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|------------|
| Alabama | 3,850 | 3,850 | 0 |
| Alaska | 29 | 29 | 0 |
| Arizona | 0 | 0 | 0 |
| Arkansas | 1,893 | 1,893 | 0 |
| California | 14,307 | 14,307 | 0 |
| Colorado | 2,701 | 2,701 | 0 |
| Connecticut | 35 | 35 | 0 |
| Delaware | 495 | 495 | 0 |
| District of Columbia | 214 | 214 | 0 |
| Florida | 17,449 | 17,449 | 0 |
| Georgia | 5,449 | 5,449 | 0 |
| Hawaii | 120 | 120 | 0 |
| Idaho | 322 | 322 | 0 |
| Illinois | 7,528 | 7,528 | 0 |
| Indiana | 4,935 | 4,935 | 0 |
| Iowa | 0 | 0 | 0 |
| Kansas | 2,707 | 2,707 | 0 |
| Kentucky | 2,796 | 2,796 | 0 |
| Louisiana | 3,932 | 3,932 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 2,142 | 2,142 | 0 |
| Massachusetts | 5,016 | 5,016 | 0 |
| Michigan | 875 | 875 | 0 |
| Minnesota | 2,771 | 2,771 | 0 |
| Mississippi | 2,211 | 2,211 | 0 |
| Missouri | 1,191 | 1,191 | 0 |
| Montana | 266 | 266 | 0 |
| Nebraska | 1,189 | 1,189 | 0 |
| Nevada | 741 | 741 | 0 |
| New Hampshire | 0 | 0 | 0 |
| New Jersey | 3,977 | 3,977 | 0 |
| New Mexico | 1,052 | 1,052 | 0 |
| New York | 7,176 | 7,175 | 1 |
| North Carolina | 5,701 | 5,701 | 0 |
| North Dakota | 377 | 377 | 0 |
| Ohio | 2,128 | 2,128 | 0 |
| Oklahoma | 79 | 79 | 0 |
| Oregon | 565 | 565 | 0 |
| Pennsylvania | 960 | 960 | 0 |
| Rhode Island | 1,014 | 1,014 | 0 |
| South Carolina | 2,647 | 2,647 | 0 |
| South Dakota | 304 | 304 | 0 |
| Tennessee | 6,700 | 6,700 | 0 |
| Texas | 16,697 | 16,696 | 1 |
| Utah | 997 | 997 | 0 |
| Vermont | 101 | 101 | 0 |
| Virginia | 2,418 | 2,418 | 0 |
| Washington | 2,395 | 2,394 | 1 |
| West Virginia | 780 | 780 | 0 |
| Wisconsin | 3,010 | 3,010 | 0 |
| Wyoming | 83 | 83 | 0 |
| United States | | | 3 |
| United States (across states) | N/A | 143,193 | N/A |

Table A.7 Medicaid Enrollees who Received Nurse Midwife Services in Calendar Year 2006 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|------------|
| Alabama | 3,930 | 3,930 | 0 |
| Alaska | 2,208 | 2,208 | 0 |
| Arizona | 7,084 | 7,084 | 0 |
| Arkansas | 896 | 896 | 0 |
| California | 11,915 | 11,915 | 0 |
| Colorado | 588 | 588 | 0 |
| Connecticut | 1,360 | 1,360 | 0 |
| Delaware | 55 | 55 | 0 |
| District of Columbia | 0 | 0 | 0 |
| Florida | 1,207 | 1,207 | 0 |
| Georgia | 16,494 | 16,494 | 0 |
| Hawaii | 0 | 0 | 0 |
| Idaho | 0 | 0 | 0 |
| Illinois | 1,433 | 1,430 | 3 |
| Indiana | 784 | 784 | 0 |
| Iowa | 1,689 | 1,689 | 0 |
| Kansas | 704 | 704 | 0 |
| Kentucky | 0 | 0 | 0 |
| Louisiana | 29,923 | 29,923 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 7,699 | 7,699 | 0 |
| Massachusetts | 2,405 | 2,405 | 0 |
| Michigan | 3,676 | 3,676 | 0 |
| Minnesota | 8,897 | 8,897 | 0 |
| Mississippi | 0 | 0 | 0 |
| Missouri | 1,273 | 1,273 | 0 |
| Montana | 0 | 0 | 0 |
| Nebraska | 0 | 0 | 0 |
| Nevada | 308 | 308 | 0 |
| New Hampshire | 0 | 0 | 0 |
| New Jersey | 744 | 744 | 0 |
| New Mexico | 10,454 | 10,454 | 0 |
| New York | 6,636 | 6,633 | 3 |
| North Carolina | 1,533 | 1,533 | 0 |
| North Dakota | 522 | 522 | 0 |
| Ohio | 0 | 0 | 0 |
| Oklahoma | 110 | 110 | 0 |
| Oregon | 2,466 | 2,466 | 0 |
| Pennsylvania | 2,496 | 2,496 | 0 |
| Rhode Island | 0 | 0 | 0 |
| South Carolina | 7,095 | 7,095 | 0 |
| South Dakota | 986 | 984 | 2 |
| Tennessee | 4,397 | 4,397 | 0 |
| Texas | 9,856 | 9,851 | 5 |
| Utah | 0 | 0 | 0 |
| Vermont | 0 | 0 | 0 |
| Virginia | 1,768 | 1,768 | 0 |
| Washington | 1,911 | 1,911 | 0 |
| West Virginia | 1,842 | 1,842 | 0 |
| Wisconsin | 650 | 650 | 0 |
| Wyoming | 0 | 0 | 0 |
| United States | | | 13 |
| United States (across states) | N/A | 154,655 | N/A |

Table A.7 Medicaid Enrollees who Received Nurse Practitioner Services in Calendar Year 2006 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|------------|
| Alabama | 0 | 0 | 0 |
| Alaska | 12,123 | 12,123 | 0 |
| Arizona | 112,270 | 112,270 | 0 |
| Arkansas | 5,433 | 5,429 | 4 |
| California | 56,069 | 56,069 | 0 |
| Colorado | 623 | 623 | 0 |
| Connecticut | 13,634 | 13,634 | 0 |
| Delaware | 66 | 66 | 0 |
| District of Columbia | 789 | 789 | 0 |
| Florida | 164,299 | 164,299 | 0 |
| Georgia | 143,039 | 143,039 | 0 |
| Hawaii | 10,143 | 10,143 | 0 |
| Idaho | 26,638 | 26,638 | 0 |
| Illinois | 38,292 | 38,277 | 15 |
| Indiana | 4,440 | 4,440 | 0 |
| Iowa | 28,288 | 28,282 | 6 |
| Kansas | 24,051 | 24,051 | 0 |
| Kentucky | 94,261 | 94,261 | 0 |
| Louisiana | 97,046 | 97,046 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 37,156 | 37,156 | 0 |
| Massachusetts | 29,501 | 29,501 | 0 |
| Michigan | 22,001 | 22,001 | 0 |
| Minnesota | 113,919 | 113,916 | 3 |
| Mississippi | 127,567 | 127,518 | 49 |
| Missouri | 4,001 | 4,001 | 0 |
| Montana | 27,684 | 27,684 | 0 |
| Nebraska | 9,311 | 9,311 | 0 |
| Nevada | 17,067 | 17,067 | 0 |
| New Hampshire | 1,025 | 1,025 | 0 |
| New Jersey | 14,609 | 14,609 | 0 |
| New Mexico | 49,949 | 49,949 | 0 |
| New York | 113,286 | 113,243 | 43 |
| North Carolina | 1 | 1 | 0 |
| North Dakota | 6,668 | 6,667 | 1 |
| Ohio | 150,360 | 150,237 | 123 |
| Oklahoma | 13,498 | 13,495 | 3 |
| Oregon | 60,360 | 60,355 | 5 |
| Pennsylvania | 498 | 498 | 0 |
| Rhode Island | 11 | 11 | 0 |
| South Carolina | 20,285 | 20,285 | 0 |
| South Dakota | 0 | 0 | 0 |
| Tennessee | 149,554 | 149,552 | 2 |
| Texas | 129,800 | 129,773 | 27 |
| Utah | 13,428 | 13,428 | 0 |
| Vermont | 2,598 | 2,598 | 0 |
| Virginia | 20,523 | 20,522 | 1 |
| Washington | 11,983 | 11,983 | 0 |
| West Virginia | 28,982 | 28,981 | 1 |
| Wisconsin | 37,022 | 37,001 | 21 |
| Wyoming | 10,165 | 10,165 | 0 |
| United States | | | 304 |
| United States (across states) | N/A | 2,015,380 | N/A |

Table A.7 Medicaid Enrollees who Received Private Nursing Services in Calendar Year 2006 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|------------|
| Alabama | 46 | 46 | 0 |
| Alaska | 74 | 74 | 0 |
| Arizona | 6 | 6 | 0 |
| Arkansas | 129 | 129 | 0 |
| California | 1,811 | 1,811 | 0 |
| Colorado | 184 | 183 | 1 |
| Connecticut | 0 | 0 | 0 |
| Delaware | 2,789 | 2,789 | 0 |
| District of Columbia | 0 | 0 | 0 |
| Florida | 0 | 0 | 0 |
| Georgia | 694 | 694 | 0 |
| Hawaii | 797 | 797 | 0 |
| Idaho | 1,584 | 1,584 | 0 |
| Illinois | 719 | 715 | 4 |
| Indiana | 0 | 0 | 0 |
| Iowa | 0 | 0 | 0 |
| Kansas | 0 | 0 | 0 |
| Kentucky | 0 | 0 | 0 |
| Louisiana | 0 | 0 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 736 | 736 | 0 |
| Massachusetts | 0 | 0 | 0 |
| Michigan | 0 | 0 | 0 |
| Minnesota | 2,123 | 2,123 | 0 |
| Mississippi | 1 | 1 | 0 |
| Missouri | 51 | 51 | 0 |
| Montana | 0 | 0 | 0 |
| Nebraska | 176 | 176 | 0 |
| Nevada | 0 | 0 | 0 |
| New Hampshire | 129 | 129 | 0 |
| New Jersey | 426 | 426 | 0 |
| New Mexico | 5 | 5 | 0 |
| New York | 9,168 | 9,157 | 11 |
| North Carolina | 0 | 0 | 0 |
| North Dakota | 0 | 0 | 0 |
| Ohio | 15,304 | 15,261 | 43 |
| Oklahoma | 0 | 0 | 0 |
| Oregon | 0 | 0 | 0 |
| Pennsylvania | 241 | 241 | 0 |
| Rhode Island | 0 | 0 | 0 |
| South Carolina | 22 | 22 | 0 |
| South Dakota | 3 | 3 | 0 |
| Tennessee | 0 | 0 | 0 |
| Texas | 164 | 164 | 0 |
| Utah | 18 | 18 | 0 |
| Vermont | 0 | 0 | 0 |
| Virginia | 510 | 509 | 1 |
| Washington | 338 | 338 | 0 |
| West Virginia | 615 | 615 | 0 |
| Wisconsin | 519 | 518 | 1 |
| Wyoming | 0 | 0 | 0 |
| United States | | | 61 |
| United States (across states) | N/A | 38,752 | N/A |

Table A.7 Medicaid Enrollees who Received Religious Non-Medical Services in Calendar Year 2006 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|------------|
| Alabama | 0 | 0 | 0 |
| Alaska | 0 | 0 | 0 |
| Arizona | 0 | 0 | 0 |
| Arkansas | 0 | 0 | 0 |
| California | 0 | 0 | 0 |
| Colorado | 0 | 0 | 0 |
| Connecticut | 0 | 0 | 0 |
| Delaware | 0 | 0 | 0 |
| District of Columbia | 0 | 0 | 0 |
| Florida | 0 | 0 | 0 |
| Georgia | 0 | 0 | 0 |
| Hawaii | 0 | 0 | 0 |
| Idaho | 0 | 0 | 0 |
| Illinois | 0 | 0 | 0 |
| Indiana | 0 | 0 | 0 |
| Iowa | 0 | 0 | 0 |
| Kansas | 0 | 0 | 0 |
| Kentucky | 0 | 0 | 0 |
| Louisiana | 0 | 0 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 0 | 0 | 0 |
| Massachusetts | 0 | 0 | 0 |
| Michigan | 0 | 0 | 0 |
| Minnesota | 0 | 0 | 0 |
| Mississippi | 0 | 0 | 0 |
| Missouri | 0 | 0 | 0 |
| Montana | 0 | 0 | 0 |
| Nebraska | 0 | 0 | 0 |
| Nevada | 0 | 0 | 0 |
| New Hampshire | 0 | 0 | 0 |
| New Jersey | 0 | 0 | 0 |
| New Mexico | 0 | 0 | 0 |
| New York | 0 | 0 | 0 |
| North Carolina | 0 | 0 | 0 |
| North Dakota | 0 | 0 | 0 |
| Ohio | 0 | 0 | 0 |
| Oklahoma | 0 | 0 | 0 |
| Oregon | 0 | 0 | 0 |
| Pennsylvania | 0 | 0 | 0 |
| Rhode Island | 0 | 0 | 0 |
| South Carolina | 0 | 0 | 0 |
| South Dakota | 0 | 0 | 0 |
| Tennessee | 0 | 0 | 0 |
| Texas | 0 | 0 | 0 |
| Utah | 0 | 0 | 0 |
| Vermont | 0 | 0 | 0 |
| Virginia | 0 | 0 | 0 |
| Washington | 0 | 0 | 0 |
| West Virginia | 0 | 0 | 0 |
| Wisconsin | 0 | 0 | 0 |
| Wyoming | 0 | 0 | 0 |
| United States | | | 0 |
| United States (across states) | N/A | 0 | N/A |

Table A.7 Medicaid Enrollees who Received Durable Medical Equipment Services in Calendar Year 2006 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|--------------|
| Alabama | 146,099 | 146,085 | 14 |
| Alaska | 29,979 | 29,979 | 0 |
| Arizona | 253,312 | 253,308 | 4 |
| Arkansas | 150,296 | 150,270 | 26 |
| California | 2,956,977 | 2,956,969 | 8 |
| Colorado | 118,787 | 118,775 | 12 |
| Connecticut | 74,584 | 74,581 | 3 |
| Delaware | 30,782 | 30,782 | 0 |
| District of Columbia | 19,619 | 19,615 | 4 |
| Florida | 348,389 | 348,383 | 6 |
| Georgia | 398,791 | 398,790 | 1 |
| Hawaii | 38,088 | 38,087 | 1 |
| Idaho | 42,551 | 42,551 | 0 |
| Illinois | 405,091 | 404,823 | 268 |
| Indiana | 286,208 | 286,205 | 3 |
| Iowa | 152,197 | 152,173 | 24 |
| Kansas | 62,235 | 62,235 | 0 |
| Kentucky | 203,065 | 203,065 | 0 |
| Louisiana | 284,837 | 284,837 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 151,885 | 151,885 | 0 |
| Massachusetts | 167,390 | 167,388 | 2 |
| Michigan | 169,199 | 169,197 | 2 |
| Minnesota | 198,542 | 198,537 | 5 |
| Mississippi | 213,264 | 213,184 | 80 |
| Missouri | 217,553 | 217,553 | 0 |
| Montana | 29,716 | 29,716 | 0 |
| Nebraska | 95,314 | 95,312 | 2 |
| Nevada | 33,228 | 33,228 | 0 |
| New Hampshire | 34,955 | 34,955 | 0 |
| New Jersey | 228,185 | 228,169 | 16 |
| New Mexico | 122,818 | 122,818 | 0 |
| New York | 613,928 | 613,456 | 472 |
| North Carolina | 461,172 | 461,172 | 0 |
| North Dakota | 20,019 | 20,014 | 5 |
| Ohio | 366,209 | 365,899 | 310 |
| Oklahoma | 192,797 | 192,732 | 65 |
| Oregon | 120,757 | 120,745 | 12 |
| Pennsylvania | 94,338 | 94,336 | 2 |
| Rhode Island | 31,724 | 31,724 | 0 |
| South Carolina | 182,637 | 182,634 | 3 |
| South Dakota | 30,611 | 30,535 | 76 |
| Tennessee | 191,815 | 191,813 | 2 |
| Texas | 879,246 | 879,103 | 143 |
| Utah | 39,126 | 39,126 | 0 |
| Vermont | 22,190 | 22,190 | 0 |
| Virginia | 81,092 | 81,082 | 10 |
| Washington | 271,598 | 271,596 | 2 |
| West Virginia | 50,664 | 50,659 | 5 |
| Wisconsin | 272,916 | 272,821 | 95 |
| Wyoming | 15,965 | 15,963 | 2 |
| United States | | | 1,685 |
| United States (across states) | N/A | 11,432,740 | N/A |

Table A.7 Medicaid Enrollees who Received Residential Care Services in Calendar Year 2006 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|------------|
| Alabama | 2,964 | 2,964 | 0 |
| Alaska | 851 | 851 | 0 |
| Arizona | 5,656 | 5,656 | 0 |
| Arkansas | 0 | 0 | 0 |
| California | 67,362 | 67,362 | 0 |
| Colorado | 4,561 | 4,559 | 2 |
| Connecticut | 6,593 | 6,592 | 1 |
| Delaware | 357 | 357 | 0 |
| District of Columbia | 0 | 0 | 0 |
| Florida | 9,033 | 9,033 | 0 |
| Georgia | 2,319 | 2,319 | 0 |
| Hawaii | 858 | 858 | 0 |
| Idaho | 4,946 | 4,946 | 0 |
| Illinois | 8,989 | 8,980 | 9 |
| Indiana | 5,769 | 5,769 | 0 |
| Iowa | 12,151 | 12,147 | 4 |
| Kansas | 4,384 | 4,384 | 0 |
| Kentucky | 2,437 | 2,437 | 0 |
| Louisiana | 0 | 0 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 353,607 | 353,604 | 3 |
| Massachusetts | 12,884 | 12,884 | 0 |
| Michigan | 5,721 | 5,721 | 0 |
| Minnesota | 11,189 | 11,187 | 2 |
| Mississippi | 90 | 90 | 0 |
| Missouri | 11,197 | 11,197 | 0 |
| Montana | 99 | 99 | 0 |
| Nebraska | 3,264 | 3,263 | 1 |
| Nevada | 1,218 | 1,218 | 0 |
| New Hampshire | 528 | 528 | 0 |
| New Jersey | 8,693 | 8,692 | 1 |
| New Mexico | 2,560 | 2,560 | 0 |
| New York | 45,712 | 45,655 | 57 |
| North Carolina | 21 | 21 | 0 |
| North Dakota | 675 | 675 | 0 |
| Ohio | 11,418 | 11,417 | 1 |
| Oklahoma | 4,294 | 4,292 | 2 |
| Oregon | 9,227 | 9,227 | 0 |
| Pennsylvania | 758 | 758 | 0 |
| Rhode Island | 2,207 | 2,207 | 0 |
| South Carolina | 362 | 362 | 0 |
| South Dakota | 1,290 | 1,278 | 12 |
| Tennessee | 4,560 | 4,560 | 0 |
| Texas | 2,438 | 2,437 | 1 |
| Utah | 1,216 | 1,216 | 0 |
| Vermont | 67 | 67 | 0 |
| Virginia | 0 | 0 | 0 |
| Washington | 37,029 | 37,029 | 0 |
| West Virginia | 3,599 | 3,599 | 0 |
| Wisconsin | 10,871 | 10,871 | 0 |
| Wyoming | 1,084 | 1,084 | 0 |
| United States | | | 96 |
| United States (across states) | N/A | 677,915 | N/A |

Table A.7 Medicaid Enrollees who Received Psychiatric Services in Calendar Year 2006 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|--------------|
| Alabama | 95,464 | 95,417 | 47 |
| Alaska | 17,237 | 17,237 | 0 |
| Arizona | 193,340 | 193,333 | 7 |
| Arkansas | 94,991 | 94,902 | 89 |
| California | 918,062 | 918,062 | 0 |
| Colorado | 34,897 | 34,894 | 3 |
| Connecticut | 59,504 | 59,455 | 49 |
| Delaware | 26,026 | 26,026 | 0 |
| District of Columbia | 16,613 | 16,613 | 0 |
| Florida | 202,631 | 202,628 | 3 |
| Georgia | 171,509 | 171,509 | 0 |
| Hawaii | 31,990 | 31,988 | 2 |
| Idaho | 31,560 | 31,557 | 3 |
| Illinois | 288,389 | 287,943 | 446 |
| Indiana | 143,838 | 143,827 | 11 |
| Iowa | 92,093 | 91,995 | 98 |
| Kansas | 63,845 | 63,843 | 2 |
| Kentucky | 152,918 | 152,918 | 0 |
| Louisiana | 63,596 | 63,596 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 276,352 | 276,351 | 1 |
| Massachusetts | 142,944 | 142,944 | 0 |
| Michigan | 64,942 | 64,939 | 3 |
| Minnesota | 143,896 | 143,896 | 0 |
| Mississippi | 81,831 | 81,756 | 75 |
| Missouri | 126,368 | 126,367 | 1 |
| Montana | 17,480 | 17,480 | 0 |
| Nebraska | 49,620 | 49,604 | 16 |
| Nevada | 17,880 | 17,880 | 0 |
| New Hampshire | 29,473 | 29,470 | 3 |
| New Jersey | 125,137 | 125,121 | 16 |
| New Mexico | 60,861 | 60,861 | 0 |
| New York | 794,701 | 792,071 | 2,630 |
| North Carolina | 211,895 | 211,895 | 0 |
| North Dakota | 12,594 | 12,586 | 8 |
| Ohio | 315,004 | 313,104 | 1,900 |
| Oklahoma | 83,490 | 83,427 | 63 |
| Oregon | 80,682 | 80,656 | 26 |
| Pennsylvania | 103,734 | 103,733 | 1 |
| Rhode Island | 42,870 | 42,870 | 0 |
| South Carolina | 105,548 | 105,546 | 2 |
| South Dakota | 15,686 | 15,387 | 299 |
| Tennessee | 311,838 | 311,810 | 28 |
| Texas | 280,762 | 280,604 | 158 |
| Utah | 17,164 | 17,158 | 6 |
| Vermont | 36,534 | 36,534 | 0 |
| Virginia | 103,899 | 103,872 | 27 |
| Washington | 105,019 | 105,019 | 0 |
| West Virginia | 77,341 | 77,340 | 1 |
| Wisconsin | 110,205 | 110,189 | 16 |
| Wyoming | 10,149 | 10,149 | 0 |
| United States | | | 6,040 |
| United States (across states) | N/A | 6,530,300 | N/A |

Table A.7 Medicaid Enrollees who Received Adult Day Care Services in Calendar Year 2006 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|------------|
| Alabama | 248 | 248 | 0 |
| Alaska | 443 | 443 | 0 |
| Arizona | 764 | 764 | 0 |
| Arkansas | 506 | 505 | 1 |
| California | 80,290 | 80,287 | 3 |
| Colorado | 1,344 | 1,344 | 0 |
| Connecticut | 1,875 | 1,875 | 0 |
| Delaware | 220 | 220 | 0 |
| District of Columbia | 0 | 0 | 0 |
| Florida | 13,537 | 13,537 | 0 |
| Georgia | 3,114 | 3,114 | 0 |
| Hawaii | 1,535 | 1,535 | 0 |
| Idaho | 529 | 529 | 0 |
| Illinois | 1,943 | 1,942 | 1 |
| Indiana | 250 | 250 | 0 |
| Iowa | 4,079 | 4,079 | 0 |
| Kansas | 85 | 85 | 0 |
| Kentucky | 3,380 | 3,380 | 0 |
| Louisiana | 0 | 0 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 365,328 | 365,326 | 2 |
| Massachusetts | 6,913 | 6,913 | 0 |
| Michigan | 384 | 384 | 0 |
| Minnesota | 12,440 | 12,439 | 1 |
| Mississippi | 798 | 798 | 0 |
| Missouri | 1,448 | 1,448 | 0 |
| Montana | 265 | 265 | 0 |
| Nebraska | 3,212 | 3,212 | 0 |
| Nevada | 342 | 342 | 0 |
| New Hampshire | 460 | 460 | 0 |
| New Jersey | 14,399 | 14,395 | 4 |
| New Mexico | 21 | 21 | 0 |
| New York | 61,656 | 61,531 | 125 |
| North Carolina | 493 | 493 | 0 |
| North Dakota | 1,052 | 1,052 | 0 |
| Ohio | 14,659 | 14,659 | 0 |
| Oklahoma | 603 | 603 | 0 |
| Oregon | 139 | 139 | 0 |
| Pennsylvania | 2,120 | 2,120 | 0 |
| Rhode Island | 3,987 | 3,987 | 0 |
| South Carolina | 9,120 | 9,120 | 0 |
| South Dakota | 3 | 3 | 0 |
| Tennessee | 43 | 43 | 0 |
| Texas | 24,050 | 24,050 | 0 |
| Utah | 54 | 54 | 0 |
| Vermont | 0 | 0 | 0 |
| Virginia | 631 | 631 | 0 |
| Washington | 3,345 | 3,345 | 0 |
| West Virginia | 0 | 0 | 0 |
| Wisconsin | 3,335 | 3,335 | 0 |
| Wyoming | 48 | 48 | 0 |
| United States | | | 137 |
| United States (across states) | N/A | 636,296 | N/A |

Table A.7 Medicaid Enrollees who Received Unknown Services in Calendar Year 2006 Before and After Unduplication

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Duplicates |
|-------------------------------|-------------------------------|--------------------------------|------------|
| Alabama | 0 | 0 | 0 |
| Alaska | 0 | 0 | 0 |
| Arizona | 1 | 1 | 0 |
| Arkansas | 2,883 | 2,881 | 2 |
| California | 14,478 | 14,478 | 0 |
| Colorado | 969 | 969 | 0 |
| Connecticut | 3,332 | 3,332 | 0 |
| Delaware | 53,771 | 53,770 | 1 |
| District of Columbia | 15 | 15 | 0 |
| Florida | 892 | 892 | 0 |
| Georgia | 38,947 | 38,947 | 0 |
| Hawaii | 0 | 0 | 0 |
| Idaho | 456 | 456 | 0 |
| Illinois | 0 | 0 | 0 |
| Indiana | 4 | 4 | 0 |
| Iowa | 6,452 | 6,452 | 0 |
| Kansas | 1,504 | 1,504 | 0 |
| Kentucky | 3,114 | 3,114 | 0 |
| Louisiana | 0 | 0 | 0 |
| Maine | 0 | 0 | 0 |
| Maryland | 4,917 | 4,917 | 0 |
| Massachusetts | 2,751 | 2,751 | 0 |
| Michigan | 0 | 0 | 0 |
| Minnesota | 0 | 0 | 0 |
| Mississippi | 28 | 28 | 0 |
| Missouri | 188 | 188 | 0 |
| Montana | 203 | 203 | 0 |
| Nebraska | 0 | 0 | 0 |
| Nevada | 0 | 0 | 0 |
| New Hampshire | 0 | 0 | 0 |
| New Jersey | 0 | 0 | 0 |
| New Mexico | 24,608 | 24,607 | 1 |
| New York | 4 | 4 | 0 |
| North Carolina | 0 | 0 | 0 |
| North Dakota | 2 | 2 | 0 |
| Ohio | 201 | 201 | 0 |
| Oklahoma | 3,862 | 3,862 | 0 |
| Oregon | 32,180 | 32,177 | 3 |
| Pennsylvania | 26 | 26 | 0 |
| Rhode Island | 50 | 50 | 0 |
| South Carolina | 129 | 129 | 0 |
| South Dakota | 2,034 | 2,033 | 1 |
| Tennessee | 0 | 0 | 0 |
| Texas | 35 | 35 | 0 |
| Utah | 388 | 388 | 0 |
| Vermont | 56 | 56 | 0 |
| Virginia | 0 | 0 | 0 |
| Washington | 4 | 4 | 0 |
| West Virginia | 7 | 7 | 0 |
| Wisconsin | 29 | 29 | 0 |
| Wyoming | 2 | 2 | 0 |
| United States | | | 8 |
| United States (across states) | N/A | 194,370 | N/A |

Table A.8 Medicaid Enrollment Turnover Rate Before and After Unduplication, 2005-2006

| State | Before Unduplication (MAX) | After Unduplication (MAXEM) | Percent Reduction |
|----------------------|-------------------------------|-----------------------------------|----------------------|
| Alabama | 1.1293 | 1.1285 | 0.0735 |
| Alaska | 1.1867 | 1.1865 | 0.0135 |
| Arizona | 1.2154 | 1.2141 | 0.1119 |
| Arkansas | 1.1455 | 1.1448 | 0.0620 |
| California | 1.2091 | 1.2091 | 0.0008 |
| Colorado | 1.1972 | 1.1971 | 0.0109 |
| Connecticut | 1.1547 | 1.1537 | 0.0823 |
| Delaware | 1.1693 | 1.1693 | 0.0077 |
| District of Columbia | 1.1236 | 1.1233 | 0.0276 |
| Florida | 1.2064 | 1.2063 | 0.0075 |
| Georgia | 1.1763 | 1.1756 | 0.0570 |
| Hawaii | 1.1483 | 1.1477 | 0.0514 |
| Idaho | 1.1929 | 1.1928 | 0.0059 |
| Illinois | 1.1775 | 1.1649 | 1.0675 |
| Indiana | 1.1699 | 1.1699 | 0.0034 |
| Iowa | 1.2099 | 1.2090 | 0.0736 |
| Kansas | 1.2063 | 1.2063 | 0.0050 |
| Kentucky | 1.1538 | 1.1560 | -0.1924 |
| Louisiana | 1.1190 | 1.1190 | 0.0000 |
| Maine | 1.1432 | 1.1430 | 0.0192 |
| Maryland | 1.1555 | 1.1555 | 0.0009 |
| Massachusetts | 1.1467 | 1.1464 | 0.0253 |
| Michigan | 1.1640 | 1.1640 | 0.0009 |
| Minnesota | 1.1926 | 1.1925 | 0.0101 |
| Mississippi | 1.1484 | 1.1477 | 0.0592 |
| Missouri | 1.1743 | 1.1739 | 0.0400 |
| Montana | 1.2045 | 1.2045 | 0.0000 |
| Nebraska | 1.1864 | 1.1863 | 0.0118 |
| Nevada | 1.3012 | 1.3012 | -0.0031 |
| New Hampshire | 1.1756 | 1.1755 | 0.0034 |
| New Jersey | 1.1608 | 1.1607 | 0.0086 |
| New Mexico | 1.1625 | 1.1625 | 0.0009 |
| New York | 1.1563 | 1.1486 | 0.6685 |
| North Carolina | 1.1639 | 1.1637 | 0.0155 |
| North Dakota | 1.2309 | 1.2081 | 1.8483 |
| Ohio | 1.1506 | 1.1485 | 0.1808 |
| Oklahoma | 1.1835 | 1.1807 | 0.2315 |
| Oregon | 1.2034 | 1.2027 | 0.0598 |
| Pennsylvania | 1.1462 | 1.1461 | 0.0035 |
| Rhode Island | 1.1346 | 1.1346 | 0.0000 |
| South Carolina | 1.1622 | 1.1621 | 0.0026 |
| South Dakota | 1.1779 | 1.1700 | 0.6665 |
| Tennessee | 1.1524 | 1.1523 | 0.0121 |
| Texas | 1.2059 | 1.2046 | 0.1070 |
| Utah | 1.2450 | 1.2450 | 0.0056 |
| Vermont | 1.1509 | 1.1509 | 0.0000 |
| Virginia | 1.1564 | 1.1560 | 0.0337 |
| Washington | 1.1740 | 1.1739 | 0.0068 |
| West Virginia | 1.1669 | 1.1665 | 0.0343 |
| Wisconsin | 1.1648 | 1.1576 | 0.6147 |
| Wyoming | 1.2197 | 1.2192 | 0.0410 |

Note: The turnover rate equals the number of people who were ever enrolled in Medicaid over a two-year period (in this case 2005 and 2006) divided by the average number of enrollees across the two years.

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