

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

**State-Specific Validation Tables,  
2011**

June 28, 2013

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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.<sup>1</sup> 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 percentage change between year two and year three, if applicable, followed by the expected

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

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 2011 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.

2009-2011 MAX IP Billing Provider Characteristics Validation Table  
 State: MD  
 Produced: 05/20/2013

Measure	2009 Value	2010 Value	2011 Value	% Change 2009-2010	% Change 2010-2011	Cross Year Expected Range	Cross Year 2009-2010 Within Range <sup>a</sup>	Cross Year 2010-2011 Within Range <sup>a</sup>
<b>IP Providers</b>								
Number of provider IDs	461	455	465	-1.30	2.20	30% (+/-)	Yes	Yes
% billing provider on IP claim	52.9	53.2	52.3	0.49	-1.75	N/A	N/A	N/A
% NPI billing provider on IP claim	47.1	46.8	47.7	-0.55	1.98	N/A	N/A	N/A
% also a provider on LT claim	4.6	4.6	3.4	1.32	-25.44	N/A	N/A	N/A
% also a provider on OT claim	80.0	85.9	85.4	7.36	-0.65	N/A	N/A	N/A
% also a provider on RX claim	13.9	17.1	12.7	23.48	-25.99	N/A	N/A	N/A
% provider IDs with NPI	93.3	93.4	94.0	0.14	0.61	30% (+/-)	Yes	Yes
% provider IDs linked to NPPES	93.1	92.7	93.8	-0.34	1.10	30% (+/-)	Yes	Yes
% provider IDs with or without NPI but linked to state provider file	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
average number of IP claims	693.4	758.4	654.3	9.37	-13.72	30% (+/-)	Yes	Yes
average number of beneficiaries with IP claims	463.0	476.4	445.4	2.89	-6.51	30% (+/-)	Yes	Yes
<b>Provider IDs with NPI</b>								
Number of provider IDs with NPI	430	425	437	-1.16	2.82	30% (+/-)	Yes	Yes
% NPI source = MSIS	97.2	96.5	96.8	-0.76	0.34	30% (+/-)	Yes	Yes
% NPI source = NPPES	2.8	3.5	3.2	26.44	-9.22	30% (+/-)	Yes	Yes
% NPI source = state cross-reference file	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
<b>Provider IDs Linked to NPPES</b>								
Number of provider IDs linked to NPPES	429	422	436	-1.63	3.32	30% (+/-)	Yes	Yes
% linked via NPI	97.2	96.4	96.8	-0.78	0.36	30% (+/-)	Yes	Yes
% linked via Medicaid legacy provider ID	2.8	3.6	3.2	27.10	-9.68	30% (+/-)	Yes	Yes
% linked via Medicare UPIN	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% with name prefix	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% with first name	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% with middle name	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% with last name	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% with name suffix	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% male	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% female	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% with credential	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% with business name	100.0	100.0	100.0	0.00	0.00	30% (+/-)	Yes	Yes
% with address line 1	100.0	100.0	100.0	0.00	0.00	30% (+/-)	Yes	Yes
% with city	100.0	100.0	100.0	0.00	0.00	30% (+/-)	Yes	Yes
% with state	100.0	100.0	100.0	0.00	0.00	30% (+/-)	Yes	Yes
% state = IP state code	33.1	34.4	32.1	3.81	-6.55	30% (+/-)	Yes	Yes
% with zip code	100.0	100.0	100.0	0.00	0.00	30% (+/-)	Yes	Yes
% with primary taxonomy	97.2	99.5	99.5	2.39	0.02	30% (+/-)	Yes	Yes
% with provider entity type = individual	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% with provider entity type = organization	100.0	100.0	100.0	0.00	0.00	30% (+/-)	Yes	Yes
<b>Provider IDs with or without NPI but linked to state provider file</b>								
Number of provider IDs with or without NPI linked to state provider file	0	0	0	Div by 0	Div by 0	N/A	N/A	N/A

Source: Medicaid Analytic eXtract (MAX) Provider Characteristics Files, 2009-2011.

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.

b "Yes" signifies that either (1) the percent change between 2010 and 2011 is within the cross-year expected range or (2) both the 2010 and the 2011 values are less than 10. "No" signifies that both (1) the percent change between 2010 and 2011 is over or under the cross-year expected range and (2) either the 2010 or the 2011 value is greater than 10.

2009-2011 MAX IP Billing Provider Characteristics Validation Table  
 State: MD  
 Produced: 05/20/2013

Measure	2009 Value	2010 Value	2011 Value	% Change 2009-2010	% Change 2010-2011	Cross Year Expected Range	Cross Year 2009-2010 Within Range <sup>a</sup>	Cross Year 2010-2011 Within Range <sup>a</sup>
<b>Provider IDs with NPPES Primary Taxonomy</b>								
Number of provider IDs with NPPES primary taxonomy	418	420	434	0.48	3.33	30% (+/-)	Yes	Yes
% individual or group of individuals	0.0	0.2	0.0	Div by 0	-100.00	30% (+/-)	N/A	Yes
% allopathic and osteopathic physicians	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% behavioral health and social service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% chiropractic providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% dental providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% dietary and nutritional service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% emergency medical service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% eye and vision service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% nursing service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% nursing service-related providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% other service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% pharmacy service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% physician assistants and advanced practice nursing providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% podiatric medicine and surgery service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% respiratory, developmental, rehabilitative, and restorative service providers	0.0	0.2	0.0	Div by 0	-100.00	30% (+/-)	N/A	Yes
% speech, language, and hearing service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% student health care	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% technologists, technicians, and other technical service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% group of individuals with multi- or single specialty	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% nonindividuals	100.0	99.8	100.0	-0.24	0.24	30% (+/-)	Yes	Yes
% agencies	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% ambulatory health care facilities	0.5	0.5	0.5	-0.42	-3.19	30% (+/-)	Yes	Yes
% hospital units	2.4	1.4	0.9	-40.26	-35.50	30% (+/-)	Yes	Yes
% hospitals	96.4	95.5	97.0	-0.97	1.60	30% (+/-)	Yes	Yes
% laboratories	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% managed care organizations	0.2	0.2	0.2	-0.42	-3.19	30% (+/-)	Yes	Yes
% nursing and custodial care facilities	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% residential treatment facilities	0.5	1.0	0.9	99.16	-3.19	30% (+/-)	Yes	Yes
% respite care facility	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% suppliers	0.0	0.7	0.5	Div by 0	-35.46	30% (+/-)	N/A	Yes
% transportation services	0.0	0.5	0.0	Div by 0	-100.00	30% (+/-)	N/A	Yes
% nonmedical	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
<b>Provider IDs with Entity Type = Individual</b>								
Number of provider IDs with entity type = individual	0	0	0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% a sole proprietorship	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% not a sole proprietorship	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% not answered	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
<b>Provider IDs with Entity Type = Organization</b>								
Number of provider IDs with entity type = organization	429	422	436	-1.63	3.32	30% (+/-)	Yes	Yes
% organization is a subpart	6.3	5.2	6.4	-17.18	23.19	30% (+/-)	Yes	Yes
% organization is not a subpart	82.5	86.3	85.8	4.53	-0.55	30% (+/-)	Yes	Yes
% not answered	11.2	8.5	7.8	-23.76	-8.59	N/A	N/A	N/A

Source: Medicaid Analytic eXtract (MAX) Provider Characteristics Files, 2009-2011.

<sup>a</sup> "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.

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2009-2011 MAX LT Billing Provider Characteristics Validation Table  
 State: MD  
 Produced: 05/20/2013

Measure	2009 Value	2010 Value	2011 Value	% Change 2009-2010	% Change 2010-2011	Cross Year Expected Range	Cross Year 2009-2010 Within Range <sup>a</sup>	Cross Year 2010-2011 Within Range <sup>a</sup>
<b>LT Providers</b>								
Number of provider IDs	475	486	530	2.32	9.05	30% (+/-)	Yes	Yes
% billing provider on LT claim	48.2	47.5	48.1	-1.41	1.22	N/A	N/A	N/A
% NPI billing provider on LT claim	51.8	52.5	51.9	1.31	-1.11	N/A	N/A	N/A
% also a provider on IP claim	4.4	4.3	3.0	-2.26	-30.13	N/A	N/A	N/A
% also a provider on OT claim	40.4	39.3	39.6	-2.77	0.82	N/A	N/A	N/A
% also a provider on RX claim	2.5	2.5	2.1	-2.26	-15.94	N/A	N/A	N/A
% provider IDs with NPI	98.1	98.1	98.3	0.04	0.16	30% (+/-)	Yes	Yes
% provider IDs linked to NPPES	98.1	98.1	98.3	0.04	0.16	30% (+/-)	Yes	Yes
% provider IDs with or without NPI but linked to state provider file	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
average number of LT claims	945.7	967.3	850.9	2.28	-12.03	30% (+/-)	Yes	Yes
average number of beneficiaries with LT claims	120.1	121.0	116.9	0.75	-3.39	30% (+/-)	Yes	Yes
<b>Provider IDs with NPI</b>								
Number of provider IDs with NPI	466	477	521	2.36	9.22	30% (+/-)	Yes	Yes
% NPI source = MSIS	99.6	99.8	99.8	0.22	0.02	30% (+/-)	Yes	Yes
% NPI source = NPPES	0.4	0.2	0.2	-51.05	-8.60	30% (+/-)	Yes	Yes
% NPI source = state cross-reference file	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
<b>Provider IDs Linked to NPPES</b>								
Number of provider IDs linked to NPPES	466	477	521	2.36	9.22	30% (+/-)	Yes	Yes
% linked via NPI	99.6	99.8	99.8	0.22	0.02	30% (+/-)	Yes	Yes
% linked via Medicaid legacy provider ID	0.4	0.2	0.2	-51.05	-8.60	30% (+/-)	Yes	Yes
% linked via Medicare UPIN	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% with name prefix	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% with first name	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% with middle name	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% with last name	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% with name suffix	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% male	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% female	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% with credential	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% with business name	100.0	100.0	100.0	0.00	0.00	30% (+/-)	Yes	Yes
% with address line 1	100.0	100.0	100.0	0.00	0.00	30% (+/-)	Yes	Yes
% with city	100.0	100.0	100.0	0.00	0.00	30% (+/-)	Yes	Yes
% with state	100.0	100.0	100.0	0.00	0.00	30% (+/-)	Yes	Yes
% state = LT state code	98.1	97.1	97.9	-1.02	0.85	30% (+/-)	Yes	Yes
% with zip code	100.0	100.0	100.0	0.00	0.00	30% (+/-)	Yes	Yes
% with primary taxonomy	96.4	97.1	97.3	0.74	0.26	30% (+/-)	Yes	Yes
% with provider entity type = individual	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% with provider entity type = organization	100.0	100.0	100.0	0.00	0.00	30% (+/-)	Yes	Yes
<b>Provider IDs with or without NPI but linked to state provider file</b>								
Number of provider IDs with or without NPI linked to state provider file	0	0	0	Div by 0	Div by 0	N/A	N/A	N/A

Source: Medicaid Analytic eXtract (MAX) Provider Characteristics Files, 2009-2011.

<sup>a</sup> "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.

<sup>b</sup> "Yes" signifies that either (1) the percent change between 2010 and 2011 is within the cross-year expected range or (2) both the 2010 and the 2011 values are less than 10. "No" signifies that both (1) the percent change between 2010 and 2011 is over or under the cross-year expected range and (2) either the 2010 or the 2011 value is greater than 10.

2009-2011 MAX LT Billing Provider Characteristics Validation Table  
 State: MD  
 Produced: 05/20/2013

Measure	2009 Value	2010 Value	2011 Value	% Change 2009-2010	% Change 2010-2011	Cross Year Expected Range	Cross Year 2009-2010 Within Range <sup>a</sup>	Cross Year 2010-2011 Within Range <sup>a</sup>
<b>Provider IDs with NPPES Primary Taxonomy</b>								
Number of provider IDs with NPPES primary taxonomy	449	463	507	3.12	9.50	30% (+/-)	Yes	Yes
% individual or group of individuals	0.0	0.2	0.2	Div by 0	-8.69	30% (+/-)	N/A	Yes
% allopathic and osteopathic physicians	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% behavioral health and social service providers	0.0	0.2	0.2	Div by 0	-8.69	30% (+/-)	N/A	Yes
% chiropractic providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% dental providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% dietary and nutritional service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% emergency medical service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% eye and vision service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% nursing service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% nursing service-related providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% other service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% pharmacy service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% physician assistants and advanced practice nursing providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% podiatric medicine and surgery service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% respiratory, developmental, rehabilitative, and restorative service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% speech, language, and hearing service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% student health care	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% technologists, technicians, and other technical service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% group of individuals with multi- or single specialty	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% nonindividuals	100.0	99.8	99.8	-0.22	0.02	30% (+/-)	Yes	Yes
% agencies	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% ambulatory health care facilities	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% hospital units	0.7	0.2	0.2	-67.66	-8.69	30% (+/-)	Yes	Yes
% hospitals	2.5	3.2	2.4	32.24	-26.95	30% (+/-)	Yes	Yes
% laboratories	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% managed care organizations	0.2	0.2	0.2	-3.14	-8.69	30% (+/-)	Yes	Yes
% nursing and custodial care facilities	94.2	90.7	92.1	-3.71	1.54	30% (+/-)	Yes	Yes
% residential treatment facilities	2.2	5.0	4.5	123.08	-8.69	30% (+/-)	Yes	Yes
% respite care facility	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% suppliers	0.2	0.4	0.4	93.72	-8.69	30% (+/-)	Yes	Yes
% transportation services	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% nonmedical	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
<b>Provider IDs with Entity Type = Individual</b>								
Number of provider IDs with entity type = individual	0	0	0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% a sole proprietorship	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% not a sole proprietorship	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% not answered	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
<b>Provider IDs with Entity Type = Organization</b>								
Number of provider IDs with entity type = organization	466	477	521	2.36	9.22	30% (+/-)	Yes	Yes
% organization is a subpart	7.1	7.3	7.9	3.61	7.24	30% (+/-)	Yes	Yes
% organization is not a subpart	64.4	70.2	71.8	9.09	2.21	30% (+/-)	Yes	Yes
% not answered	28.5	22.4	20.3	-21.40	-9.30	N/A	N/A	N/A

Source: Medicaid Analytic eXtract (MAX) Provider Characteristics Files, 2009-2011.

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.

b "Yes" signifies that either (1) the percent change between 2010 and 2011 is within the cross-year expected range or (2) both the 2010 and the 2011 values are less than 10. "No" signifies that both (1) the percent change between 2010 and 2011 is over or under the cross-year expected range and (2) either the 2010 or the 2011 value is greater than 10.

2009-2011 MAX OT Servicing Provider Characteristics Validation Table  
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Measure	2009 Value	2010 Value	2011 Value	% Change 2009-2010	% Change 2010-2011	Cross Year Expected Range	Cross Year 2009-2010 Within Range <sup>a</sup>	Cross Year 2010-2011 Within Range <sup>a</sup>
<b>OT Providers</b>								
Number of provider IDs	86,588	92,158	97,503	6.43	5.80	30% (+/-)	Yes	Yes
% billing provider on OT claim	15.0	14.2	13.5	-5.52	-4.84	N/A	N/A	N/A
% servicing provider on OT claim	68.3	68.3	69.4	-0.01	1.67	N/A	N/A	N/A
% NPI servicing provider on OT claim	31.7	31.8	30.6	0.03	-3.60	N/A	N/A	N/A
% also a provider on IP claim	0.4	0.4	0.4	-3.15	-1.29	N/A	N/A	N/A
% also a provider on LT claim	0.2	0.2	0.2	-6.57	4.11	N/A	N/A	N/A
% also a provider on RX claim	14.1	13.6	12.7	-3.23	-6.39	N/A	N/A	N/A
% provider IDs with NPI	62.2	62.3	60.3	0.18	-3.17	30% (+/-)	Yes	Yes
% provider IDs linked to NPPES	50.5	51.0	49.6	0.99	-2.63	30% (+/-)	Yes	Yes
% provider IDs with or without NPI but linked to state provider file	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
average number of OT claims	582.4	663.7	655.5	13.96	-1.24	30% (+/-)	Yes	Yes
average number of beneficiaries with OT claims	82.6	85.5	86.3	3.51	1.03	30% (+/-)	Yes	Yes
<b>Provider IDs with NPI</b>								
Number of provider IDs with NPI	53,853	57,418	58,822	6.62	2.45	30% (+/-)	Yes	Yes
% NPI source = MSIS	99.1	99.1	99.2	0.08	0.07	30% (+/-)	Yes	Yes
% NPI source = NPPES	0.9	0.9	0.8	-8.67	-8.12	30% (+/-)	Yes	Yes
% NPI source = state cross-reference file	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
<b>Provider IDs Linked to NPPES</b>								
Number of provider IDs linked to NPPES	43,686	46,956	48,373	7.49	3.02	30% (+/-)	Yes	Yes
% linked via NPI	98.8	99.0	99.0	0.11	0.09	30% (+/-)	Yes	Yes
% linked via Medicaid legacy provider ID	1.2	1.0	1.0	-9.30	-8.91	30% (+/-)	Yes	Yes
% linked via Medicare UPIN	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% with name prefix	36.7	37.4	37.4	1.92	-0.17	30% (+/-)	Yes	Yes
% with first name	76.1	76.6	76.5	0.67	-0.14	30% (+/-)	Yes	Yes
% with middle name	52.2	52.8	52.4	1.11	-0.75	30% (+/-)	Yes	Yes
% with last name	76.1	76.6	76.5	0.67	-0.14	30% (+/-)	Yes	Yes
% with name suffix	2.1	2.0	1.8	-2.02	-9.43	30% (+/-)	Yes	Yes
% male	46.0	44.5	43.2	-3.21	-2.83	30% (+/-)	Yes	Yes
% female	30.1	32.1	33.2	6.59	3.60	30% (+/-)	Yes	Yes
% with credential	72.8	73.4	73.2	0.84	-0.34	30% (+/-)	Yes	Yes
% with business name	23.9	23.1	23.3	-3.57	1.10	30% (+/-)	Yes	Yes
% with address line 1	100.0	99.7	99.8	-0.35	0.15	30% (+/-)	Yes	Yes
% with city	100.0	99.7	99.8	-0.35	0.15	30% (+/-)	Yes	Yes
% with state	100.0	99.7	99.8	-0.35	0.15	30% (+/-)	Yes	Yes
% state = OT state code	78.7	77.6	77.4	-1.47	-0.18	30% (+/-)	Yes	Yes
% with zip code	100.0	99.7	99.8	-0.35	0.15	30% (+/-)	Yes	Yes
% with primary taxonomy	98.1	97.9	98.2	-0.28	0.33	30% (+/-)	Yes	Yes
% with provider entity type = individual	76.1	76.6	76.5	0.67	-0.14	30% (+/-)	Yes	Yes
% with provider entity type = organization	23.9	23.1	23.3	-3.57	1.10	30% (+/-)	Yes	Yes
<b>Provider IDs with or without NPI but linked to state provider file</b>								
Number of provider IDs with or without NPI linked to state provider file	0	0	0	Div by 0	Div by 0	N/A	N/A	N/A

Source: Medicaid Analytic eXtract (MAX) Provider Characteristics Files, 2009-2011.

<sup>a</sup> "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.

<sup>b</sup> "Yes" signifies that either (1) the percent change between 2010 and 2011 is within the cross-year expected range or (2) both the 2010 and the 2011 values are less than 10. "No" signifies that both (1) the percent change between 2010 and 2011 is over or under the cross-year expected range and (2) either the 2010 or the 2011 value is greater than 10.

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Measure	2009 Value	2010 Value	2011 Value	% Change 2009-2010	% Change 2010-2011	Cross Year Expected Range	Cross Year 2009-2010 Within Range <sup>a</sup>	Cross Year 2010-2011 Within Range <sup>a</sup>
<b>Provider IDs with NPPES Primary Taxonomy</b>								
Number of provider IDs with NPPES primary taxonomy	43,174	45,956	47,497	6.44	3.35	30% (+/-)	Yes	Yes
% individual or group of individuals	86.0	86.8	86.7	0.95	-0.06	30% (+/-)	Yes	Yes
% allopathic and osteopathic physicians	65.0	63.0	61.6	-3.09	-2.23	30% (+/-)	Yes	Yes
% behavioral health and social service providers	4.6	5.9	6.0	28.33	1.63	30% (+/-)	Yes	Yes
% chiropractic providers	0.2	0.1	0.1	-29.75	10.01	30% (+/-)	Yes	Yes
% dental providers	3.4	4.1	4.4	22.49	6.24	30% (+/-)	Yes	Yes
% dietary and nutritional service providers	0.0	0.0	0.0	40.00	-39.85	30% (+/-)	Yes	Yes
% emergency medical service providers	0.0	0.1	0.0	78.13	-18.74	30% (+/-)	Yes	Yes
% eye and vision service providers	0.6	0.6	0.6	0.96	1.76	30% (+/-)	Yes	Yes
% nursing service providers	0.7	0.3	0.3	-51.82	7.26	30% (+/-)	Yes	Yes
% nursing service-related providers	0.4	0.0	0.0	-99.43	-100.00	30% (+/-)	Yes	Yes
% other service providers	3.5	4.2	4.1	20.02	-2.23	30% (+/-)	Yes	Yes
% pharmacy service providers	0.0	0.0	0.0	860.00	0.88	30% (+/-)	Yes	Yes
% physician assistants and advanced practice nursing providers	4.1	4.8	5.2	18.28	8.22	30% (+/-)	Yes	Yes
% podiatric medicine and surgery service providers	1.7	1.5	1.4	-11.97	-4.22	30% (+/-)	Yes	Yes
% respiratory, developmental, rehabilitative, and restorative service providers	1.1	1.2	1.5	5.84	25.96	30% (+/-)	Yes	Yes
% speech, language, and hearing service providers	0.4	0.3	0.4	-8.97	15.64	30% (+/-)	Yes	Yes
% student health care	0.4	0.6	1.0	50.51	62.85	30% (+/-)	Yes	Yes
% technologists, technicians, and other technical service providers	0.1	0.1	0.1	-21.74	-6.43	30% (+/-)	Yes	Yes
% group of individuals with multi- or single specialty	0.0	0.0	0.0	-100.00	Div by 0	30% (+/-)	Yes	N/A
% nonindividuals	14.0	13.2	13.3	-5.84	0.43	30% (+/-)	Yes	Yes
% agencies	1.6	1.7	1.7	5.50	-1.15	30% (+/-)	Yes	Yes
% ambulatory health care facilities	3.5	3.3	3.4	-5.69	1.59	30% (+/-)	Yes	Yes
% hospital units	0.0	0.0	0.0	-14.29	-21.05	30% (+/-)	Yes	Yes
% hospitals	1.6	1.6	1.8	0.57	12.98	30% (+/-)	Yes	Yes
% laboratories	0.5	0.6	0.5	14.61	-2.86	30% (+/-)	Yes	Yes
% managed care organizations	0.0	0.1	0.1	59.09	-0.75	30% (+/-)	Yes	Yes
% nursing and custodial care facilities	0.9	0.9	0.9	-8.30	3.32	30% (+/-)	Yes	Yes
% residential treatment facilities	0.1	0.1	0.1	-12.50	16.97	30% (+/-)	Yes	Yes
% respite care facility	0.0	0.0	0.0	0.00	-6.43	30% (+/-)	Yes	Yes
% suppliers	4.9	4.1	4.0	-15.22	-2.53	30% (+/-)	Yes	Yes
% transportation services	0.9	0.9	0.8	2.33	-10.93	30% (+/-)	Yes	Yes
% nonmedical	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
<b>Provider IDs with Entity Type = Individual</b>								
Number of provider IDs with entity type = individual	33,232	35,958	36,992	8.20	2.88	30% (+/-)	Yes	Yes
% a sole proprietorship	18.3	20.1	21.1	9.84	4.83	30% (+/-)	Yes	Yes
% not a sole proprietorship	67.2	69.7	69.4	3.65	-0.37	30% (+/-)	Yes	Yes
% not answered	14.4	10.2	9.5	-29.50	-6.99	N/A	N/A	N/A
<b>Provider IDs with Entity Type = Organization</b>								
Number of provider IDs with entity type = organization	10,454	10,835	11,285	3.64	4.15	30% (+/-)	Yes	Yes
% organization is a subpart	9.0	9.4	9.8	4.91	4.11	30% (+/-)	Yes	Yes
% organization is not a subpart	70.2	74.8	75.3	6.55	0.68	30% (+/-)	Yes	Yes
% not answered	20.8	15.8	14.9	-24.22	-5.67	N/A	N/A	N/A

Source: Medicaid Analytic eXtract (MAX) Provider Characteristics Files, 2009-2011.

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2009-2011 MAX OT Billing Provider Characteristics Validation Table  
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Measure	2009 Value	2010 Value	2011 Value	% Change 2009-2010	% Change 2010-2011	Cross Year Expected Range	Cross Year 2009-2010 Within Range <sup>a</sup>	Cross Year 2010-2011 Within Range <sup>a</sup>
<b>OT Providers</b>								
Number of provider IDs	13,191	13,357	13,377	1.26	0.15	30% (+/-)	Yes	Yes
% billing provider on OT claim	100.0	100.0	100.0	0.00	0.00	N/A	N/A	N/A
% servicing provider on OT claim	98.7	98.0	98.6	-0.69	0.53	N/A	N/A	N/A
% NPI servicing provider on OT claim	0.0	0.0	0.0	Div by 0	6.79	N/A	N/A	N/A
% also a provider on IP claim	1.4	1.5	1.5	6.11	0.37	N/A	N/A	N/A
% also a provider on LT claim	0.1	0.1	0.1	-17.58	9.64	N/A	N/A	N/A
% also a provider on RX claim	19.9	18.0	15.9	-9.23	-11.72	N/A	N/A	N/A
% provider IDs with NPI	90.3	90.7	91.2	0.36	0.54	30% (+/-)	Yes	Yes
% provider IDs linked to NPPES	53.6	52.9	53.6	-1.31	1.29	30% (+/-)	Yes	Yes
% provider IDs with or without NPI but linked to state provider file	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
average number of OT claims	3,383.8	3,861.6	4,085.7	14.12	5.80	30% (+/-)	Yes	Yes
average number of beneficiaries with OT claims	194.4	207.5	214.3	6.76	3.30	30% (+/-)	Yes	Yes
<b>Provider IDs with NPI</b>								
Number of provider IDs with NPI	11,917	12,110	12,194	1.62	0.69	30% (+/-)	Yes	Yes
% NPI source = MSIS	97.2	97.1	97.3	-0.12	0.21	30% (+/-)	Yes	Yes
% NPI source = NPPES	2.8	2.9	2.7	4.11	-7.26	30% (+/-)	Yes	Yes
% NPI source = state cross-reference file	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
<b>Provider IDs Linked to NPPES</b>								
Number of provider IDs linked to NPPES	7,069	7,064	7,166	-0.07	1.44	30% (+/-)	Yes	Yes
% linked via NPI	95.4	95.1	95.5	-0.29	0.41	30% (+/-)	Yes	Yes
% linked via Medicaid legacy provider ID	4.6	4.9	4.5	5.56	-7.69	30% (+/-)	Yes	Yes
% linked via Medicare UPIN	0.0	0.0	0.0	Div by 0	-100.00	30% (+/-)	N/A	Yes
% with name prefix	19.6	17.7	15.9	-9.54	-10.56	30% (+/-)	Yes	Yes
% with first name	31.7	28.7	26.2	-9.53	-8.53	30% (+/-)	Yes	Yes
% with middle name	23.4	20.9	19.0	-10.35	-9.49	30% (+/-)	Yes	Yes
% with last name	31.7	28.7	26.2	-9.53	-8.53	30% (+/-)	Yes	Yes
% with name suffix	1.2	1.1	0.8	-8.25	-24.46	30% (+/-)	Yes	Yes
% male	22.5	20.4	18.0	-9.47	-11.81	30% (+/-)	Yes	Yes
% female	9.2	8.3	8.2	-9.68	-0.41	30% (+/-)	Yes	Yes
% with credential	30.6	27.8	25.4	-9.31	-8.66	30% (+/-)	Yes	Yes
% with business name	68.3	70.9	73.5	3.78	3.71	30% (+/-)	Yes	Yes
% with address line 1	100.0	99.6	99.7	-0.44	0.19	30% (+/-)	Yes	Yes
% with city	100.0	99.6	99.7	-0.44	0.19	30% (+/-)	Yes	Yes
% with state	100.0	99.6	99.7	-0.44	0.19	30% (+/-)	Yes	Yes
% state = OT state code	85.5	84.2	82.7	-1.44	-1.87	30% (+/-)	Yes	Yes
% with zip code	100.0	99.6	99.7	-0.44	0.19	30% (+/-)	Yes	Yes
% with primary taxonomy	98.2	97.8	98.2	-0.39	0.48	30% (+/-)	Yes	Yes
% with provider entity type = individual	31.7	28.7	26.2	-9.53	-8.53	30% (+/-)	Yes	Yes
% with provider entity type = organization	68.3	70.9	73.5	3.78	3.71	30% (+/-)	Yes	Yes
<b>Provider IDs with or without NPI but linked to state provider file</b>								
Number of provider IDs with or without NPI linked to state provider file	0	0	0	Div by 0	Div by 0	N/A	N/A	N/A

Source: Medicaid Analytic eExtract (MAX) Provider Characteristics Files, 2009-2011.

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<sup>b</sup> "Yes" signifies that either (1) the percent change between 2010 and 2011 is within the cross-year expected range or (2) both the 2010 and the 2011 values are less than 10. "No" signifies that both (1) the percent change between 2010 and 2011 is over or under the cross-year expected range and (2) either the 2010 or the 2011 value is greater than 10.

2009-2011 MAX OT Billing Provider Characteristics Validation Table  
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Measure	2009 Value	2010 Value	2011 Value	% Change 2009-2010	% Change 2010-2011	Cross Year Expected Range	Cross Year 2009-2010 Within Range <sup>a</sup>	Cross Year 2010-2011 Within Range <sup>a</sup>
<b>Provider IDs with NPPES Primary Taxonomy</b>								
Number of provider IDs with NPPES primary taxonomy	7,075	6,907	7,040	-2.37	1.93	30% (+/-)	Yes	Yes
% individual or group of individuals	62.5	61.1	60.4	-2.13	-1.19	30% (+/-)	Yes	Yes
% allopathic and osteopathic physicians	43.3	43.4	42.7	0.26	-1.46	30% (+/-)	Yes	Yes
% behavioral health and social service providers	3.7	4.0	3.8	7.10	-3.30	30% (+/-)	Yes	Yes
% chiropractic providers	0.5	0.3	0.4	-23.23	6.43	30% (+/-)	Yes	Yes
% dental providers	1.6	0.1	0.2	-90.92	17.55	30% (+/-)	Yes	Yes
% dietary and nutritional service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% emergency medical service providers	0.0	0.1	0.0	210.71	-51.02	30% (+/-)	Yes	Yes
% eye and vision service providers	1.2	1.3	1.3	3.62	4.84	30% (+/-)	Yes	Yes
% nursing service providers	0.4	0.1	0.1	-69.34	-12.59	30% (+/-)	Yes	Yes
% nursing service-related providers	1.1	0.0	0.0	-100.00	Div by 0	30% (+/-)	Yes	N/A
% other service providers	4.8	5.9	5.6	22.37	-5.04	30% (+/-)	Yes	Yes
% pharmacy service providers	0.0	0.1	0.1	Div by 0	-2.04	30% (+/-)	N/A	Yes
% physician assistants and advanced practice nursing providers	0.6	0.6	0.6	-4.40	-8.89	30% (+/-)	Yes	Yes
% podiatric medicine and surgery service providers	3.7	3.3	3.4	-10.14	1.98	30% (+/-)	Yes	Yes
% respiratory, developmental, rehabilitative, and restorative service providers	1.2	1.4	1.5	16.03	12.72	30% (+/-)	Yes	Yes
% speech, language, and hearing service providers	0.2	0.3	0.4	44.58	26.90	30% (+/-)	Yes	Yes
% student health care	0.0	0.0	0.1	53.57	98.20	30% (+/-)	Yes	Yes
% technologists, technicians, and other technical service providers	0.1	0.1	0.1	15.04	-23.51	30% (+/-)	Yes	Yes
% group of individuals with multi- or single specialty	0.0	0.0	0.0	-100.00	Div by 0	30% (+/-)	Yes	N/A
% nonindividuals	37.5	38.9	39.6	3.55	1.87	30% (+/-)	Yes	Yes
% agencies	2.9	3.5	3.4	21.33	-4.71	30% (+/-)	Yes	Yes
% ambulatory health care facilities	8.1	9.1	9.4	11.87	3.10	30% (+/-)	Yes	Yes
% hospital units	0.1	0.1	0.1	1.75	-2.04	30% (+/-)	Yes	Yes
% hospitals	4.6	4.5	5.5	-0.72	21.61	30% (+/-)	Yes	Yes
% laboratories	1.4	1.8	1.8	23.99	3.78	30% (+/-)	Yes	Yes
% managed care organizations	0.1	0.1	0.1	46.46	-2.04	30% (+/-)	Yes	Yes
% nursing and custodial care facilities	2.9	3.0	3.1	3.90	3.26	30% (+/-)	Yes	Yes
% residential treatment facilities	0.0	0.1	0.1	71.43	-1.36	30% (+/-)	Yes	Yes
% respite care facility	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% suppliers	14.8	13.6	13.4	-7.66	-1.47	30% (+/-)	Yes	Yes
% transportation services	2.6	3.0	2.7	14.61	-10.90	30% (+/-)	Yes	Yes
% nonmedical	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
<b>Provider IDs with Entity Type = Individual</b>								
Number of provider IDs with entity type = individual	2,241	2,026	1,880	-9.59	-7.21	30% (+/-)	Yes	Yes
% a sole proprietorship	50.6	54.9	55.2	8.66	0.41	30% (+/-)	Yes	Yes
% not a sole proprietorship	36.8	35.8	35.4	-2.54	-1.29	30% (+/-)	Yes	Yes
% not answered	12.7	9.2	9.5	-27.17	2.58	N/A	N/A	N/A
<b>Provider IDs with Entity Type = Organization</b>								
Number of provider IDs with entity type = organization	4,828	5,007	5,268	3.71	5.21	30% (+/-)	Yes	Yes
% organization is a subpart	9.1	9.5	9.9	4.11	4.47	30% (+/-)	Yes	Yes
% organization is not a subpart	71.1	75.7	76.2	6.51	0.66	30% (+/-)	Yes	Yes
% not answered	19.8	14.8	13.9	-25.26	-6.24	N/A	N/A	N/A

Source: Medicaid Analytic eXtract (MAX) Provider Characteristics Files, 2009-2011.

<sup>a</sup> "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.

<sup>b</sup> "Yes" signifies that either (1) the percent change between 2010 and 2011 is within the cross-year expected range or (2) both the 2010 and the 2011 values are less than 10. "No" signifies that both (1) the percent change between 2010 and 2011 is over or under the cross-year expected range and (2) either the 2010 or the 2011 value is greater than 10.

2009-2011 MAX RX Billing Provider Characteristics Validation Table  
 State: MD  
 Produced: 05/20/2013

Measure	2009 Value	2010 Value	2011 Value	% Change 2009-2010	% Change 2010-2011	Cross Year Expected Range	Cross Year 2009-2010 Within Range <sup>a</sup>	Cross Year 2010-2011 Within Range <sup>a</sup>
<b>RX Providers</b>								
Number of provider IDs	2,508	2,643	2,647	5.38	0.15	30% (+/-)	Yes	Yes
% billing provider on RX claim	50.4	52.3	50.9	3.76	-2.68	N/A	N/A	N/A
% prescribing provider on RX claim	6.1	1.9	1.0	-68.78	-46.09	N/A	N/A	N/A
% NPI billing provider on RX claim	49.6	47.7	49.1	-3.81	2.93	N/A	N/A	N/A
% also a provider on IP claim	0.4	0.5	0.4	13.78	-8.47	N/A	N/A	N/A
% also a provider on LT claim	0.3	0.3	0.3	-5.02	-0.21	N/A	N/A	N/A
% also a provider on OT claim	25.5	20.7	20.8	-18.90	0.58	N/A	N/A	N/A
% provider IDs with NPI	99.4	99.6	99.6	0.14	0.00	30% (+/-)	Yes	Yes
% provider IDs linked to NPPES	99.0	99.6	99.6	0.55	0.00	30% (+/-)	Yes	Yes
% provider IDs with or without NPI but linked to state provider file	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
average number of RX claims	4,324.8	4,641.3	5,128.5	7.32	10.50	30% (+/-)	Yes	Yes
average number of beneficiaries with RX claims	436.8	458.7	497.2	5.02	8.38	30% (+/-)	Yes	Yes
<b>Provider IDs with NPI</b>								
Number of provider IDs with NPI	2,494	2,632	2,636	5.53	0.15	30% (+/-)	Yes	Yes
% NPI source = MSIS	100.0	100.0	100.0	0.00	0.00	30% (+/-)	Yes	Yes
% NPI source = NPPES	0.0	0.0	0.0	-5.00	-0.17	30% (+/-)	Yes	Yes
% NPI source = state cross-reference file	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
<b>Provider IDs Linked to NPPES</b>								
Number of provider IDs linked to NPPES	2,484	2,632	2,636	5.96	0.15	30% (+/-)	Yes	Yes
% linked via NPI	100.0	100.0	100.0	0.00	0.00	30% (+/-)	Yes	Yes
% linked via Medicaid legacy provider ID	0.0	0.0	0.0	-5.00	-0.17	30% (+/-)	Yes	Yes
% linked via Medicare UPIN	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% with name prefix	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% with first name	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% with middle name	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% with last name	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% with name suffix	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% male	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% female	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% with credential	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% with business name	100.0	99.4	99.8	-0.61	0.38	30% (+/-)	Yes	Yes
% with address line 1	100.0	99.4	99.8	-0.61	0.38	30% (+/-)	Yes	Yes
% with city	100.0	99.4	99.8	-0.61	0.38	30% (+/-)	Yes	Yes
% with state	100.0	99.4	99.8	-0.61	0.38	30% (+/-)	Yes	Yes
% state = RX state code	90.0	88.7	87.5	-1.44	-1.35	30% (+/-)	Yes	Yes
% with zip code	100.0	99.4	99.8	-0.61	0.38	30% (+/-)	Yes	Yes
% with primary taxonomy	96.9	96.7	97.3	-0.25	0.63	30% (+/-)	Yes	Yes
% with provider entity type = individual	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% with provider entity type = organization	100.0	99.4	99.8	-0.61	0.38	30% (+/-)	Yes	Yes
<b>Provider IDs with or without NPI but linked to state provider file</b>								
Number of provider IDs with or without NPI linked to state provider file	0	0	0	Div by 0	Div by 0	N/A	N/A	N/A

Source: Medicaid Analytic eXtract (MAX) Provider Characteristics Files, 2009-2011.

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.

b "Yes" signifies that either (1) the percent change between 2010 and 2011 is within the cross-year expected range or (2) both the 2010 and the 2011 values are less than 10. "No" signifies that both (1) the percent change between 2010 and 2011 is over or under the cross-year expected range and (2) either the 2010 or the 2011 value is greater than 10.

2009-2011 MAX RX Billing Provider Characteristics Validation Table  
 State: MD  
 Produced: 05/20/2013

Measure	2009 Value	2010 Value	2011 Value	% Change 2009-2010	% Change 2010-2011	Cross Year Expected Range	Cross Year 2009-2010 Within Range <sup>a</sup>	Cross Year 2010-2011 Within Range <sup>a</sup>
<b>Provider IDs with NPPES Primary Taxonomy</b>								
Number of provider IDs with NPPES primary taxonomy	2,407	2,544	2,564	5.69	0.79	30% (+/-)	Yes	Yes
% individual or group of individuals	1.5	1.8	1.8	17.63	-0.77	30% (+/-)	Yes	Yes
% allopathic and osteopathic physicians	0.1	0.0	0.0	-100.00	Div by 0	30% (+/-)	Yes	N/A
% behavioral health and social service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% chiropractic providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% dental providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% dietary and nutritional service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% emergency medical service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% eye and vision service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% nursing service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% nursing service-related providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% other service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% pharmacy service providers	1.4	1.8	1.8	27.95	-0.77	30% (+/-)	Yes	Yes
% physician assistants and advanced practice nursing providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% podiatric medicine and surgery service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% respiratory, developmental, rehabilitative, and restorative service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% speech, language, and hearing service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% student health care	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% technologists, technicians, and other technical service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% group of individuals with multi- or single specialty	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% nonindividuals	98.5	98.2	98.2	-0.28	0.01	30% (+/-)	Yes	Yes
% agencies	0.1	0.1	0.1	-36.80	-1.26	30% (+/-)	Yes	Yes
% ambulatory health care facilities	0.0	0.1	0.1	Div by 0	-1.26	30% (+/-)	N/A	Yes
% hospital units	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% hospitals	0.2	0.2	0.2	-36.95	-0.63	30% (+/-)	Yes	Yes
% laboratories	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% managed care organizations	0.1	0.1	0.0	-5.60	-66.95	30% (+/-)	Yes	Yes
% nursing and custodial care facilities	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% residential treatment facilities	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% respite care facility	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% suppliers	98.0	97.8	97.9	-0.21	0.10	30% (+/-)	Yes	Yes
% transportation services	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% nonmedical	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
<b>Provider IDs with Entity Type = Individual</b>								
Number of provider IDs with entity type = individual	0	0	0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% a sole proprietorship	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% not a sole proprietorship	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% not answered	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
<b>Provider IDs with Entity Type = Organization</b>								
Number of provider IDs with entity type = organization	2,484	2,616	2,630	5.31	0.54	30% (+/-)	Yes	Yes
% organization is a subpart	12.6	12.1	13.1	-4.44	8.28	30% (+/-)	Yes	Yes
% organization is not a subpart	76.2	80.8	80.2	5.98	-0.72	30% (+/-)	Yes	Yes
% not answered	11.1	7.1	6.7	-36.01	-5.88	N/A	N/A	N/A

Source: Medicaid Analytic eXtract (MAX) Provider Characteristics Files, 2009-2011.

<sup>a</sup> "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.

<sup>b</sup> "Yes" signifies that either (1) the percent change between 2010 and 2011 is within the cross-year expected range or (2) both the 2010 and the 2011 values are less than 10. "No" signifies that both (1) the percent change between 2010 and 2011 is over or under the cross-year expected range and (2) either the 2010 or the 2011 value is greater than 10.

2009-2011 MAX RX Prescribing Provider Characteristics Validation Table

State: MD

Produced: 05/20/2013

Measure	2009 Value	2010 Value	2011 Value	% Change 2009-2010	% Change 2010-2011	Cross Year Expected Range	Cross Year 2009-2010 Within Range <sup>a</sup>	Cross Year 2010-2011 Within Range <sup>a</sup>
<b>RX Providers</b>								
Number of provider IDs	16,619	16,642	16,443	0.14	-1.20	30% (+/-)	Yes	Yes
% billing provider on RX claim	0.9	0.3	0.2	-67.21	-45.27	N/A	N/A	N/A
% prescribing provider on RX claim	100.0	100.0	100.0	0.00	0.00	N/A	N/A	N/A
% NPI billing provider on RX claim	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
% also a provider on IP claim	0.3	0.4	0.3	22.15	-26.47	N/A	N/A	N/A
% also a provider on LT claim	0.0	0.0	0.0	0.00	-18.91	N/A	N/A	N/A
% also a provider on OT claim	69.6	72.3	72.4	3.83	0.14	N/A	N/A	N/A
% provider IDs with NPI	68.1	72.0	72.7	5.83	0.90	30% (+/-)	Yes	Yes
% provider IDs linked to NPPES	67.9	72.0	72.6	6.11	0.88	30% (+/-)	Yes	Yes
% provider IDs with or without NPI but linked to state provider file	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
average number of RX claims	522.5	573.1	647.4	9.67	12.97	30% (+/-)	Yes	Yes
average number of beneficiaries with RX claims	64.6	62.2	65.7	-3.66	5.66	30% (+/-)	Yes	Yes
<b>Provider IDs with NPI</b>								
Number of provider IDs with NPI	11,310	11,986	11,949	5.98	-0.31	30% (+/-)	Yes	Yes
% NPI source = MSIS	93.9	93.5	93.0	-0.44	-0.49	30% (+/-)	Yes	Yes
% NPI source = NPPES	6.1	6.5	7.0	6.84	7.01	30% (+/-)	Yes	Yes
% NPI source = state cross-reference file	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
<b>Provider IDs Linked to NPPES</b>								
Number of provider IDs linked to NPPES	11,278	11,984	11,945	6.26	-0.33	30% (+/-)	Yes	Yes
% linked via NPI	93.9	93.5	93.0	-0.43	-0.49	30% (+/-)	Yes	Yes
% linked via Medicaid legacy provider ID	6.1	6.5	6.9	6.59	7.03	30% (+/-)	Yes	Yes
% linked via Medicare UPIN	0.0	0.0	0.0	-5.56	-1.51	30% (+/-)	Yes	Yes
% with name prefix	45.7	46.3	46.6	1.24	0.71	30% (+/-)	Yes	Yes
% with first name	92.8	93.3	94.5	0.51	1.38	30% (+/-)	Yes	Yes
% with middle name	64.6	65.1	66.1	0.79	1.46	30% (+/-)	Yes	Yes
% with last name	92.8	93.3	94.5	0.51	1.38	30% (+/-)	Yes	Yes
% with name suffix	2.6	2.4	2.3	-10.94	-2.87	30% (+/-)	Yes	Yes
% male	57.8	56.2	55.4	-2.78	-1.28	30% (+/-)	Yes	Yes
% female	35.0	37.1	39.1	5.96	5.41	30% (+/-)	Yes	Yes
% with credential	88.9	89.8	90.9	0.92	1.23	30% (+/-)	Yes	Yes
% with business name	7.2	6.3	5.2	-12.48	-17.17	30% (+/-)	Yes	Yes
% with address line 1	100.0	99.6	99.8	-0.43	0.20	30% (+/-)	Yes	Yes
% with city	100.0	99.6	99.8	-0.43	0.20	30% (+/-)	Yes	Yes
% with state	100.0	99.6	99.8	-0.43	0.20	30% (+/-)	Yes	Yes
% state = RX state code	84.3	82.5	82.7	-2.07	0.22	30% (+/-)	Yes	Yes
% with zip code	100.0	99.6	99.8	-0.43	0.20	30% (+/-)	Yes	Yes
% with primary taxonomy	98.7	98.4	98.8	-0.28	0.39	30% (+/-)	Yes	Yes
% with provider entity type = individual	92.8	93.3	94.5	0.51	1.38	30% (+/-)	Yes	Yes
% with provider entity type = organization	7.2	6.3	5.2	-12.48	-17.17	30% (+/-)	Yes	Yes
<b>Provider IDs with or without NPI but linked to state provider file</b>								
Number of provider IDs with or without NPI linked to state provider file	0	0	0	Div by 0	Div by 0	N/A	N/A	N/A

Source: Medicaid Analytic eXtract (MAX) Provider Characteristics Files, 2009-2011.

<sup>a</sup> "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.

<sup>b</sup> "Yes" signifies that either (1) the percent change between 2010 and 2011 is within the cross-year expected range or (2) both the 2010 and the 2011 values are less than 10. "No" signifies that both (1) the percent change between 2010 and 2011 is over or under the cross-year expected range and (2) either the 2010 or the 2011 value is greater than 10.

2009-2011 MAX RX Prescribing Provider Characteristics Validation Table

State: MD

Produced: 05/20/2013

Measure	2009 Value	2010 Value	2011 Value	% Change 2009-2010	% Change 2010-2011	Cross Year Expected Range	Cross Year 2009-2010 Within Range <sup>a</sup>	Cross Year 2010-2011 Within Range <sup>a</sup>
<b>Provider IDs with NPPES Primary Taxonomy</b>								
Number of provider IDs with NPPES primary taxonomy	11,144	11,795	11,802	5.84	0.06	30% (+/-)	Yes	Yes
% individual or group of individuals	95.7	97.4	98.1	1.73	0.72	30% (+/-)	Yes	Yes
% allopathic and osteopathic physicians	80.4	78.9	78.8	-1.85	-0.15	30% (+/-)	Yes	Yes
% behavioral health and social service providers	0.3	0.2	0.2	-11.51	-0.11	30% (+/-)	Yes	Yes
% chiropractic providers	0.0	0.0	0.0	-52.78	-50.16	30% (+/-)	Yes	Yes
% dental providers	4.1	5.0	5.0	21.24	-0.58	30% (+/-)	Yes	Yes
% dietary and nutritional service providers	0.0	0.0	0.0	Div by 0	-100.00	30% (+/-)	N/A	Yes
% emergency medical service providers	0.1	0.1	0.1	25.93	-0.32	30% (+/-)	Yes	Yes
% eye and vision service providers	0.3	0.3	0.3	14.74	20.62	30% (+/-)	Yes	Yes
% nursing service providers	0.8	0.3	0.3	-64.48	0.05	30% (+/-)	Yes	Yes
% nursing service-related providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% other service providers	3.8	5.0	4.7	32.05	-4.66	30% (+/-)	Yes	Yes
% pharmacy service providers	0.0	0.0	0.0	88.89	-50.16	30% (+/-)	Yes	Yes
% physician assistants and advanced practice nursing providers	3.9	5.3	6.0	34.17	14.57	30% (+/-)	Yes	Yes
% podiatric medicine and surgery service providers	1.4	1.4	1.2	-1.97	-11.61	30% (+/-)	Yes	Yes
% respiratory, developmental, rehabilitative, and restorative service providers	0.1	0.1	0.0	-53.17	-42.55	30% (+/-)	Yes	Yes
% speech, language, and hearing service providers	0.0	0.0	0.0	88.89	-0.32	30% (+/-)	Yes	Yes
% student health care	0.5	0.8	1.3	69.48	56.68	30% (+/-)	Yes	Yes
% technologists, technicians, and other technical service providers	0.0	0.0	0.0	-70.37	-100.00	30% (+/-)	Yes	Yes
% group of individuals with multi- or single specialty	0.0	0.0	0.0	-100.00	Div by 0	30% (+/-)	Yes	N/A
% nonindividuals	4.3	2.6	1.9	-38.46	-26.32	30% (+/-)	Yes	Yes
% agencies	0.2	0.2	0.2	32.40	-21.35	30% (+/-)	Yes	Yes
% ambulatory health care facilities	1.1	0.8	0.7	-32.11	-5.49	30% (+/-)	Yes	Yes
% hospital units	0.1	0.0	0.0	-100.00	Div by 0	30% (+/-)	Yes	N/A
% hospitals	0.5	0.7	0.5	27.12	-20.52	30% (+/-)	Yes	Yes
% laboratories	0.0	0.1	0.0	41.67	-33.54	30% (+/-)	Yes	Yes
% managed care organizations	0.0	0.0	0.0	55.56	-19.30	30% (+/-)	Yes	Yes
% nursing and custodial care facilities	0.1	0.1	0.1	7.94	-12.78	30% (+/-)	Yes	Yes
% residential treatment facilities	0.0	0.0	0.0	55.56	-19.30	30% (+/-)	Yes	Yes
% respite care facility	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% suppliers	2.2	0.8	0.3	-65.98	-55.58	30% (+/-)	Yes	Yes
% transportation services	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% nonmedical	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
<b>Provider IDs with Entity Type = Individual</b>								
Number of provider IDs with entity type = individual	10,464	11,176	11,293	6.80	1.05	30% (+/-)	Yes	Yes
% a sole proprietorship	18.6	19.7	20.3	6.02	3.15	30% (+/-)	Yes	Yes
% not a sole proprietorship	67.6	71.0	70.9	5.06	-0.15	30% (+/-)	Yes	Yes
% not answered	13.8	9.3	8.8	-32.82	-5.52	N/A	N/A	N/A
<b>Provider IDs with Entity Type = Organization</b>								
Number of provider IDs with entity type = organization	814	757	625	-7.00	-17.44	30% (+/-)	Yes	Yes
% organization is a subpart	11.9	10.2	9.9	-14.64	-2.48	30% (+/-)	Yes	Yes
% organization is not a subpart	73.3	76.4	78.7	4.11	3.10	30% (+/-)	Yes	Yes
% not answered	14.7	13.5	11.4	-8.60	-15.69	N/A	N/A	N/A

Source: Medicaid Analytic eExtract (MAX) Provider Characteristics Files, 2009-2011.

<sup>a</sup> "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.

<sup>b</sup> "Yes" signifies that either (1) the percent change between 2010 and 2011 is within the cross-year expected range or (2) both the 2010 and the 2011 values are less than 10. "No" signifies that both (1) the percent change between 2010 and 2011 is over or under the cross-year expected range and (2) either the 2010 or the 2011 value is greater than 10.

2009-2011 MAX All Provider Characteristics Validation Table  
 State: MD  
 Produced: 05/20/2013

Measure	2009 Value	2010 Value	2011 Value	% Change 2009-2010	% Change 2010-2011	Cross Year Expected Range	Cross Year 2009-2010 Within Range <sup>a</sup>	Cross Year 2010-2011 Within Range <sup>a</sup>
<b>All Providers</b>								
Number of provider IDs	93,884	99,424	104,685	5.90	5.29	30%(+/-)	Yes	Yes
% billing provider on IP claim	0.3	0.2	0.2	-6.54	-4.48	N/A	N/A	N/A
% NPI billing provider on IP claim	0.2	0.2	0.2	-7.36	-0.90	N/A	N/A	N/A
% billing provider on LT claim	0.2	0.2	0.2	-4.92	4.99	N/A	N/A	N/A
% NPI billing provider on LT claim	0.3	0.3	0.3	-2.29	2.61	N/A	N/A	N/A
% billing provider on OT claim	14.1	13.4	12.8	-4.38	-4.88	N/A	N/A	N/A
% servicing provider on OT claim	63.0	63.3	64.6	0.49	2.16	N/A	N/A	N/A
% NPI servicing provider on OT claim	29.3	29.4	28.5	0.54	-3.13	N/A	N/A	N/A
% billing provider on RX claim	1.3	1.4	1.3	3.27	-7.43	N/A	N/A	N/A
% prescribing provider on RX claim	17.7	16.7	15.7	-5.45	-6.16	N/A	N/A	N/A
% NPI billing provider on RX claim	1.3	1.3	1.2	-4.30	-2.07	N/A	N/A	N/A
% billing provider	15.7	15.1	14.3	-3.75	-4.98	N/A	N/A	N/A
% NPI billing provider	1.8	1.7	1.7	-4.32	-0.99	N/A	N/A	N/A
% servicing provider	63.0	63.3	64.6	0.49	2.16	N/A	N/A	N/A
% NPI servicing provider	29.3	29.4	28.5	0.54	-3.13	N/A	N/A	N/A
% prescribing provider	17.7	16.7	15.7	-5.45	-6.16	N/A	N/A	N/A
% provider IDs with NPI	60.3	60.8	59.2	0.96	-2.70	30%(+/-)	Yes	Yes
% provider IDs linked to NPPES	49.4	50.3	49.2	1.81	-2.18	30%(+/-)	Yes	Yes
% provider IDs with or without NPI but linked to state provider file	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
average number of claims	1,022.2	1,151.7	1,165.6	12.67	1.20	30%(+/-)	Yes	Yes
average number of beneficiaries with claims	105.3	109.6	111.0	4.04	1.33	30%(+/-)	Yes	Yes
<b>Provider IDs with NPI</b>								
Number of provider IDs with NPI	56,568	60,482	61,965	6.92	2.45	30%(+/-)	Yes	Yes
% NPI source = MSIS	98.2	98.2	98.2	-0.07	0.01	30%(+/-)	Yes	Yes
% NPI source = NPPES	1.8	1.8	1.8	3.98	-0.29	30%(+/-)	Yes	Yes
% NPI source = state cross-reference file	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
<b>Provider IDs Linked to NPPES</b>								
Number of provider IDs linked to NPPES	46,391	50,017	51,515	7.82	2.99	30%(+/-)	Yes	Yes
% linked via NPI	97.9	97.8	97.8	-0.07	0.02	30%(+/-)	Yes	Yes
% linked via Medicaid legacy provider ID	2.1	2.2	2.2	2.99	-0.78	30%(+/-)	Yes	Yes
% linked via Medicare UPIN	0.0	0.0	0.0	50.00	-2.94	30%(+/-)	Yes	Yes
% with name prefix	35.1	35.7	35.7	1.76	0.00	30%(+/-)	Yes	Yes
% with first name	72.6	73.0	73.0	0.57	0.01	30%(+/-)	Yes	Yes
% with middle name	49.8	50.4	50.1	1.05	-0.57	30%(+/-)	Yes	Yes
% with last name	72.6	73.0	73.0	0.57	0.01	30%(+/-)	Yes	Yes
% with name suffix	2.0	1.9	1.8	-2.02	-9.09	30%(+/-)	Yes	Yes
% male	43.8	42.3	41.2	-3.30	-2.75	30%(+/-)	Yes	Yes
% female	28.8	30.6	31.8	6.46	3.81	30%(+/-)	Yes	Yes
% with credential	69.5	70.0	69.9	0.75	-0.20	30%(+/-)	Yes	Yes
% with business name	27.4	26.7	26.8	-2.81	0.58	30%(+/-)	Yes	Yes
% with address line 1	100.0	99.6	99.8	-0.35	0.16	30%(+/-)	Yes	Yes
% with city	100.0	99.6	99.8	-0.35	0.16	30%(+/-)	Yes	Yes
% with state	100.0	99.6	99.8	-0.35	0.16	30%(+/-)	Yes	Yes
% state = claim file state code	79.2	78.1	77.9	-1.36	-0.24	30%(+/-)	Yes	Yes
% with zip code	100.0	99.6	99.8	-0.35	0.16	30%(+/-)	Yes	Yes
% with primary taxonomy	98.0	97.8	98.2	-0.22	0.34	30%(+/-)	Yes	Yes

Source: Medicaid Analytic eExtract (MAX) Provider Characteristics Files, 2009-2011.

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2009-2011 MAX All Provider Characteristics Validation Table  
 State: MD  
 Produced: 05/20/2013

Measure	2009 Value	2010 Value	2011 Value	% Change 2009-2010	% Change 2010-2011	Cross Year Expected Range	Cross Year 2009-2010 Within Range <sup>a</sup>	Cross Year 2010-2011 Within Range <sup>a</sup>
% with provider entity type = individual	72.6	73.0	73.0	0.57	0.01	30%(+/-)	Yes	Yes
% with provider entity type = organization	27.4	26.7	26.8	-2.81	0.58	30%(+/-)	Yes	Yes
<b>Provider IDs with or without NPI but linked to state provider file</b>								
Number of provider IDs with or without NPI linked to state provider file	0	0	0	Div by 0	Div by 0	N/A	N/A	N/A
<b>Provider IDs with NPPES Primary Taxonomy</b>								
Number of provider IDs with NPPES primary taxonomy	45,784	48,933	50,569	6.88	3.34	30%(+/-)	Yes	Yes
% individual or group of individuals	82.2	82.8	82.8	0.76	0.04	30%(+/-)	Yes	Yes
% allopathic and osteopathic physicians	62.1	60.1	58.8	-3.25	-2.09	30%(+/-)	Yes	Yes
% behavioral health and social service providers	4.4	5.6	5.7	27.95	1.59	30%(+/-)	Yes	Yes
% chiropractic providers	0.1	0.1	0.1	-30.20	10.28	30%(+/-)	Yes	Yes
% dental providers	3.2	3.9	4.1	21.74	6.26	30%(+/-)	Yes	Yes
% dietary and nutritional service providers	0.0	0.0	0.0	50.00	-34.08	30%(+/-)	Yes	Yes
% emergency medical service providers	0.0	0.1	0.0	70.97	-17.92	30%(+/-)	Yes	Yes
% eye and vision service providers	0.6	0.6	0.6	-0.17	2.35	30%(+/-)	Yes	Yes
% nursing service providers	0.6	0.3	0.3	-51.36	6.68	30%(+/-)	Yes	Yes
% nursing service-related providers	0.3	0.0	0.0	-99.40	-100.00	30%(+/-)	Yes	Yes
% other service providers	3.3	4.0	3.9	19.24	-2.28	30%(+/-)	Yes	Yes
% pharmacy service providers	0.1	0.1	0.1	46.84	-1.13	30%(+/-)	Yes	Yes
% physician assistants and advanced practice nursing providers	4.0	4.7	5.1	18.83	8.44	30%(+/-)	Yes	Yes
% podiatric medicine and surgery service providers	1.6	1.4	1.3	-11.74	-4.52	30%(+/-)	Yes	Yes
% respiratory, developmental, rehabilitative, and restorative service providers	1.0	1.1	1.4	5.61	26.15	30%(+/-)	Yes	Yes
% speech, language, and hearing service providers	0.4	0.3	0.4	-7.67	14.39	30%(+/-)	Yes	Yes
% student health care	0.4	0.6	0.9	48.94	62.79	30%(+/-)	Yes	Yes
% technologists, technicians, and other technical service providers	0.1	0.1	0.0	-22.73	-6.94	30%(+/-)	Yes	Yes
% group of individuals with multi- or single specialty	0.0	0.0	0.0	-100.00	Div by 0	30%(+/-)	Yes	N/A
% nonindividuals	17.8	17.2	17.2	-3.51	-0.18	30%(+/-)	Yes	Yes
% agencies	1.5	1.6	1.6	5.41	-1.37	30%(+/-)	Yes	Yes
% ambulatory health care facilities	3.3	3.1	3.2	-6.26	1.50	30%(+/-)	Yes	Yes
% hospital units	0.0	0.0	0.0	-34.15	-19.44	30%(+/-)	Yes	Yes
% hospitals	1.7	1.6	1.8	-2.52	11.35	30%(+/-)	Yes	Yes
% laboratories	0.5	0.5	0.5	13.94	-2.83	30%(+/-)	Yes	Yes
% managed care organizations	0.0	0.1	0.1	50.00	-6.62	30%(+/-)	Yes	Yes
% nursing and custodial care facilities	1.4	1.3	1.4	-7.29	5.01	30%(+/-)	Yes	Yes
% residential treatment facilities	0.1	0.1	0.1	26.60	3.03	30%(+/-)	Yes	Yes
% respite care facility	0.0	0.0	0.0	-11.11	-1.13	30%(+/-)	Yes	Yes
% suppliers	8.4	7.9	7.7	-5.56	-2.46	30%(+/-)	Yes	Yes
% transportation services	0.8	0.8	0.7	1.98	-10.96	30%(+/-)	Yes	Yes
% nonmedical	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
<b>Provider IDs with Entity Type = Individual</b>								
Number of provider IDs with entity type = individual	33,659	36,498	37,593	8.43	3.00	30%(+/-)	Yes	Yes
% a sole proprietorship	18.3	20.1	21.0	9.56	4.77	30%(+/-)	Yes	Yes
% not a sole proprietorship	67.4	69.9	69.7	3.67	-0.35	30%(+/-)	Yes	Yes
% not answered	14.3	10.0	9.3	-29.66	-7.10	N/A	N/A	N/A
<b>Provider IDs with Entity Type = Organization</b>								
Number of provider IDs with entity type = organization	12,732	13,342	13,821	4.79	3.59	30%(+/-)	Yes	Yes
% organization is a subpart	9.3	9.6	10.1	3.16	4.92	30%(+/-)	Yes	Yes
% organization is not a subpart	71.0	75.8	76.1	6.74	0.47	30%(+/-)	Yes	Yes
% not answered	19.7	14.7	13.8	-25.73	-5.64	N/A	N/A	N/A

Source: Medicaid Analytic eXtract (MAX) Provider Characteristics Files, 2009-2011.

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