Medicaid Analytic Extract Provider Characteristics (MAXPC)

State-Specific Validation Tables, 2010

Maryland

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

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[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: MD
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	461	455	-1.30	30% (+/-)	Yes
% billing provider on IP claim	52.9	53.2	0.49	N/A	N/A
% NPI billing provider on IP claim	47.1	46.8	-0.55	N/A	N/A
% also a provider on LT claim	4.6	4.6	1.32	N/A	N/A
% also a provider on OT claim	80.0	85.9	7.36	N/A	N/A
% also a provider on RX claim	13.9	17.1	23.48	N/A	N/A
% provider IDs with NPI	93.3	93.4	0.14	30% (+/-)	Yes
% provider IDs linked to NPPES	93.1	92.7	-0.34	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	693.4	758.4	9.37	30% (+/-)	Yes
average number of beneficiaries with IP claims	463.0	476.4	2.89	30% (+/-)	Yes
Provider IDs with NPI					
Number of provider IDs with NPI	430	425	-1.16	30% (+/-)	Yes
% NPI source = MSIS	97.2	96.5	-0.76	30% (+/-)	Yes
% NPI source = NPPES	2.8	3.5	26.44	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	429	422	-1.63	30% (+/-)	Yes
% linked via NPI	97.2	96.4	-0.78	30% (+/-)	Yes
% linked via Medicaid legacy provider ID	2.8	3.6	27.10	30% (+/-)	Yes
% linked via Medicare UPIN	0.0	0.0	Div by 0	30% (+/-)	N/A
% with name prefix	0.0	0.0	Div by 0	30% (+/-)	N/A
% with first name	0.0	0.0	Div by 0	30% (+/-)	N/A
% with middle name	0.0	0.0	Div by 0	30% (+/-)	N/A
% with last name	0.0	0.0	Div by 0	30% (+/-)	N/A
% with name suffix	0.0	0.0	Div by 0	30% (+/-)	N/A
% male	0.0	0.0	Div by 0	30% (+/-)	N/A
% female	0.0	0.0	Div by 0	30% (+/-)	N/A
% with credential	0.0	0.0	Div by 0	30% (+/-)	N/A
% with business name	100.0	100.0	0.00	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 = IP state code	33.1	34.4	3.81	30% (+/-)	Yes
% with zip code	100.0	100.0	0.00	30% (+/-)	Yes
% with primary taxonomy	97.2	99.5	2.39	30% (+/-)	Yes
% with provider entity type = individual	0.0	0.0	Div by 0	30% (+/-)	N/A
% with provider entity type = organization	100.0	100.0	0.00	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	418	420	0.48	30% (+/-)	Yes
% individual or group of individuals	0.0	0.2	Div by 0	30% (+/-)	N/A
% allopathic and osteopathic physicians	0.0	0.0	Div by 0	30% (+/-)	N/A
% behavioral health and social service providers	0.0	0.0	Div by 0	30% (+/-)	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 IP Billing Provider Characteristics Validation Table
State: MD
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	0.2	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	100.0	99.8	-0.24	30% (+/-)	Yes
% agencies	0.0	0.0	Div by 0	30% (+/-)	N/A
% ambulatory health care facilities	0.5	0.5	-0.42	30% (+/-)	Yes
% hospital units	2.4	1.4	-40.26	30% (+/-)	Yes
% hospitals	96.4	95.5	-0.97	30% (+/-)	Yes
% laboratories	0.0	0.0	Div by 0	30% (+/-)	N/A
% managed care organizations	0.2	0.2	-0.42	30% (+/-)	Yes
% nursing and custodial care facilities	0.0	0.0	Div by 0	30% (+/-)	N/A
% residential treatment facilities	0.5	1.0	99.16	30% (+/-)	Yes
% respite care facility	0.0	0.0	Div by 0	30% (+/-)	N/A
% suppliers	0.0	0.7	Div by 0	30% (+/-)	N/A
% transportation services	0.0	0.5	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	0	0	Div by 0	30% (+/-)	N/A
% a sole proprietorship	0.0	0.0	Div by 0	30% (+/-)	N/A
% not a sole proprietorship	0.0	0.0	Div by 0	30% (+/-)	N/A
% 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	429	422	-1.63	30% (+/-)	Yes
% organization is a subpart	6.3	5.2	-17.18	30% (+/-)	Yes
% organization is not a subpart	82.5	86.3	4.53	30% (+/-)	Yes
% not answered	11.2	8.5	-23.76	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: MD
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	475	486	2.32	30% (+/-)	Yes
% billing provider on LT claim	48.2	47.5	-1.41	N/A	N/A
% NPI billing provider on LT claim	51.8	52.5	1.31	N/A	N/A
% also a provider on IP claim	4.4	4.3	-2.26	N/A	N/A
% also a provider on OT claim	40.4	39.3	-2.77	N/A	N/A
% also a provider on RX claim	2.5	2.5	-2.26	N/A	N/A
% provider IDs with NPI	98.1	98.1	0.04	30% (+/-)	Yes
% provider IDs linked to NPPES	98.1	98.1	0.04	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	945.7	967.3	2.28	30% (+/-)	Yes
average number of beneficiaries with LT claims	120.1	121.0	0.75	30% (+/-)	Yes
Provider IDs with NPI					
Number of provider IDs with NPI	466	477	2.36	30% (+/-)	Yes
% NPI source = MSIS	99.6	99.8	0.22	30% (+/-)	Yes
% NPI source = NPPES	0.4	0.2	-51.05	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	466	477	2.36	30% (+/-)	Yes
% linked via NPI	99.6	99.8	0.22	30% (+/-)	Yes
% linked via Medicaid legacy provider ID	0.4	0.2	-51.05	30% (+/-)	Yes
% linked via Medicare UPIN	0.0	0.0	Div by 0	30% (+/-)	N/A
% with name prefix	0.0	0.0	Div by 0	30% (+/-)	N/A
% with first name	0.0	0.0	Div by 0	30% (+/-)	N/A
% with middle name	0.0	0.0	Div by 0	30% (+/-)	N/A
% with last name	0.0	0.0	Div by 0	30% (+/-)	N/A
% with name suffix	0.0	0.0	Div by 0	30% (+/-)	N/A
% male	0.0	0.0	Div by 0	30% (+/-)	N/A
% female	0.0	0.0	Div by 0	30% (+/-)	N/A
% with credential	0.0	0.0	Div by 0	30% (+/-)	N/A
% with business name	100.0	100.0	0.00	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	98.1	97.1	-1.02	30% (+/-)	Yes
% with zip code	100.0	100.0	0.00	30% (+/-)	Yes
% with primary taxonomy	96.4	97.1	0.74	30% (+/-)	Yes
% with provider entity type = individual	0.0	0.0	Div by 0	30% (+/-)	N/A
% with provider entity type = organization	100.0	100.0	0.00	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	449	463	3.12	30% (+/-)	Yes
% individual or group of individuals	0.0	0.2	Div by 0	30% (+/-)	N/A
% allopathic and osteopathic physicians	0.0	0.0	Div by 0	30% (+/-)	N/A
% behavioral health and social service providers	0.0	0.2	Div by 0	30% (+/-)	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: MD
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	100.0	99.8	-0.22	30% (+/-)	Yes
% agencies	0.0	0.0	Div by 0	30% (+/-)	N/A
% ambulatory health care facilities	0.0	0.0	Div by 0	30% (+/-)	N/A
% hospital units	0.7	0.2	-67.66	30% (+/-)	Yes
% hospitals	2.5	3.2	32.24	30% (+/-)	Yes
% laboratories	0.0	0.0	Div by 0	30% (+/-)	N/A
% managed care organizations	0.2	0.2	-3.14	30% (+/-)	Yes
% nursing and custodial care facilities	94.2	90.7	-3.71	30% (+/-)	Yes
% residential treatment facilities	2.2	5.0	123.08	30% (+/-)	Yes
% respite care facility	0.0	0.0	Div by 0	30% (+/-)	N/A
% suppliers	0.2	0.4	93.72	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	0	0	Div by 0	30% (+/-)	N/A
% a sole proprietorship	0.0	0.0	Div by 0	30% (+/-)	N/A
% not a sole proprietorship	0.0	0.0	Div by 0	30% (+/-)	N/A
% 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	466	477	2.36	30% (+/-)	Yes
% organization is a subpart	7.1	7.3	3.61	30% (+/-)	Yes
% organization is not a subpart	64.4	70.2	9.09	30% (+/-)	Yes
% not answered	28.5	22.4	-21.40	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: MD
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	86,588	92,158	6.43	30% (+/-)	Yes
% billing provider on OT claim	15.0	14.2	-5.52	N/A	N/A
% servicing provider on OT claim	68.3	68.3	-0.01	N/A	N/A
% NPI servicing provider on OT claim	31.7	31.8	0.03	N/A	N/A
% also a provider on IP claim	0.4	0.4	-3.15	N/A	N/A
% also a provider on LT claim	0.2	0.2	-6.57	N/A	N/A
% also a provider on RX claim	14.1	13.6	-3.23	N/A	N/A
% provider IDs with NPI	62.2	62.3	0.18	30% (+/-)	Yes
% provider IDs linked to NPPES	50.5	51.0	0.99	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	582.4	663.7	13.96	30% (+/-)	Yes
average number of beneficiaries with OT claims	82.6	85.5	3.51	30% (+/-)	Yes
Provider IDs with NPI					
Number of provider IDs with NPI	53,853	57,418	6.62	30% (+/-)	Yes
% NPI source = MSIS	99.1	99.1	0.08	30% (+/-)	Yes
% NPI source = NPPES	0.9	0.9	-8.67	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	43,686	46,956	7.49	30% (+/-)	Yes
% linked via NPI	98.8	99.0	0.11	30% (+/-)	Yes
% linked via Medicaid legacy provider ID	1.2	1.0	-9.30	30% (+/-)	Yes
% linked via Medicare UPIN	0.0	0.0	Div by 0	30% (+/-)	N/A
% with name prefix	36.7	37.4	1.92	30% (+/-)	Yes
% with first name	76.1	76.6	0.67	30% (+/-)	Yes
% with middle name	52.2	52.8	1.11	30% (+/-)	Yes
% with last name	76.1	76.6	0.67	30% (+/-)	Yes
% with name suffix	2.1	2.0	-2.02	30% (+/-)	Yes
% male	46.0	44.5	-3.21	30% (+/-)	Yes
% female	30.1	32.1	6.59	30% (+/-)	Yes
% with credential	72.8	73.4	0.84	30% (+/-)	Yes
% with business name	23.9	23.1	-3.57	30% (+/-)	Yes
% with address line 1	100.0	99.7	-0.35	30% (+/-)	Yes
% with city	100.0	99.7	-0.35	30% (+/-)	Yes
% with state	100.0	99.7	-0.35	30% (+/-)	Yes
% state = OT state code	78.7	77.6	-1.47	30% (+/-)	Yes
% with zip code	100.0	99.7	-0.35	30% (+/-)	Yes
% with primary taxonomy	98.1	97.9	-0.28	30% (+/-)	Yes
% with provider entity type = individual	76.1	76.6	0.67	30% (+/-)	Yes
% with provider entity type = organization	23.9	23.1	-3.57	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	43,174	45,956	6.44	30% (+/-)	Yes
% individual or group of individuals	86.0	86.8	0.95	30% (+/-)	Yes
% allopathic and osteopathic physicians	65.0	63.0	-3.09	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 OT Servicing Provider Characteristics Validation Table
State: MD
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	4.6	5.9	28.33	30% (+/-)	Yes
% chiropractic providers	0.2	0.1	-29.75	30% (+/-)	Yes
% dental providers	3.4	4.1	22.49	30% (+/-)	Yes
% dietary and nutritional service providers	0.0	0.0	40.00	30% (+/-)	Yes
% emergency medical service providers	0.0	0.1	78.13	30% (+/-)	Yes
% eye and vision service providers	0.6	0.6	0.96	30% (+/-)	Yes
% nursing service providers	0.7	0.3	-51.82	30% (+/-)	Yes
% nursing service-related providers	0.4	0.0	-99.43	30% (+/-)	Yes
% other service providers	3.5	4.2	20.02	30% (+/-)	Yes
% pharmacy service providers	0.0	0.0	860.00	30% (+/-)	Yes
% physician assistants and advanced practice nursing providers	4.1	4.8	18.28	30% (+/-)	Yes
% podiatric medicine and surgery service providers	1.7	1.5	-11.97	30% (+/-)	Yes
% respiratory, developmental, rehabilitative, and restorative service providers	1.1	1.2	5.84	30% (+/-)	Yes
% speech, language, and hearing service providers	0.4	0.3	-8.97	30% (+/-)	Yes
% student health care	0.4	0.6	50.51	30% (+/-)	Yes
% technologists, technicians, and other technical service providers	0.1	0.1	-21.74	30% (+/-)	Yes
% group of individuals with multi- or single specialty	0.0	0.0	-100.00	30% (+/-)	Yes
% nonindividuals	14.0	13.2	-5.84	30% (+/-)	Yes
% agencies	1.6	1.7	5.50	30% (+/-)	Yes
% ambulatory health care facilities	3.5	3.3	-5.69	30% (+/-)	Yes
% hospital units	0.0	0.0	-14.29	30% (+/-)	Yes
% hospitals	1.6	1.6	0.57	30% (+/-)	Yes
% laboratories	0.5	0.6	14.61	30% (+/-)	Yes
% managed care organizations	0.0	0.1	59.09	30% (+/-)	Yes
% nursing and custodial care facilities	0.9	0.9	-8.30	30% (+/-)	Yes
% residential treatment facilities	0.1	0.1	-12.50	30% (+/-)	Yes
% respite care facility	0.0	0.0	0.00	30% (+/-)	Yes
% suppliers	4.9	4.1	-15.22	30% (+/-)	Yes
% transportation services	0.9	0.9	2.33	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	33,232	35,958	8.20	30% (+/-)	Yes
% a sole proprietorship	18.3	20.1	9.84	30% (+/-)	Yes
% not a sole proprietorship	67.2	69.7	3.65	30% (+/-)	Yes
% not answered	14.4	10.2	-29.50	N/A	N/A
Provider IDs with Entity Type = Organization					
Number of provider IDs with entity type = organization	10,454	10,835	3.64	30% (+/-)	Yes
% organization is a subpart	9.0	9.4	4.91	30% (+/-)	Yes
% organization is not a subpart	70.2	74.8	6.55	30% (+/-)	Yes
% not answered	20.8	15.8	-24.22	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: MD
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	13,191	13,357	1.26	30% (+/-)	Yes
% billing provider on OT claim	100.0	100.0	0.00	N/A	N/A
% servicing provider on OT claim	98.7	98.0	-0.69	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	1.4	1.5	6.11	N/A	N/A
% also a provider on LT claim	0.1	0.1	-17.58	N/A	N/A
% also a provider on RX claim	19.9	18.0	-9.23	N/A	N/A
% provider IDs with NPI	90.3	90.7	0.36	30% (+/-)	Yes
% provider IDs linked to NPPES	53.6	52.9	-1.31	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	3,383.8	3,861.6	14.12	30% (+/-)	Yes
average number of beneficiaries with OT claims	194.4	207.5	6.76	30% (+/-)	Yes
Provider IDs with NPI					
Number of provider IDs with NPI	11,917	12,110	1.62	30% (+/-)	Yes
% NPI source = MSIS	97.2	97.1	-0.12	30% (+/-)	Yes
% NPI source = NPPES	2.8	2.9	4.11	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	7,069	7,064	-0.07	30% (+/-)	Yes
% linked via NPI	95.4	95.1	-0.29	30% (+/-)	Yes
% linked via Medicaid legacy provider ID	4.6	4.9	5.56	30% (+/-)	Yes
% linked via Medicare UPIN	0.0	0.0	Div by 0	30% (+/-)	N/A
% with name prefix	19.6	17.7	-9.54	30% (+/-)	Yes
% with first name	31.7	28.7	-9.53	30% (+/-)	Yes
% with middle name	23.4	20.9	-10.35	30% (+/-)	Yes
% with last name	31.7	28.7	-9.53	30% (+/-)	Yes
% with name suffix	1.2	1.1	-8.25	30% (+/-)	Yes
% male	22.5	20.4	-9.47	30% (+/-)	Yes
% female	9.2	8.3	-9.68	30% (+/-)	Yes
% with credential	30.6	27.8	-9.31	30% (+/-)	Yes
% with business name	68.3	70.9	3.78	30% (+/-)	Yes
% with address line 1	100.0	99.6	-0.44	30% (+/-)	Yes
% with city	100.0	99.6	-0.44	30% (+/-)	Yes
% with state	100.0	99.6	-0.44	30% (+/-)	Yes
% state = OT state code	85.5	84.2	-1.44	30% (+/-)	Yes
% with zip code	100.0	99.6	-0.44	30% (+/-)	Yes
% with primary taxonomy	98.2	97.8	-0.39	30% (+/-)	Yes
% with provider entity type = individual	31.7	28.7	-9.53	30% (+/-)	Yes
% with provider entity type = organization	68.3	70.9	3.78	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	7,075	6,907	-2.37	30% (+/-)	Yes
% individual or group of individuals	62.5	61.1	-2.13	30% (+/-)	Yes
% allopathic and osteopathic physicians	43.3	43.4	0.26	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 OT Billing Provider Characteristics Validation Table
State: MD
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	3.7	4.0	7.10	30% (+/-)	Yes
% chiropractic providers	0.5	0.3	-23.23	30% (+/-)	Yes
% dental providers	1.6	0.1	-90.92	30% (+/-)	Yes
% dietary and nutritional service providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% emergency medical service providers	0.0	0.1	210.71	30% (+/-)	Yes
% eye and vision service providers	1.2	1.3	3.62	30% (+/-)	Yes
% nursing service providers	0.4	0.1	-69.34	30% (+/-)	Yes
% nursing service-related providers	1.1	0.0	-100.00	30% (+/-)	Yes
% other service providers	4.8	5.9	22.37	30% (+/-)	Yes
% pharmacy service providers	0.0	0.1	Div by 0	30% (+/-)	N/A
% physician assistants and advanced practice nursing providers	0.6	0.6	-4.40	30% (+/-)	Yes
% podiatric medicine and surgery service providers	3.7	3.3	-10.14	30% (+/-)	Yes
% respiratory, developmental, rehabilitative, and restorative service providers	1.2	1.4	16.03	30% (+/-)	Yes
% speech, language, and hearing service providers	0.2	0.3	44.58	30% (+/-)	Yes
% student health care	0.0	0.0	53.57	30% (+/-)	Yes
% technologists, technicians, and other technical service providers	0.1	0.1	15.04	30% (+/-)	Yes
% group of individuals with multi- or single specialty	0.0	0.0	-100.00	30% (+/-)	Yes
% nonindividuals	37.5	38.9	3.55	30% (+/-)	Yes
% agencies	2.9	3.5	21.33	30% (+/-)	Yes
% ambulatory health care facilities	8.1	9.1	11.87	30% (+/-)	Yes
% hospital units	0.1	0.1	1.75	30% (+/-)	Yes
% hospitals	4.6	4.5	-0.72	30% (+/-)	Yes
% laboratories	1.4	1.8	23.99	30% (+/-)	Yes
% managed care organizations	0.1	0.1	46.46	30% (+/-)	Yes
% nursing and custodial care facilities	2.9	3.0	3.90	30% (+/-)	Yes
% residential treatment facilities	0.0	0.1	71.43	30% (+/-)	Yes
% respite care facility	0.0	0.0	Div by 0	30% (+/-)	N/A
% suppliers	14.8	13.6	-7.66	30% (+/-)	Yes
% transportation services	2.6	3.0	14.61	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	2,241	2,026	-9.59	30% (+/-)	Yes
% a sole proprietorship	50.6	54.9	8.66	30% (+/-)	Yes
% not a sole proprietorship	36.8	35.8	-2.54	30% (+/-)	Yes
% not answered	12.7	9.2	-27.17	N/A	N/A
Provider IDs with Entity Type = Organization					
Number of provider IDs with entity type = organization	4,828	5,007	3.71	30% (+/-)	Yes
% organization is a subpart	9.1	9.5	4.11	30% (+/-)	Yes
% organization is not a subpart	71.1	75.7	6.51	30% (+/-)	Yes
% not answered	19.8	14.8	-25.26	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 RX Billing Provider Characteristics Validation Table
State: MD
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	2,508	2,643	5.38	30% (+/-)	Yes
% billing provider on RX claim	50.4	52.3	3.76	N/A	N/A
% prescribing provider on RX claim	6.1	1.9	-68.78	N/A	N/A
% NPI billing provider on RX claim	49.6	47.7	-3.81	N/A	N/A
% also a provider on IP claim	0.4	0.5	13.78	N/A	N/A
% also a provider on LT claim	0.3	0.3	-5.02	N/A	N/A
% also a provider on OT claim	25.5	20.7	-18.90	N/A	N/A
% provider IDs with NPI	99.4	99.6	0.14	30% (+/-)	Yes
% provider IDs linked to NPPES	99.0	99.6	0.55	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	4,324.8	4,641.3	7.32	30% (+/-)	Yes
average number of beneficiaries with RX claims	436.8	458.7	5.02	30% (+/-)	Yes
Provider IDs with NPI					
Number of provider IDs with NPI	2,494	2,632	5.53	30% (+/-)	Yes
% NPI source = MSIS	100.0	100.0	0.00	30% (+/-)	Yes
% NPI source = NPPES	0.0	0.0	-5.00	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	2,484	2,632	5.96	30% (+/-)	Yes
% linked via NPI	100.0	100.0	0.00	30% (+/-)	Yes
% linked via Medicaid legacy provider ID	0.0	0.0	-5.00	30% (+/-)	Yes
% linked via Medicare UPIN	0.0	0.0	Div by 0	30% (+/-)	N/A
% with name prefix	0.0	0.0	Div by 0	30% (+/-)	N/A
% with first name	0.0	0.0	Div by 0	30% (+/-)	N/A
% with middle name	0.0	0.0	Div by 0	30% (+/-)	N/A
% with last name	0.0	0.0	Div by 0	30% (+/-)	N/A
% with name suffix	0.0	0.0	Div by 0	30% (+/-)	N/A
% male	0.0	0.0	Div by 0	30% (+/-)	N/A
% female	0.0	0.0	Div by 0	30% (+/-)	N/A
% with credential	0.0	0.0	Div by 0	30% (+/-)	N/A
% with business name	100.0	99.4	-0.61	30% (+/-)	Yes
% with address line 1	100.0	99.4	-0.61	30% (+/-)	Yes
% with city	100.0	99.4	-0.61	30% (+/-)	Yes
% with state	100.0	99.4	-0.61	30% (+/-)	Yes
% state = RX state code	90.0	88.7	-1.44	30% (+/-)	Yes
% with zip code	100.0	99.4	-0.61	30% (+/-)	Yes
% with primary taxonomy	96.9	96.7	-0.25	30% (+/-)	Yes
% with provider entity type = individual	0.0	0.0	Div by 0	30% (+/-)	N/A
% with provider entity type = organization	100.0	99.4	-0.61	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	2,407	2,544	5.69	30% (+/-)	Yes
% individual or group of individuals	1.5	1.8	17.63	30% (+/-)	Yes
% allopathic and osteopathic physicians	0.1	0.0	-100.00	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: MD
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	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	1.4	1.8	27.95	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	98.5	98.2	-0.28	30% (+/-)	Yes
% agencies	0.1	0.1	-36.80	30% (+/-)	Yes
% ambulatory health care facilities	0.0	0.1	Div by 0	30% (+/-)	N/A
% hospital units	0.0	0.0	Div by 0	30% (+/-)	N/A
% hospitals	0.2	0.2	-36.95	30% (+/-)	Yes
% laboratories	0.0	0.0	Div by 0	30% (+/-)	N/A
% managed care organizations	0.1	0.1	-5.60	30% (+/-)	Yes
% nursing and custodial care facilities	0.0	0.0	Div by 0	30% (+/-)	N/A
% 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	98.0	97.8	-0.21	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	0	0	Div by 0	30% (+/-)	N/A
% a sole proprietorship	0.0	0.0	Div by 0	30% (+/-)	N/A
% not a sole proprietorship	0.0	0.0	Div by 0	30% (+/-)	N/A
% 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	2,484	2,616	5.31	30% (+/-)	Yes
% organization is a subpart	12.6	12.1	-4.44	30% (+/-)	Yes
% organization is not a subpart	76.2	80.8	5.98	30% (+/-)	Yes
% not answered	11.1	7.1	-36.01	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: MD
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	16,619	16,642	0.14	30% (+/-)	Yes
% billing provider on RX claim	0.9	0.3	-67.21	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	Div by 0	N/A	N/A
% also a provider on IP claim	0.3	0.4	22.15	N/A	N/A
% also a provider on LT claim	0.0	0.0	0.00	N/A	N/A
% also a provider on OT claim	69.6	72.3	3.83	N/A	N/A
% provider IDs with NPI	68.1	72.0	5.83	30% (+/-)	Yes
% provider IDs linked to NPPES	67.9	72.0	6.11	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	522.5	573.1	9.67	30% (+/-)	Yes
average number of beneficiaries with RX claims	64.6	62.2	-3.66	30% (+/-)	Yes
Provider IDs with NPI					
Number of provider IDs with NPI	11,310	11,986	5.98	30% (+/-)	Yes
% NPI source = MSIS	93.9	93.5	-0.44	30% (+/-)	Yes
% NPI source = NPPES	6.1	6.5	6.84	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	11,278	11,984	6.26	30% (+/-)	Yes
% linked via NPI	93.9	93.5	-0.43	30% (+/-)	Yes
% linked via Medicaid legacy provider ID	6.1	6.5	6.59	30% (+/-)	Yes
% linked via Medicare UPIN	0.0	0.0	-5.56	30% (+/-)	Yes
% with name prefix	45.7	46.3	1.24	30% (+/-)	Yes
% with first name	92.8	93.3	0.51	30% (+/-)	Yes
% with middle name	64.6	65.1	0.79	30% (+/-)	Yes
% with last name	92.8	93.3	0.51	30% (+/-)	Yes
% with name suffix	2.6	2.4	-10.94	30% (+/-)	Yes
% male	57.8	56.2	-2.78	30% (+/-)	Yes
% female	35.0	37.1	5.96	30% (+/-)	Yes
% with credential	88.9	89.8	0.92	30% (+/-)	Yes
% with business name	7.2	6.3	-12.48	30% (+/-)	Yes
% with address line 1	100.0	99.6	-0.43	30% (+/-)	Yes
% with city	100.0	99.6	-0.43	30% (+/-)	Yes
% with state	100.0	99.6	-0.43	30% (+/-)	Yes
% state = RX state code	84.3	82.5	-2.07	30% (+/-)	Yes
% with zip code	100.0	99.6	-0.43	30% (+/-)	Yes
% with primary taxonomy	98.7	98.4	-0.28	30% (+/-)	Yes
% with provider entity type = individual	92.8	93.3	0.51	30% (+/-)	Yes
% with provider entity type = organization	7.2	6.3	-12.48	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	11,144	11,795	5.84	30% (+/-)	Yes
% individual or group of individuals	95.7	97.4	1.73	30% (+/-)	Yes
% allopathic and osteopathic physicians	80.4	78.9	-1.85	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 Prescribing Provider Characteristics Validation Table
State: MD
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	0.3	0.2	-11.51	30% (+/-)	Yes
% chiropractic providers	0.0	0.0	-52.78	30% (+/-)	Yes
% dental providers	4.1	5.0	21.24	30% (+/-)	Yes
% dietary and nutritional service providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% emergency medical service providers	0.1	0.1	25.93	30% (+/-)	Yes
% eye and vision service providers	0.3	0.3	14.74	30% (+/-)	Yes
% nursing service providers	0.8	0.3	-64.48	30% (+/-)	Yes
% nursing service-related providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% other service providers	3.8	5.0	32.05	30% (+/-)	Yes
% pharmacy service providers	0.0	0.0	88.89	30% (+/-)	Yes
% physician assistants and advanced practice nursing providers	3.9	5.3	34.17	30% (+/-)	Yes
% podiatric medicine and surgery service providers	1.4	1.4	-1.97	30% (+/-)	Yes
% respiratory, developmental, rehabilitative, and restorative service providers	0.1	0.1	-53.17	30% (+/-)	Yes
% speech, language, and hearing service providers	0.0	0.0	88.89	30% (+/-)	Yes
% student health care	0.5	0.8	69.48	30% (+/-)	Yes
% technologists, technicians, and other technical service providers	0.0	0.0	-70.37	30% (+/-)	Yes
% group of individuals with multi- or single specialty	0.0	0.0	-100.00	30% (+/-)	Yes
% nonindividuals	4.3	2.6	-38.46	30% (+/-)	Yes
% agencies	0.2	0.2	32.40	30% (+/-)	Yes
% ambulatory health care facilities	1.1	0.8	-32.11	30% (+/-)	Yes
% hospital units	0.1	0.0	-100.00	30% (+/-)	Yes
% hospitals	0.5	0.7	27.12	30% (+/-)	Yes
% laboratories	0.0	0.1	41.67	30% (+/-)	Yes
% managed care organizations	0.0	0.0	55.56	30% (+/-)	Yes
% nursing and custodial care facilities	0.1	0.1	7.94	30% (+/-)	Yes
% residential treatment facilities	0.0	0.0	55.56	30% (+/-)	Yes
% respite care facility	0.0	0.0	Div by 0	30% (+/-)	N/A
% suppliers	2.2	0.8	-65.98	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	10,464	11,176	6.80	30% (+/-)	Yes
% a sole proprietorship	18.6	19.7	6.02	30% (+/-)	Yes
% not a sole proprietorship	67.6	71.0	5.06	30% (+/-)	Yes
% not answered	13.8	9.3	-32.82	N/A	N/A
Provider IDs with Entity Type = Organization					
Number of provider IDs with entity type = organization	814	757	-7.00	30% (+/-)	Yes
% organization is a subpart	11.9	10.2	-14.64	30% (+/-)	Yes
% organization is not a subpart	73.3	76.4	4.11	30% (+/-)	Yes
% not answered	14.7	13.5	-8.60	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: MD
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	93,884	99,424	5.90	30%(+/-)	Yes
% billing provider on IP claim	0.3	0.2	-6.54	N/A	N/A
% NPI billing provider on IP claim	0.2	0.2	-7.36	N/A	N/A
% billing provider on LT claim	0.2	0.2	-4.92	N/A	N/A
% NPI billing provider on LT claim	0.3	0.3	-2.29	N/A	N/A
% billing provider on OT claim	14.1	13.4	-4.38	N/A	N/A
% servicing provider on OT claim	63.0	63.3	0.49	N/A	N/A
% NPI servicing provider on OT claim	29.3	29.4	0.54	N/A	N/A
% billing provider on RX claim	1.3	1.4	3.27	N/A	N/A
% prescribing provider on RX claim	17.7	16.7	-5.45	N/A	N/A
% NPI billing provider on RX claim	1.3	1.3	-4.30	N/A	N/A
% billing provider	15.7	15.1	-3.75	N/A	N/A
% NPI billing provider	1.8	1.7	-4.32	N/A	N/A
% servicing provider	63.0	63.3	0.49	N/A	N/A
% NPI servicing provider	29.3	29.4	0.54	N/A	N/A
% prescribing provider	17.7	16.7	-5.45	N/A	N/A
% provider IDs with NPI	60.3	60.8	0.96	30%(+/-)	Yes
% provider IDs linked to NPPES	49.4	50.3	1.81	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	1,022.2	1,151.7	12.67	30%(+/-)	Yes
average number of beneficiaries with claims	105.3	109.6	4.04	30%(+/-)	Yes
Provider IDs with NPI					
Number of provider IDs with NPI	56,568	60,482	6.92	30%(+/-)	Yes
% NPI source = MSIS	98.2	98.2	-0.07	30%(+/-)	Yes
% NPI source = NPPES	1.8	1.8	3.98	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	46,391	50,017	7.82	30%(+/-)	Yes
% linked via NPI	97.9	97.8	-0.07	30%(+/-)	Yes
% linked via Medicaid legacy provider ID	2.1	2.2	2.99	30%(+/-)	Yes
% linked via Medicare UPIN	0.0	0.0	50.00	30%(+/-)	Yes
% with name prefix	35.1	35.7	1.76	30%(+/-)	Yes
% with first name	72.6	73.0	0.57	30%(+/-)	Yes
% with middle name	49.8	50.4	1.05	30%(+/-)	Yes
% with last name	72.6	73.0	0.57	30%(+/-)	Yes
% with name suffix	2.0	1.9	-2.02	30%(+/-)	Yes
% male	43.8	42.3	-3.30	30%(+/-)	Yes
% female	28.8	30.6	6.46	30%(+/-)	Yes
% with credential	69.5	70.0	0.75	30%(+/-)	Yes
% with business name	27.4	26.7	-2.81	30%(+/-)	Yes
% with address line 1	100.0	99.6	-0.35	30%(+/-)	Yes
% with city	100.0	99.6	-0.35	30%(+/-)	Yes
% with state	100.0	99.6	-0.35	30%(+/-)	Yes
% state = claim file state code	79.2	78.1	-1.36	30%(+/-)	Yes
% with zip code	100.0	99.6	-0.35	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: MD
Produced: 02/28/2013

Measure	2009 Value	2010 Value	% Change 2009-2010	Cross Year Expected Range	Cross Year Within Range[a]
% with primary taxonomy	98.0	97.8	-0.22	30%(+/-)	Yes
% with provider entity type = individual	72.6	73.0	0.57	30%(+/-)	Yes
% with provider entity type = organization	27.4	26.7	-2.81	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	45,784	48,933	6.88	30%(+/-)	Yes
% individual or group of individuals	82.2	82.8	0.76	30%(+/-)	Yes
% allopathic and osteopathic physicians	62.1	60.1	-3.25	30%(+/-)	Yes
% behavioral health and social service providers	4.4	5.6	27.95	30%(+/-)	Yes
% chiropractic providers	0.1	0.1	-30.20	30%(+/-)	Yes
% dental providers	3.2	3.9	21.74	30%(+/-)	Yes
% dietary and nutritional service providers	0.0	0.0	50.00	30%(+/-)	Yes
% emergency medical service providers	0.0	0.1	70.97	30%(+/-)	Yes
% eye and vision service providers	0.6	0.6	-0.17	30%(+/-)	Yes
% nursing service providers	0.6	0.3	-51.36	30%(+/-)	Yes
% nursing service-related providers	0.3	0.0	-99.40	30%(+/-)	Yes
% other service providers	3.3	4.0	19.24	30%(+/-)	Yes
% pharmacy service providers	0.1	0.1	46.84	30%(+/-)	Yes
% physician assistants and advanced practice nursing providers	4.0	4.7	18.83	30%(+/-)	Yes
% podiatric medicine and surgery service providers	1.6	1.4	-11.74	30%(+/-)	Yes
% respiratory, developmental, rehabilitative, and restorative service providers	1.0	1.1	5.61	30%(+/-)	Yes
% speech, language, and hearing service providers	0.4	0.3	-7.67	30%(+/-)	Yes
% student health care	0.4	0.6	48.94	30%(+/-)	Yes
% technologists, technicians, and other technical service providers	0.1	0.1	-22.73	30%(+/-)	Yes
% group of individuals with multi- or single specialty	0.0	0.0	-100.00	30%(+/-)	Yes
% nonindividuals	17.8	17.2	-3.51	30%(+/-)	Yes
% agencies	1.5	1.6	5.41	30%(+/-)	Yes
% ambulatory health care facilities	3.3	3.1	-6.26	30%(+/-)	Yes
% hospital units	0.0	0.0	-34.15	30%(+/-)	Yes
% hospitals	1.7	1.6	-2.52	30%(+/-)	Yes
% laboratories	0.5	0.5	13.94	30%(+/-)	Yes
% managed care organizations	0.0	0.1	50.00	30%(+/-)	Yes
% nursing and custodial care facilities	1.4	1.3	-7.29	30%(+/-)	Yes
% residential treatment facilities	0.1	0.1	26.60	30%(+/-)	Yes
% respite care facility	0.0	0.0	-11.11	30%(+/-)	Yes
% suppliers	8.4	7.9	-5.56	30%(+/-)	Yes
% transportation services	0.8	0.8	1.98	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	33,659	36,498	8.43	30%(+/-)	Yes
% a sole proprietorship	18.3	20.1	9.56	30%(+/-)	Yes
% not a sole proprietorship	67.4	69.9	3.67	30%(+/-)	Yes
% not answered	14.3	10.0	-29.66	N/A	N/A
Provider IDs with Entity Type = Organization					
Number of provider IDs with entity type = organization	12,732	13,342	4.79	30%(+/-)	Yes
% organization is a subpart	9.3	9.6	3.16	30%(+/-)	Yes
% organization is not a subpart	71.0	75.8	6.74	30%(+/-)	Yes
% not answered	19.7	14.7	-25.73	N/A	N/A

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

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