

**Medicaid Analytic Extract
Provider Characteristics
(MAXPC)**

**State-Specific Validation Tables,
2010**

Tennessee

May 31, 2013

Deo Bencio
Mei-ling Mason



MATHEMATICA
Policy Research

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ACRONYMS

CMS	Centers for Medicare & Medicaid Services
CY	Calendar year
FY	Federal fiscal year
HIPAA	Health Insurance Portability and Accountability Act
ID	Identification/identifier
IP	Inpatient
LT	Long-term care
MAX	Medicaid Analytic Extract
MAXPC	MAX Provider Characteristics File
MSIS	Medicaid Statistical Information System
NPI	National Provider Identifier
NPPES	National Plan and Provider Enumeration System
OT	Other services
RX	Drug
UPIN	Unique Physician Identification Number

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INTRODUCTION

The Medicaid Statistical Information System (MSIS) files and the corresponding research-friendly Medicaid Analytic Extract (MAX) files support a wide range of studies on Medicaid enrollment, service use, and expenditures. There is currently considerable interest at the Centers for Medicare & Medicaid Services (CMS) in also examining health reform proposals, program integrity, and access-to-care issues among certain types of Medicaid providers. However, it has not been possible to easily conduct provider-based research activities because the provider identification numbers collected in MSIS are largely unedited, undocumented, and state specific.

The advent of the Health Insurance Portability and Accountability Act (HIPAA) mandated covered entities such as health care providers, health plans, and health care clearinghouses to obtain and use a National Provider Identifier (NPI) in all administrative and financial HIPAA transactions.¹ The NPI is a unique 10-digit, sequentially assigned national identification number, unstructured so as not to carry any way information such as the state or medical specialty of the health care provider who “owns” the identifier. Beginning in February 2009, states were required to include NPIs on claims submitted to MSIS. The main limitation of this identifier, however, is that certain classes of nonmedical providers are not required to obtain an NPI. Nonetheless, the availability of the NPI on MSIS claims makes the development of a uniform provider characteristic file more feasible. The MAX Provider Characteristics (MAXPC) file is such a file.

Once the state’s MAXPC file is created, validation tables are produced. Validation tables are designed as a diagnostic tool to determine whether linkages are working in the expected manner and consist of a set of seven tables. The first six tables focus on provider ID types in the IP, LT, OT, and RX files. These provider types are: IP billing, LT billing, OT servicing, OT billing, RX billing, and RX prescribing provider IDs. The seventh table examines all provider IDs in all of the files. Each file-specific validation table is used to detect linkage issues that are peculiar to a given file type. The all-provider table is used to monitor the overall quality of the linkages of all provider IDs. The design of the validation tables is very similar across file types. The measures are grouped into seven sections as denoted by the shaded rows. The first section describes measures for each unique provider in the file. The second section focuses on the source of NPIs. The third section focuses on provider IDs that link to NPPES, followed by a section for provider IDs that link to state provider files. The fifth section focuses on the primary taxonomy of providers that link to NPPES. Among providers, taxonomies are classified into two groups: (1) individuals or groups of individuals, and (2) nonindividuals. The sixth section focuses on individual providers showing their sole proprietorship status. Finally, the seventh section focuses on provider organizations and their ownership status.

The columns in the state-specific tables describe the annual statistics for up to three years, followed by a column describing the percentage change between year one and year two, the

¹ CMS. “National Provider Identifier (NPI) Overview.” Available at <http://www.cms.gov/nationalProvIdentstand/>.

percentage change between year two and year three, if applicable, followed by the expected range of values across years, and finally, an indicator showing whether the percentage change between the two most recent years being compared is within the expected range.

The primary source of data used in the MAXPC 2010 files were the MSIS Valid claims files. The following measures in the MAXPC file were derived from original, unadjusted claims:

- Number of IP Claims for Provider
- Number of Beneficiaries with IP Claims for Provider
- Number of LT Claims for Provider
- Number of Beneficiaries with LT Claims for Provider
- Number of OT Claims for Provider
- Number of Beneficiaries with OT Claims for Provider
- Number of RX Claims for provider
- Number of Beneficiaries with RX Claims for Provider.

2009-2010 MAX IP Billing Provider Characteristics Validation Table

State: TN

Produced: 02/28/2013

Measure	2009 Value	2010 Value	% Change 2009-2010	Cross Year Expected Range	Cross Year Within Range ^a
IP Providers					
Number of provider IDs	1,772	1,745	-1.52	30% (+/-)	Yes
% billing provider on IP claim	47.3	48.1	1.79	N/A	N/A
% NPI billing provider on IP claim	52.7	51.9	-1.61	N/A	N/A
% also a provider on LT claim	37.9	40.6	7.15	N/A	N/A
% also a provider on OT claim	90.0	89.5	-0.55	N/A	N/A
% also a provider on RX claim	0.2	0.3	26.99	N/A	N/A
% provider IDs with NPI	92.8	92.6	-0.24	30% (+/-)	Yes
% provider IDs linked to NPPES	92.7	92.6	-0.12	30% (+/-)	Yes
% provider IDs with or without NPI but linked to state provider file	0.0	0.0	Div by 0	N/A	N/A
average number of IP claims	316.6	318.2	0.51	30% (+/-)	Yes
average number of beneficiaries with IP claims	214.3	198.3	-7.47	30% (+/-)	Yes
Provider IDs with NPI					
Number of provider IDs with NPI	1,644	1,615	-1.76	30% (+/-)	Yes
% NPI source = MSIS	100.0	100.0	0.00	30% (+/-)	Yes
% NPI source = NPPES	0.0	0.0	Div by 0	30% (+/-)	N/A
% NPI source = state cross-reference file	0.0	0.0	Div by 0	N/A	N/A
Provider IDs Linked to NPPES					
Number of provider IDs linked to NPPES	1,642	1,615	-1.64	30% (+/-)	Yes
% linked via NPI	100.0	100.0	0.00	30% (+/-)	Yes
% linked via Medicaid legacy provider ID	0.0	0.0	Div by 0	30% (+/-)	N/A
% linked via Medicare UPIN	0.0	0.0	Div by 0	30% (+/-)	N/A
% with name prefix	0.2	0.2	-23.77	30% (+/-)	Yes
% with first name	0.7	0.4	-49.11	30% (+/-)	Yes
% with middle name	0.5	0.4	-23.61	30% (+/-)	Yes
% with last name	0.7	0.4	-49.11	30% (+/-)	Yes
% with name suffix	0.0	0.1	Div by 0	30% (+/-)	N/A
% male	0.4	0.2	-49.04	30% (+/-)	Yes
% female	0.4	0.2	-49.04	30% (+/-)	Yes
% with credential	0.7	0.3	-53.73	30% (+/-)	Yes
% with business name	99.3	99.4	0.11	30% (+/-)	Yes
% with address line 1	100.0	99.8	-0.25	30% (+/-)	Yes
% with city	100.0	99.8	-0.25	30% (+/-)	Yes
% with state	100.0	99.8	-0.25	30% (+/-)	Yes
% state = IP state code	59.9	62.4	4.05	30% (+/-)	Yes
% with zip code	100.0	99.8	-0.25	30% (+/-)	Yes
% with primary taxonomy	98.5	98.1	-0.46	30% (+/-)	Yes
% with provider entity type = individual	0.7	0.4	-49.11	30% (+/-)	Yes
% with provider entity type = organization	99.3	99.4	0.11	30% (+/-)	Yes
Provider IDs with or without NPI but linked to state provider file					
Number of provider IDs with or without NPI linked to state provider file	0	0	Div by 0	N/A	N/A
Provider IDs with NPPES Primary Taxonomy					
Number of provider IDs with NPPES primary taxonomy	1,620	1,584	-2.22	30% (+/-)	Yes
% individual or group of individuals	2.5	1.0	-59.09	30% (+/-)	Yes
% allopathic and osteopathic physicians	1.4	0.4	-73.31	30% (+/-)	Yes
% behavioral health and social service providers	0.8	0.3	-60.60	30% (+/-)	Yes

Source: Medicaid Analytic eXtract (MAX) Provider Characteristics Files, 2009-2010.

^a "Yes" signifies that either (1) the percent change between 2009 and 2010 is within the cross-year expected range or (2) both the 2009 and the 2010 values are less than 10. "No" signifies that both (1) the percent change between 2009 and 2010 is over or under the cross-year expected range and (2) either the 2009 or the 2010 value is greater than 10.

2009-2010 MAX IP Billing Provider Characteristics Validation Table

State: TN

Produced: 02/28/2013

Measure	2009 Value	2010 Value	% Change 2009-2010	Cross Year Expected Range	Cross Year Within Range ^a
% chiropractic providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% dental providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% dietary and nutritional service providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% emergency medical service providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% eye and vision service providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% nursing service providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% nursing service-related providers	0.0	0.1	Div by 0	30% (+/-)	N/A
% other service providers	0.0	0.1	Div by 0	30% (+/-)	N/A
% pharmacy service providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% physician assistants and advanced practice nursing providers	0.1	0.0	-100.00	30% (+/-)	Yes
% podiatric medicine and surgery service providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% respiratory, developmental, rehabilitative, and restorative service providers	0.0	0.1	Div by 0	30% (+/-)	N/A
% speech, language, and hearing service providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% student health care	0.0	0.0	Div by 0	30% (+/-)	N/A
% technologists, technicians, and other technical service providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% group of individuals with multi- or single specialty	0.1	0.0	-100.00	30% (+/-)	Yes
% nonindividuals	97.5	99.0	1.50	30% (+/-)	Yes
% agencies	0.6	0.8	36.33	30% (+/-)	Yes
% ambulatory health care facilities	2.0	0.5	-75.21	30% (+/-)	Yes
% hospital units	5.1	5.5	7.20	30% (+/-)	Yes
% hospitals	52.4	52.6	0.35	30% (+/-)	Yes
% laboratories	0.1	0.0	-100.00	30% (+/-)	Yes
% managed care organizations	0.0	0.0	Div by 0	30% (+/-)	N/A
% nursing and custodial care facilities	33.0	35.4	7.05	30% (+/-)	Yes
% residential treatment facilities	4.0	3.4	-13.72	30% (+/-)	Yes
% respite care facility	0.0	0.1	Div by 0	30% (+/-)	N/A
% suppliers	0.3	0.8	145.31	30% (+/-)	Yes
% transportation services	0.0	0.0	Div by 0	30% (+/-)	N/A
% nonmedical	0.0	0.0	Div by 0	N/A	N/A
Provider IDs with Entity Type = Individual					
Number of provider IDs with entity type = individual	12	6	-50.00	30% (+/-)	No
% a sole proprietorship	8.3	66.7	700.04	30% (+/-)	No
% not a sole proprietorship	91.7	33.3	-63.64	30% (+/-)	No
% not answered	0.0	0.0	Div by 0	N/A	N/A
Provider IDs with Entity Type = Organization					
Number of provider IDs with entity type = organization	1,630	1,605	-1.53	30% (+/-)	Yes
% organization is a subpart	15.2	20.2	33.09	30% (+/-)	No
% organization is not a subpart	67.0	68.4	2.12	30% (+/-)	Yes
% not answered	17.8	11.3	-36.26	N/A	N/A

Source: Medicaid Analytic eXtract (MAX) Provider Characteristics Files, 2009-2010.

^a "Yes" signifies that either (1) the percent change between 2009 and 2010 is within the cross-year expected range or (2) both the 2009 and the 2010 values are less than 10. "No" signifies that both (1) the percent change between 2009 and 2010 is over or under the cross-year expected range and (2) either the 2009 or the 2010 value is greater than 10.

2009-2010 MAX LT Billing Provider Characteristics Validation Table

State: TN

Produced: 02/28/2013

Measure	2009 Value	2010 Value	% Change 2009-2010	Cross Year Expected Range	Cross Year Within Range ^a
LT Providers					
Number of provider IDs	899	962	7.01	30% (+/-)	Yes
% billing provider on LT claim	49.4	50.2	1.66	N/A	N/A
% NPI billing provider on LT claim	50.6	49.8	-1.62	N/A	N/A
% also a provider on IP claim	74.6	73.6	-1.39	N/A	N/A
% also a provider on OT claim	71.5	69.5	-2.77	N/A	N/A
% also a provider on RX claim	0.3	0.3	-6.59	N/A	N/A
% provider IDs with NPI	94.7	94.4	-0.29	30% (+/-)	Yes
% provider IDs linked to NPPES	94.7	94.4	-0.29	30% (+/-)	Yes
% provider IDs with or without NPI but linked to state provider file	0.0	0.0	Div by 0	N/A	N/A
average number of LT claims	656.5	806.2	22.80	30% (+/-)	Yes
average number of beneficiaries with LT claims	83.2	77.5	-6.83	30% (+/-)	Yes
Provider IDs with NPI					
Number of provider IDs with NPI	851	908	6.70	30% (+/-)	Yes
% NPI source = MSIS	100.0	100.0	0.00	30% (+/-)	Yes
% NPI source = NPPES	0.0	0.0	Div by 0	30% (+/-)	N/A
% NPI source = state cross-reference file	0.0	0.0	Div by 0	N/A	N/A
Provider IDs Linked to NPPES					
Number of provider IDs linked to NPPES	851	908	6.70	30% (+/-)	Yes
% linked via NPI	100.0	100.0	0.00	30% (+/-)	Yes
% linked via Medicaid legacy provider ID	0.0	0.0	Div by 0	30% (+/-)	N/A
% linked via Medicare UPIN	0.0	0.0	Div by 0	30% (+/-)	N/A
% with name prefix	0.2	0.0	-100.00	30% (+/-)	Yes
% with first name	0.4	0.1	-68.84	30% (+/-)	Yes
% with middle name	0.4	0.1	-68.84	30% (+/-)	Yes
% with last name	0.4	0.1	-68.84	30% (+/-)	Yes
% with name suffix	0.0	0.0	Div by 0	30% (+/-)	N/A
% male	0.2	0.0	-100.00	30% (+/-)	Yes
% female	0.1	0.1	-6.78	30% (+/-)	Yes
% with credential	0.2	0.0	-100.00	30% (+/-)	Yes
% with business name	99.6	99.9	0.24	30% (+/-)	Yes
% with address line 1	100.0	100.0	0.00	30% (+/-)	Yes
% with city	100.0	100.0	0.00	30% (+/-)	Yes
% with state	100.0	100.0	0.00	30% (+/-)	Yes
% state = LT state code	98.5	97.9	-0.57	30% (+/-)	Yes
% with zip code	100.0	100.0	0.00	30% (+/-)	Yes
% with primary taxonomy	97.7	97.7	0.04	30% (+/-)	Yes
% with provider entity type = individual	0.4	0.1	-68.84	30% (+/-)	Yes
% with provider entity type = organization	99.6	99.9	0.24	30% (+/-)	Yes
Provider IDs with or without NPI but linked to state provider file					
Number of provider IDs with or without NPI linked to state provider file	0	0	Div by 0	N/A	N/A
Provider IDs with NPPES Primary Taxonomy					
Number of provider IDs with NPPES primary taxonomy	831	887	6.74	30% (+/-)	Yes
% individual or group of individuals	1.1	0.7	-37.58	30% (+/-)	Yes
% allopathic and osteopathic physicians	0.5	0.0	-100.00	30% (+/-)	Yes
% behavioral health and social service providers	0.6	0.7	12.29	30% (+/-)	Yes

Source: Medicaid Analytic eExtract (MAX) Provider Characteristics Files, 2009-2010.

^a "Yes" signifies that either (1) the percent change between 2009 and 2010 is within the cross-year expected range or (2) both the 2009 and the 2010 values are less than 10. "No" signifies that both (1) the percent change between 2009 and 2010 is over or under the cross-year expected range and (2) either the 2009 or the 2010 value is greater than 10.

2009-2010 MAX LT Billing Provider Characteristics Validation Table

State: TN

Produced: 02/28/2013

Measure	2009 Value	2010 Value	% Change 2009-2010	Cross Year Expected Range	Cross Year Within Range ^a
% chiropractic providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% dental providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% dietary and nutritional service providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% emergency medical service providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% eye and vision service providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% nursing service providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% nursing service-related providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% other service providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% pharmacy service providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% physician assistants and advanced practice nursing providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% podiatric medicine and surgery service providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% respiratory, developmental, rehabilitative, and restorative service providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% speech, language, and hearing service providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% student health care	0.0	0.0	Div by 0	30% (+/-)	N/A
% technologists, technicians, and other technical service providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% group of individuals with multi- or single specialty	0.0	0.0	Div by 0	30% (+/-)	N/A
% nonindividuals	98.9	99.3	0.41	30% (+/-)	Yes
% agencies	0.1	0.5	275.83	30% (+/-)	Yes
% ambulatory health care facilities	0.7	0.3	-53.19	30% (+/-)	Yes
% hospital units	2.6	3.5	32.04	30% (+/-)	Yes
% hospitals	6.6	7.2	9.00	30% (+/-)	Yes
% laboratories	0.0	0.0	Div by 0	30% (+/-)	N/A
% managed care organizations	0.0	0.0	Div by 0	30% (+/-)	N/A
% nursing and custodial care facilities	87.0	82.4	-5.28	30% (+/-)	Yes
% residential treatment facilities	1.8	4.8	168.59	30% (+/-)	Yes
% respite care facility	0.0	0.0	Div by 0	30% (+/-)	N/A
% suppliers	0.0	0.6	Div by 0	30% (+/-)	N/A
% transportation services	0.0	0.0	Div by 0	30% (+/-)	N/A
% nonmedical	0.0	0.0	Div by 0	N/A	N/A
Provider IDs with Entity Type = Individual					
Number of provider IDs with entity type = individual	3	1	-66.67	30% (+/-)	Yes
% a sole proprietorship	33.3	100.0	200.00	30% (+/-)	No
% not a sole proprietorship	66.7	0.0	-100.00	30% (+/-)	No
% not answered	0.0	0.0	Div by 0	N/A	N/A
Provider IDs with Entity Type = Organization					
Number of provider IDs with entity type = organization	848	907	6.96	30% (+/-)	Yes
% organization is a subpart	18.5	31.1	67.94	30% (+/-)	No
% organization is not a subpart	50.5	46.6	-7.60	30% (+/-)	Yes
% not answered	31.0	22.3	-28.19	N/A	N/A

Source: Medicaid Analytic eXtract (MAX) Provider Characteristics Files, 2009-2010.

^a "Yes" signifies that either (1) the percent change between 2009 and 2010 is within the cross-year expected range or (2) both the 2009 and the 2010 values are less than 10. "No" signifies that both (1) the percent change between 2009 and 2010 is over or under the cross-year expected range and (2) either the 2009 or the 2010 value is greater than 10.

2009-2010 MAX OT Servicing Provider Characteristics Validation Table

State: TN

Produced: 02/28/2013

Measure	2009 Value	2010 Value	% Change 2009-2010	Cross Year Expected Range	Cross Year Within Range ^a
OT Providers					
Number of provider IDs	73,493	73,001	-0.67	30% (+/-)	Yes
% billing provider on OT claim	32.5	33.2	2.17	N/A	N/A
% servicing provider on OT claim	73.6	73.5	-0.17	N/A	N/A
% NPI servicing provider on OT claim	26.6	27.0	1.44	N/A	N/A
% also a provider on IP claim	2.0	1.6	-17.22	N/A	N/A
% also a provider on LT claim	0.8	0.6	-25.96	N/A	N/A
% also a provider on RX claim	22.4	24.5	9.56	N/A	N/A
% provider IDs with NPI	76.0	75.6	-0.50	30% (+/-)	Yes
% provider IDs linked to NPPES	75.8	75.6	-0.21	30% (+/-)	Yes
% provider IDs with or without NPI but linked to state provider file	0.0	0.0	Div by 0	N/A	N/A
average number of OT claims	1,045.8	1,246.7	19.21	30% (+/-)	Yes
average number of beneficiaries with OT claims	235.4	250.8	6.55	30% (+/-)	Yes
Provider IDs with NPI					
Number of provider IDs with NPI	55,856	55,206	-1.16	30% (+/-)	Yes
% NPI source = MSIS	98.5	99.1	0.65	30% (+/-)	Yes
% NPI source = NPPES	1.5	0.9	-43.00	30% (+/-)	Yes
% NPI source = state cross-reference file	0.0	0.0	Div by 0	N/A	N/A
Provider IDs Linked to NPPES					
Number of provider IDs linked to NPPES	55,682	55,194	-0.88	30% (+/-)	Yes
% linked via NPI	98.5	99.1	0.66	30% (+/-)	Yes
% linked via Medicaid legacy provider ID	0.0	0.0	50.00	30% (+/-)	Yes
% linked via Medicare UPIN	1.5	0.8	-44.32	30% (+/-)	Yes
% with name prefix	28.4	29.7	4.77	30% (+/-)	Yes
% with first name	62.8	65.0	3.61	30% (+/-)	Yes
% with middle name	49.9	52.3	4.76	30% (+/-)	Yes
% with last name	62.8	65.0	3.61	30% (+/-)	Yes
% with name suffix	3.3	3.5	5.28	30% (+/-)	Yes
% male	39.6	40.1	1.10	30% (+/-)	Yes
% female	23.1	25.0	7.91	30% (+/-)	Yes
% with credential	60.8	62.9	3.45	30% (+/-)	Yes
% with business name	37.2	34.6	-7.08	30% (+/-)	Yes
% with address line 1	100.0	99.6	-0.37	30% (+/-)	Yes
% with city	100.0	99.6	-0.37	30% (+/-)	Yes
% with state	100.0	99.6	-0.37	30% (+/-)	Yes
% state = OT state code	72.7	73.8	1.62	30% (+/-)	Yes
% with zip code	100.0	99.6	-0.37	30% (+/-)	Yes
% with primary taxonomy	99.4	98.4	-1.01	30% (+/-)	Yes
% with provider entity type = individual	62.8	65.0	3.61	30% (+/-)	Yes
% with provider entity type = organization	37.2	34.6	-7.08	30% (+/-)	Yes
Provider IDs with or without NPI but linked to state provider file					
Number of provider IDs with or without NPI linked to state provider file	0	0	Div by 0	N/A	N/A
Provider IDs with NPPES Primary Taxonomy					
Number of provider IDs with NPPES primary taxonomy	55,483	54,313	-2.11	30% (+/-)	Yes
% individual or group of individuals	66.4	69.5	4.57	30% (+/-)	Yes
% allopathic and osteopathic physicians	37.7	37.1	-1.64	30% (+/-)	Yes

Source: Medicaid Analytic eExtract (MAX) Provider Characteristics Files, 2009-2010.

^a "Yes" signifies that either (1) the percent change between 2009 and 2010 is within the cross-year expected range or (2) both the 2009 and the 2010 values are less than 10. "No" signifies that both (1) the percent change between 2009 and 2010 is over or under the cross-year expected range and (2) either the 2009 or the 2010 value is greater than 10.

2009-2010 MAX OT Servicing Provider Characteristics Validation Table

State: TN

Produced: 02/28/2013

Measure	2009 Value	2010 Value	% Change 2009-2010	Cross Year Expected Range	Cross Year Within Range ^a
% behavioral health and social service providers	5.0	5.7	13.80	30% (+/-)	Yes
% chiropractic providers	0.4	0.5	18.57	30% (+/-)	Yes
% dental providers	2.3	3.7	62.64	30% (+/-)	Yes
% dietary and nutritional service providers	0.0	0.0	16.00	30% (+/-)	Yes
% emergency medical service providers	0.0	0.1	227.78	30% (+/-)	Yes
% eye and vision service providers	2.3	2.4	2.49	30% (+/-)	Yes
% nursing service providers	0.4	0.4	11.34	30% (+/-)	Yes
% nursing service-related providers	0.0	0.0	51.85	30% (+/-)	Yes
% other service providers	1.8	2.8	56.98	30% (+/-)	Yes
% pharmacy service providers	0.0	0.0	266.67	30% (+/-)	Yes
% physician assistants and advanced practice nursing providers	10.7	12.2	13.71	30% (+/-)	Yes
% podiatric medicine and surgery service providers	0.5	0.4	-7.76	30% (+/-)	Yes
% respiratory, developmental, rehabilitative, and restorative service providers	2.5	2.8	13.50	30% (+/-)	Yes
% speech, language, and hearing service providers	0.8	1.0	33.33	30% (+/-)	Yes
% student health care	0.2	0.2	8.33	30% (+/-)	Yes
% technologists, technicians, and other technical service providers	0.0	0.0	242.86	30% (+/-)	Yes
% group of individuals with multi- or single specialty	1.8	0.0	-100.00	30% (+/-)	Yes
% nonindividuals	33.6	30.5	-9.05	30% (+/-)	Yes
% agencies	2.1	1.7	-22.28	30% (+/-)	Yes
% ambulatory health care facilities	2.7	2.4	-11.57	30% (+/-)	Yes
% hospital units	1.4	0.1	-93.63	30% (+/-)	Yes
% hospitals	21.6	20.8	-3.32	30% (+/-)	Yes
% laboratories	0.5	0.6	31.71	30% (+/-)	Yes
% managed care organizations	0.0	0.0	222.22	30% (+/-)	Yes
% nursing and custodial care facilities	1.3	0.9	-32.25	30% (+/-)	Yes
% residential treatment facilities	0.1	0.1	56.79	30% (+/-)	Yes
% respite care facility	0.0	0.0	175.00	30% (+/-)	Yes
% suppliers	2.7	2.7	-1.34	30% (+/-)	Yes
% transportation services	1.2	1.2	1.26	30% (+/-)	Yes
% nonmedical	0.0	0.0	Div by 0	N/A	N/A
Provider IDs with Entity Type = Individual					
Number of provider IDs with entity type = individual	34,941	35,886	2.70	30% (+/-)	Yes
% a sole proprietorship	17.7	18.8	6.44	30% (+/-)	Yes
% not a sole proprietorship	71.7	73.8	2.88	30% (+/-)	Yes
% not answered	10.6	7.4	-30.19	N/A	N/A
Provider IDs with Entity Type = Organization					
Number of provider IDs with entity type = organization	20,741	19,103	-7.90	30% (+/-)	Yes
% organization is a subpart	10.3	7.9	-23.25	30% (+/-)	Yes
% organization is not a subpart	76.2	82.5	8.22	30% (+/-)	Yes
% not answered	13.5	9.6	-28.66	N/A	N/A

Source: Medicaid Analytic eXtract (MAX) Provider Characteristics Files, 2009-2010.

^a "Yes" signifies that either (1) the percent change between 2009 and 2010 is within the cross-year expected range or (2) both the 2009 and the 2010 values are less than 10. "No" signifies that both (1) the percent change between 2009 and 2010 is over or under the cross-year expected range and (2) either the 2009 or the 2010 value is greater than 10.

2009-2010 MAX OT Billing Provider Characteristics Validation Table

State: TN

Produced: 02/28/2013

Measure	2009 Value	2010 Value	% Change 2009-2010	Cross Year Expected Range	Cross Year Within Range ^a
OT Providers					
Number of provider IDs	25,788	27,080	5.01	30% (+/-)	Yes
% billing provider on OT claim	100.0	100.0	0.00	N/A	N/A
% servicing provider on OT claim	92.6	89.5	-3.36	N/A	N/A
% NPI servicing provider on OT claim	0.0	0.0	Div by 0	N/A	N/A
% also a provider on IP claim	3.0	2.9	-4.77	N/A	N/A
% also a provider on LT claim	1.3	1.2	-0.64	N/A	N/A
% also a provider on RX claim	0.2	0.2	0.47	N/A	N/A
% provider IDs with NPI	84.7	83.0	-2.02	30% (+/-)	Yes
% provider IDs linked to NPPES	84.4	83.0	-1.65	30% (+/-)	Yes
% provider IDs with or without NPI but linked to state provider file	0.0	0.0	Div by 0	N/A	N/A
average number of OT claims	2,680.7	2,900.0	8.18	30% (+/-)	Yes
average number of beneficiaries with OT claims	468.8	488.0	4.11	30% (+/-)	Yes
Provider IDs with NPI					
Number of provider IDs with NPI	21,836	22,466	2.89	30% (+/-)	Yes
% NPI source = MSIS	100.0	100.0	0.00	30% (+/-)	Yes
% NPI source = NPPES	0.0	0.0	Div by 0	30% (+/-)	N/A
% NPI source = state cross-reference file	0.0	0.0	Div by 0	N/A	N/A
Provider IDs Linked to NPPES					
Number of provider IDs linked to NPPES	21,753	22,466	3.28	30% (+/-)	Yes
% linked via NPI	100.0	100.0	0.00	30% (+/-)	Yes
% linked via Medicaid legacy provider ID	0.0	0.0	Div by 0	30% (+/-)	N/A
% linked via Medicare UPIN	0.0	0.0	Div by 0	30% (+/-)	N/A
% with name prefix	39.6	41.4	4.45	30% (+/-)	Yes
% with first name	84.8	86.6	2.10	30% (+/-)	Yes
% with middle name	68.3	70.6	3.39	30% (+/-)	Yes
% with last name	84.8	86.6	2.10	30% (+/-)	Yes
% with name suffix	5.0	5.2	3.90	30% (+/-)	Yes
% male	56.6	56.7	0.24	30% (+/-)	Yes
% female	28.2	29.8	5.82	30% (+/-)	Yes
% with credential	83.2	85.0	2.22	30% (+/-)	Yes
% with business name	15.2	13.0	-14.48	30% (+/-)	Yes
% with address line 1	100.0	99.6	-0.42	30% (+/-)	Yes
% with city	100.0	99.6	-0.42	30% (+/-)	Yes
% with state	100.0	99.6	-0.42	30% (+/-)	Yes
% state = OT state code	86.0	86.1	0.03	30% (+/-)	Yes
% with zip code	100.0	99.6	-0.42	30% (+/-)	Yes
% with primary taxonomy	99.2	98.2	-1.01	30% (+/-)	Yes
% with provider entity type = individual	84.8	86.6	2.10	30% (+/-)	Yes
% with provider entity type = organization	15.2	13.0	-14.48	30% (+/-)	Yes
Provider IDs with or without NPI but linked to state provider file					
Number of provider IDs with or without NPI linked to state provider file	0	0	Div by 0	N/A	N/A
Provider IDs with NPPES Primary Taxonomy					
Number of provider IDs with NPPES primary taxonomy	21,647	22,064	1.93	30% (+/-)	Yes
% individual or group of individuals	86.9	89.2	2.64	30% (+/-)	Yes
% allopathic and osteopathic physicians	56.4	54.4	-3.51	30% (+/-)	Yes

Source: Medicaid Analytic eExtract (MAX) Provider Characteristics Files, 2009-2010.

^a "Yes" signifies that either (1) the percent change between 2009 and 2010 is within the cross-year expected range or (2) both the 2009 and the 2010 values are less than 10. "No" signifies that both (1) the percent change between 2009 and 2010 is over or under the cross-year expected range and (2) either the 2009 or the 2010 value is greater than 10.

2009-2010 MAX OT Billing Provider Characteristics Validation Table

State: TN

Produced: 02/28/2013

Measure	2009 Value	2010 Value	% Change 2009-2010	Cross Year Expected Range	Cross Year Within Range ^a
% behavioral health and social service providers	3.6	3.5	-4.13	30% (+/-)	Yes
% chiropractic providers	0.5	0.5	5.07	30% (+/-)	Yes
% dental providers	2.1	4.7	122.87	30% (+/-)	Yes
% dietary and nutritional service providers	0.0	0.0	260.00	30% (+/-)	Yes
% emergency medical service providers	0.0	0.1	177.78	30% (+/-)	Yes
% eye and vision service providers	2.9	2.9	0.00	30% (+/-)	Yes
% nursing service providers	0.2	0.2	29.63	30% (+/-)	Yes
% nursing service-related providers	0.0	0.0	360.00	30% (+/-)	Yes
% other service providers	2.4	3.5	43.12	30% (+/-)	Yes
% pharmacy service providers	0.0	0.0	100.00	30% (+/-)	Yes
% physician assistants and advanced practice nursing providers	13.6	14.8	8.94	30% (+/-)	Yes
% podiatric medicine and surgery service providers	0.8	0.8	-4.09	30% (+/-)	Yes
% respiratory, developmental, rehabilitative, and restorative service providers	2.2	2.3	3.53	30% (+/-)	Yes
% speech, language, and hearing service providers	0.8	1.1	31.70	30% (+/-)	Yes
% student health care	0.2	0.3	59.66	30% (+/-)	Yes
% technologists, technicians, and other technical service providers	0.0	0.0	540.00	30% (+/-)	Yes
% group of individuals with multi- or single specialty	1.0	0.0	-100.00	30% (+/-)	Yes
% nonindividuals	13.1	10.8	-17.49	30% (+/-)	Yes
% agencies	1.4	1.3	-7.61	30% (+/-)	Yes
% ambulatory health care facilities	1.6	0.8	-51.37	30% (+/-)	Yes
% hospital units	0.1	0.0	-59.46	30% (+/-)	Yes
% hospitals	4.5	3.3	-26.78	30% (+/-)	Yes
% laboratories	0.4	0.5	26.76	30% (+/-)	Yes
% managed care organizations	0.0	0.0	360.00	30% (+/-)	Yes
% nursing and custodial care facilities	1.3	1.3	3.75	30% (+/-)	Yes
% residential treatment facilities	0.1	0.1	22.83	30% (+/-)	Yes
% respite care facility	0.0	0.0	180.00	30% (+/-)	Yes
% suppliers	2.8	2.5	-10.70	30% (+/-)	Yes
% transportation services	0.9	0.9	-1.89	30% (+/-)	Yes
% nonmedical	0.0	0.0	Div by 0	N/A	N/A
Provider IDs with Entity Type = Individual					
Number of provider IDs with entity type = individual	18,446	19,450	5.44	30% (+/-)	Yes
% a sole proprietorship	18.3	19.1	4.55	30% (+/-)	Yes
% not a sole proprietorship	70.7	73.4	3.71	30% (+/-)	Yes
% not answered	11.0	7.5	-31.44	N/A	N/A
Provider IDs with Entity Type = Organization					
Number of provider IDs with entity type = organization	3,307	2,921	-11.67	30% (+/-)	Yes
% organization is a subpart	9.7	11.4	17.44	30% (+/-)	Yes
% organization is not a subpart	69.7	72.9	4.57	30% (+/-)	Yes
% not answered	20.6	15.7	-23.69	N/A	N/A

Source: Medicaid Analytic eXtract (MAX) Provider Characteristics Files, 2009-2010.

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2009-2010 MAX RX Billing Provider Characteristics Validation Table

State: TN

Produced: 02/28/2013

Measure	2009 Value	2010 Value	% Change 2009-2010	Cross Year Expected Range	Cross Year Within Range ^a
RX Providers					
Number of provider IDs	14,399	15,542	7.94	30% (+/-)	Yes
% billing provider on RX claim	51.1	50.6	-0.98	N/A	N/A
% prescribing provider on RX claim	0.0	0.0	-9.52	N/A	N/A
% NPI billing provider on RX claim	48.9	49.4	1.02	N/A	N/A
% also a provider on IP claim	0.0	0.0	-9.52	N/A	N/A
% also a provider on LT claim	0.0	0.0	-9.52	N/A	N/A
% also a provider on OT claim	1.2	1.0	-11.70	N/A	N/A
% provider IDs with NPI	100.0	99.9	-0.03	30% (+/-)	Yes
% provider IDs linked to NPDES	99.5	99.9	0.41	30% (+/-)	Yes
% provider IDs with or without NPI but linked to state provider file	0.0	0.0	Div by 0	N/A	N/A
average number of RX claims	2,383.5	1,686.4	-29.25	30% (+/-)	Yes
average number of beneficiaries with RX claims	228.5	213.0	-6.77	30% (+/-)	Yes
Provider IDs with NPI					
Number of provider IDs with NPI	14,392	15,530	7.91	30% (+/-)	Yes
% NPI source = MSIS	100.0	100.0	0.00	30% (+/-)	Yes
% NPI source = NPDES	0.0	0.0	Div by 0	30% (+/-)	N/A
% NPI source = state cross-reference file	0.0	0.0	Div by 0	N/A	N/A
Provider IDs Linked to NPDES					
Number of provider IDs linked to NPDES	14,329	15,530	8.38	30% (+/-)	Yes
% linked via NPI	100.0	100.0	0.00	30% (+/-)	Yes
% linked via Medicaid legacy provider ID	0.0	0.0	Div by 0	30% (+/-)	N/A
% linked via Medicare UPIN	0.0	0.0	Div by 0	30% (+/-)	N/A
% with name prefix	0.0	0.1	107.14	30% (+/-)	Yes
% with first name	0.1	0.1	50.00	30% (+/-)	Yes
% with middle name	0.0	0.1	38.10	30% (+/-)	Yes
% with last name	0.1	0.1	50.00	30% (+/-)	Yes
% with name suffix	0.0	0.0	Div by 0	30% (+/-)	N/A
% male	0.0	0.0	11.43	30% (+/-)	Yes
% female	0.0	0.0	114.29	30% (+/-)	Yes
% with credential	0.1	0.1	26.79	30% (+/-)	Yes
% with business name	99.9	99.5	-0.43	30% (+/-)	Yes
% with address line 1	100.0	99.6	-0.40	30% (+/-)	Yes
% with city	100.0	99.6	-0.40	30% (+/-)	Yes
% with state	100.0	99.6	-0.40	30% (+/-)	Yes
% state = RX state code	21.7	20.5	-5.38	30% (+/-)	Yes
% with zip code	100.0	99.6	-0.40	30% (+/-)	Yes
% with primary taxonomy	100.0	99.2	-0.80	30% (+/-)	Yes
% with provider entity type = individual	0.1	0.1	50.00	30% (+/-)	Yes
% with provider entity type = organization	99.9	99.5	-0.43	30% (+/-)	Yes
Provider IDs with or without NPI but linked to state provider file					
Number of provider IDs with or without NPI linked to state provider file	0	0	Div by 0	N/A	N/A
Provider IDs with NPDES Primary Taxonomy					
Number of provider IDs with NPDES primary taxonomy	14,384	15,400	7.06	30% (+/-)	Yes
% individual or group of individuals	0.1	1.1	1,485.71	30% (+/-)	Yes
% allopathic and osteopathic physicians	0.1	0.2	341.07	30% (+/-)	Yes

Source: Medicaid Analytic eXtract (MAX) Provider Characteristics Files, 2009-2010.

^a "Yes" signifies that either (1) the percent change between 2009 and 2010 is within the cross-year expected range or (2) both the 2009 and the 2010 values are less than 10. "No" signifies that both (1) the percent change between 2009 and 2010 is over or under the cross-year expected range and (2) either the 2009 or the 2010 value is greater than 10.

2009-2010 MAX RX Billing Provider Characteristics Validation Table

State: TN

Produced: 02/28/2013

Measure	2009 Value	2010 Value	% Change 2009-2010	Cross Year Expected Range	Cross Year Within Range ^a
% behavioral health and social service providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% chiropractic providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% dental providers	0.0	0.0	85.71	30% (+/-)	Yes
% dietary and nutritional service providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% emergency medical service providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% eye and vision service providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% nursing service providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% nursing service-related providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% other service providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% pharmacy service providers	0.0	0.8	11,957.14	30% (+/-)	Yes
% physician assistants and advanced practice nursing providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% podiatric medicine and surgery service providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% respiratory, developmental, rehabilitative, and restorative service providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% speech, language, and hearing service providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% student health care	0.0	0.0	Div by 0	30% (+/-)	N/A
% technologists, technicians, and other technical service providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% group of individuals with multi- or single specialty	0.0	0.0	Div by 0	30% (+/-)	N/A
% nonindividuals	99.9	98.9	-1.04	30% (+/-)	Yes
% agencies	0.0	0.1	364.29	30% (+/-)	Yes
% ambulatory health care facilities	0.0	0.1	85.71	30% (+/-)	Yes
% hospital units	0.0	0.0	Div by 0	30% (+/-)	N/A
% hospitals	0.0	0.1	642.86	30% (+/-)	Yes
% laboratories	0.0	0.0	Div by 0	30% (+/-)	N/A
% managed care organizations	0.0	0.0	Div by 0	30% (+/-)	N/A
% nursing and custodial care facilities	0.0	0.0	-100.00	30% (+/-)	Yes
% residential treatment facilities	0.0	0.0	Div by 0	30% (+/-)	N/A
% respite care facility	0.0	0.0	Div by 0	30% (+/-)	N/A
% suppliers	99.9	98.7	-1.19	30% (+/-)	Yes
% transportation services	0.0	0.0	Div by 0	30% (+/-)	N/A
% nonmedical	0.0	0.0	Div by 0	N/A	N/A
Provider IDs with Entity Type = Individual					
Number of provider IDs with entity type = individual	8	13	62.50	30% (+/-)	No
% a sole proprietorship	12.5	30.8	146.15	30% (+/-)	No
% not a sole proprietorship	62.5	53.8	-13.85	30% (+/-)	Yes
% not answered	25.0	15.4	-38.46	N/A	N/A
Provider IDs with Entity Type = Organization					
Number of provider IDs with entity type = organization	14,321	15,455	7.92	30% (+/-)	Yes
% organization is a subpart	58.9	61.1	3.68	30% (+/-)	Yes
% organization is not a subpart	38.5	37.3	-3.10	30% (+/-)	Yes
% not answered	2.6	1.6	-37.33	N/A	N/A

Source: Medicaid Analytic eXtract (MAX) Provider Characteristics Files, 2009-2010.

^a "Yes" signifies that either (1) the percent change between 2009 and 2010 is within the cross-year expected range or (2) both the 2009 and the 2010 values are less than 10. "No" signifies that both (1) the percent change between 2009 and 2010 is over or under the cross-year expected range and (2) either the 2009 or the 2010 value is greater than 10.

2009-2010 MAX RX Prescribing Provider Characteristics Validation Table

State: TN

Produced: 02/28/2013

Measure	2009 Value	2010 Value	% Change 2009-2010	Cross Year Expected Range	Cross Year Within Range ^a
RX Providers					
Number of provider IDs	61,665	64,729	4.97	30% (+/-)	Yes
% billing provider on RX claim	0.0	0.0	Div by 0	N/A	N/A
% prescribing provider on RX claim	100.0	100.0	0.00	N/A	N/A
% NPI billing provider on RX claim	0.0	0.0	0.00	N/A	N/A
% also a provider on IP claim	0.0	0.0	50.00	N/A	N/A
% also a provider on LT claim	0.0	0.0	Div by 0	N/A	N/A
% also a provider on OT claim	26.4	27.4	3.83	N/A	N/A
% provider IDs with NPI	6.6	7.5	13.07	30% (+/-)	Yes
% provider IDs linked to NPPES	6.6	7.5	13.33	30% (+/-)	Yes
% provider IDs with or without NPI but linked to state provider file	0.0	0.0	Div by 0	N/A	N/A
average number of RX claims	278.6	202.8	-27.19	30% (+/-)	Yes
average number of beneficiaries with RX claims	47.3	46.4	-1.79	30% (+/-)	Yes
Provider IDs with NPI					
Number of provider IDs with NPI	4,066	4,826	18.69	30% (+/-)	Yes
% NPI source = MSIS	99.2	99.3	0.10	30% (+/-)	Yes
% NPI source = NPPES	0.8	0.7	-12.99	30% (+/-)	Yes
% NPI source = state cross-reference file	0.0	0.0	Div by 0	N/A	N/A
Provider IDs Linked to NPPES					
Number of provider IDs linked to NPPES	4,057	4,826	18.95	30% (+/-)	Yes
% linked via NPI	99.2	99.3	0.10	30% (+/-)	Yes
% linked via Medicaid legacy provider ID	0.2	0.2	-6.76	30% (+/-)	Yes
% linked via Medicare UPIN	0.5	0.5	-15.87	30% (+/-)	Yes
% with name prefix	32.3	32.3	-0.08	30% (+/-)	Yes
% with first name	57.6	58.1	0.83	30% (+/-)	Yes
% with middle name	48.6	48.9	0.70	30% (+/-)	Yes
% with last name	57.6	58.1	0.83	30% (+/-)	Yes
% with name suffix	3.8	3.7	-2.38	30% (+/-)	Yes
% male	35.0	34.8	-0.52	30% (+/-)	Yes
% female	22.7	23.3	2.91	30% (+/-)	Yes
% with credential	56.1	56.5	0.81	30% (+/-)	Yes
% with business name	42.4	41.5	-2.00	30% (+/-)	Yes
% with address line 1	100.0	99.6	-0.37	30% (+/-)	Yes
% with city	100.0	99.6	-0.37	30% (+/-)	Yes
% with state	100.0	99.6	-0.37	30% (+/-)	Yes
% state = RX state code	80.1	80.5	0.47	30% (+/-)	Yes
% with zip code	100.0	99.6	-0.37	30% (+/-)	Yes
% with primary taxonomy	99.9	99.1	-0.74	30% (+/-)	Yes
% with provider entity type = individual	57.6	58.1	0.83	30% (+/-)	Yes
% with provider entity type = organization	42.4	41.5	-2.00	30% (+/-)	Yes
Provider IDs with or without NPI but linked to state provider file					
Number of provider IDs with or without NPI linked to state provider file	0	0	Div by 0	N/A	N/A
Provider IDs with NPPES Primary Taxonomy					
Number of provider IDs with NPPES primary taxonomy	4,059	4,783	17.84	30% (+/-)	Yes
% individual or group of individuals	58.8	58.8	-0.10	30% (+/-)	Yes
% allopathic and osteopathic physicians	17.1	15.8	-7.43	30% (+/-)	Yes

Source: Medicaid Analytic eExtract (MAX) Provider Characteristics Files, 2009-2010.

^a "Yes" signifies that either (1) the percent change between 2009 and 2010 is within the cross-year expected range or (2) both the 2009 and the 2010 values are less than 10. "No" signifies that both (1) the percent change between 2009 and 2010 is over or under the cross-year expected range and (2) either the 2009 or the 2010 value is greater than 10.

2009-2010 MAX RX Prescribing Provider Characteristics Validation Table

State: TN

Produced: 02/28/2013

Measure	2009 Value	2010 Value	% Change 2009-2010	Cross Year Expected Range	Cross Year Within Range ^a
% behavioral health and social service providers	0.2	0.3	48.73	30% (+/-)	Yes
% chiropractic providers	0.1	0.1	-14.63	30% (+/-)	Yes
% dental providers	15.0	16.0	6.78	30% (+/-)	Yes
% dietary and nutritional service providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% emergency medical service providers	0.0	0.0	68.00	30% (+/-)	Yes
% eye and vision service providers	8.9	8.6	-3.38	30% (+/-)	Yes
% nursing service providers	0.3	0.3	-21.56	30% (+/-)	Yes
% nursing service-related providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% other service providers	0.7	0.9	27.25	30% (+/-)	Yes
% pharmacy service providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% physician assistants and advanced practice nursing providers	14.4	15.9	10.21	30% (+/-)	Yes
% podiatric medicine and surgery service providers	0.3	0.1	-54.38	30% (+/-)	Yes
% respiratory, developmental, rehabilitative, and restorative service providers	0.1	0.5	428.28	30% (+/-)	Yes
% speech, language, and hearing service providers	0.0	0.0	-14.29	30% (+/-)	Yes
% student health care	0.2	0.2	-32.11	30% (+/-)	Yes
% technologists, technicians, and other technical service providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% group of individuals with multi- or single specialty	1.4	0.0	-100.00	30% (+/-)	Yes
% nonindividuals	41.2	41.2	0.15	30% (+/-)	Yes
% agencies	0.8	0.4	-45.29	30% (+/-)	Yes
% ambulatory health care facilities	1.2	0.4	-69.99	30% (+/-)	Yes
% hospital units	2.3	0.1	-97.28	30% (+/-)	Yes
% hospitals	35.6	40.0	12.25	30% (+/-)	Yes
% laboratories	0.0	0.0	Div by 0	30% (+/-)	N/A
% managed care organizations	0.0	0.0	Div by 0	30% (+/-)	N/A
% nursing and custodial care facilities	1.1	0.1	-88.20	30% (+/-)	Yes
% residential treatment facilities	0.0	0.1	236.00	30% (+/-)	Yes
% respite care facility	0.0	0.0	Div by 0	30% (+/-)	N/A
% suppliers	0.2	0.2	-2.91	30% (+/-)	Yes
% transportation services	0.0	0.0	Div by 0	30% (+/-)	N/A
% nonmedical	0.0	0.0	Div by 0	N/A	N/A
Provider IDs with Entity Type = Individual					
Number of provider IDs with entity type = individual	2,337	2,803	19.94	30% (+/-)	Yes
% a sole proprietorship	21.8	23.2	6.47	30% (+/-)	Yes
% not a sole proprietorship	65.7	67.8	3.26	30% (+/-)	Yes
% not answered	12.5	9.0	-28.29	N/A	N/A
Provider IDs with Entity Type = Organization					
Number of provider IDs with entity type = organization	1,720	2,005	16.57	30% (+/-)	Yes
% organization is a subpart	8.7	5.9	-31.49	30% (+/-)	Yes
% organization is not a subpart	81.3	88.3	8.67	30% (+/-)	Yes
% not answered	10.1	5.7	-42.97	N/A	N/A

Source: Medicaid Analytic eXtract (MAX) Provider Characteristics Files, 2009-2010.

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2009-2010 MAX All Provider Characteristics Validation Table

State: TN

Produced: 02/28/2013

Measure	2009 Value	2010 Value	% Change 2009-2010	Cross Year Expected Range	Cross Year Within Range ^a
All Providers					
Number of provider IDs	135,392	138,621	2.38	30%(+/-)	Yes
% billing provider on IP claim	0.6	0.6	-2.10	N/A	N/A
% NPI billing provider on IP claim	0.7	0.7	-5.36	N/A	N/A
% billing provider on LT claim	0.3	0.3	6.10	N/A	N/A
% NPI billing provider on LT claim	0.3	0.3	2.98	N/A	N/A
% billing provider on OT claim	19.0	19.5	2.56	N/A	N/A
% servicing provider on OT claim	40.0	38.7	-3.14	N/A	N/A
% NPI servicing provider on OT claim	14.4	14.2	-1.58	N/A	N/A
% billing provider on RX claim	5.4	5.7	4.39	N/A	N/A
% prescribing provider on RX claim	45.5	46.7	2.52	N/A	N/A
% NPI billing provider on RX claim	5.2	5.5	6.51	N/A	N/A
% billing provider	24.6	25.3	3.01	N/A	N/A
% NPI billing provider	6.0	6.3	5.11	N/A	N/A
% servicing provider	40.0	38.7	-3.14	N/A	N/A
% NPI servicing provider	14.4	14.2	-1.58	N/A	N/A
% prescribing provider	45.5	46.7	2.52	N/A	N/A
% provider IDs with NPI	52.2	51.5	-1.29	30%(+/-)	Yes
% provider IDs linked to NPPES	52.0	51.5	-0.98	30%(+/-)	Yes
% provider IDs with or without NPI but linked to state provider file	0.0	0.0	Div by 0	N/A	N/A
average number of claims	1,170.6	1,169.6	-0.09	30%(+/-)	Yes
average number of beneficiaries with claims	195.4	199.0	1.85	30%(+/-)	Yes
Provider IDs with NPI					
Number of provider IDs with NPI	70,638	71,390	1.06	30%(+/-)	Yes
% NPI source = MSIS	98.8	99.3	0.53	30%(+/-)	Yes
% NPI source = NPPES	1.2	0.7	-43.40	30%(+/-)	Yes
% NPI source = state cross-reference file	0.0	0.0	Div by 0	N/A	N/A
Provider IDs Linked to NPPES					
Number of provider IDs linked to NPPES	70,402	71,378	1.39	30%(+/-)	Yes
% linked via NPI	98.8	99.3	0.53	30%(+/-)	Yes
% linked via Medicaid legacy provider ID	0.0	0.0	50.00	30%(+/-)	Yes
% linked via Medicare UPIN	1.2	0.7	-44.69	30%(+/-)	Yes
% with name prefix	22.5	23.0	2.44	30%(+/-)	Yes
% with first name	49.7	50.3	1.30	30%(+/-)	Yes
% with middle name	39.5	40.4	2.42	30%(+/-)	Yes
% with last name	49.7	50.3	1.30	30%(+/-)	Yes
% with name suffix	2.6	2.7	2.90	30%(+/-)	Yes
% male	31.4	31.0	-1.15	30%(+/-)	Yes
% female	18.3	19.3	5.49	30%(+/-)	Yes
% with credential	48.1	48.7	1.13	30%(+/-)	Yes
% with business name	50.3	49.3	-2.03	30%(+/-)	Yes
% with address line 1	100.0	99.6	-0.38	30%(+/-)	Yes
% with city	100.0	99.6	-0.38	30%(+/-)	Yes
% with state	100.0	99.6	-0.38	30%(+/-)	Yes
% state = claim file state code	62.3	62.3	0.02	30%(+/-)	Yes
% with zip code	100.0	99.6	-0.38	30%(+/-)	Yes

Source: Medicaid Analytic eXtract (MAX) Provider Characteristics Files, 2009-2010.

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2009-2010 MAX All Provider Characteristics Validation Table

State: TN

Produced: 02/28/2013

Measure	2009 Value	2010 Value	% Change 2009-2010	Cross Year Expected Range	Cross Year Within Range ^a
% with primary taxonomy	99.5	98.6	-0.95	30%(+/-)	Yes
% with provider entity type = individual	49.7	50.3	1.30	30%(+/-)	Yes
% with provider entity type = organization	50.3	49.3	-2.03	30%(+/-)	Yes
Provider IDs with or without NPI but linked to state provider file					
Number of provider IDs with or without NPI linked to state provider file	0	0	Div by 0	N/A	N/A
Provider IDs with NPPES Primary Taxonomy					
Number of provider IDs with NPPES primary taxonomy	70,258	70,363	0.15	30%(+/-)	Yes
% individual or group of individuals	52.5	53.9	2.64	30%(+/-)	Yes
% allopathic and osteopathic physicians	29.8	28.7	-3.73	30%(+/-)	Yes
% behavioral health and social service providers	4.0	4.4	11.32	30%(+/-)	Yes
% chiropractic providers	0.4	0.4	15.86	30%(+/-)	Yes
% dental providers	1.8	2.8	59.07	30%(+/-)	Yes
% dietary and nutritional service providers	0.0	0.0	15.00	30%(+/-)	Yes
% emergency medical service providers	0.0	0.0	221.43	30%(+/-)	Yes
% eye and vision service providers	1.8	1.8	0.16	30%(+/-)	Yes
% nursing service providers	0.3	0.3	8.95	30%(+/-)	Yes
% nursing service-related providers	0.0	0.0	47.62	30%(+/-)	Yes
% other service providers	1.4	2.2	53.50	30%(+/-)	Yes
% pharmacy service providers	0.0	0.2	2,842.86	30%(+/-)	Yes
% physician assistants and advanced practice nursing providers	8.4	9.4	11.14	30%(+/-)	Yes
% podiatric medicine and surgery service providers	0.4	0.3	-9.83	30%(+/-)	Yes
% respiratory, developmental, rehabilitative, and restorative service providers	1.9	2.2	11.04	30%(+/-)	Yes
% speech, language, and hearing service providers	0.6	0.8	30.36	30%(+/-)	Yes
% student health care	0.1	0.1	6.82	30%(+/-)	Yes
% technologists, technicians, and other technical service providers	0.0	0.0	236.36	30%(+/-)	Yes
% group of individuals with multi- or single specialty	1.4	0.0	-100.00	30%(+/-)	Yes
% nonindividuals	47.5	46.1	-2.92	30%(+/-)	Yes
% agencies	1.7	1.3	-23.00	30%(+/-)	Yes
% ambulatory health care facilities	2.1	1.8	-13.98	30%(+/-)	Yes
% hospital units	1.2	0.2	-85.86	30%(+/-)	Yes
% hospitals	17.2	16.3	-5.11	30%(+/-)	Yes
% laboratories	0.4	0.5	28.53	30%(+/-)	Yes
% managed care organizations	0.0	0.0	271.43	30%(+/-)	Yes
% nursing and custodial care facilities	1.5	1.3	-8.89	30%(+/-)	Yes
% residential treatment facilities	0.1	0.2	55.74	30%(+/-)	Yes
% respite care facility	0.0	0.0	333.33	30%(+/-)	Yes
% suppliers	22.4	23.5	4.96	30%(+/-)	Yes
% transportation services	0.9	0.9	-1.06	30%(+/-)	Yes
% nonmedical	0.0	0.0	Div by 0	N/A	N/A
Provider IDs with Entity Type = Individual					
Number of provider IDs with entity type = individual	34,961	35,907	2.71	30%(+/-)	Yes
% a sole proprietorship	17.7	18.8	6.49	30%(+/-)	Yes
% not a sole proprietorship	71.7	73.8	2.87	30%(+/-)	Yes
% not answered	10.6	7.4	-30.19	N/A	N/A
Provider IDs with Entity Type = Organization					
Number of provider IDs with entity type = organization	35,441	35,203	-0.67	30%(+/-)	Yes
% organization is a subpart	30.0	31.7	5.59	30%(+/-)	Yes
% organization is not a subpart	60.5	61.9	2.33	30%(+/-)	Yes
% not answered	9.5	6.4	-32.53	N/A	N/A

Source: Medicaid Analytic eXtract (MAX) Provider Characteristics Files, 2009-2010.

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