

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

**State-Specific Validation Tables,
2010**

Missouri

May 31, 2013

Deo Bencio
Mei-ling Mason



MATHEMATICA
Policy Research

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ACRONYMS

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

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INTRODUCTION

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

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

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

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

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

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

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

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

2009-2010 MAX IP Billing Provider Characteristics Validation Table

State: MO

Produced: 03/11/2013

Measure	2009 Value	2010 Value	% Change 2009-2010	Cross Year Expected Range	Cross Year Within Range ^a
IP Providers					
Number of provider IDs	896	913	1.90	30% (+/-)	Yes
% billing provider on IP claim	52.3	54.8	4.63	N/A	N/A
% NPI billing provider on IP claim	47.7	45.2	-5.08	N/A	N/A
% also a provider on LT claim	0.0	0.0	Div by 0	N/A	N/A
% also a provider on OT claim	91.6	90.6	-1.14	N/A	N/A
% also a provider on RX claim	49.1	46.2	-5.88	N/A	N/A
% provider IDs with NPI	83.3	69.3	-16.73	30% (+/-)	Yes
% provider IDs linked to NPPES	81.6	63.9	-21.73	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	322.3	441.1	36.85	30% (+/-)	No
average number of beneficiaries with IP claims	237.2	339.8	43.28	30% (+/-)	No
Provider IDs with NPI					
Number of provider IDs with NPI	746	633	-15.15	30% (+/-)	Yes
% NPI source = MSIS	94.9	79.9	-15.77	30% (+/-)	Yes
% NPI source = NPPES	5.1	20.1	293.86	30% (+/-)	No
% 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	731	583	-20.25	30% (+/-)	Yes
% linked via NPI	94.8	78.2	-17.50	30% (+/-)	Yes
% linked via Medicaid legacy provider ID	5.2	21.8	319.08	30% (+/-)	No
% linked via Medicare UPIN	0.0	0.0	Div by 0	30% (+/-)	N/A
% with name prefix	3.6	3.8	6.10	30% (+/-)	Yes
% with first name	5.7	7.0	22.40	30% (+/-)	Yes
% with middle name	5.1	6.3	25.37	30% (+/-)	Yes
% with last name	5.7	7.0	22.40	30% (+/-)	Yes
% with name suffix	0.3	0.5	87.96	30% (+/-)	Yes
% male	4.8	6.2	28.97	30% (+/-)	Yes
% female	1.0	0.9	-10.44	30% (+/-)	Yes
% with credential	5.5	6.9	25.38	30% (+/-)	Yes
% with business name	94.3	92.5	-1.91	30% (+/-)	Yes
% with address line 1	100.0	99.5	-0.52	30% (+/-)	Yes
% with city	100.0	99.5	-0.52	30% (+/-)	Yes
% with state	100.0	99.5	-0.52	30% (+/-)	Yes
% state = IP state code	69.9	73.8	5.51	30% (+/-)	Yes
% with zip code	100.0	99.5	-0.52	30% (+/-)	Yes
% with primary taxonomy	99.3	99.1	-0.18	30% (+/-)	Yes
% with provider entity type = individual	5.7	7.0	22.40	30% (+/-)	Yes
% with provider entity type = organization	94.3	92.5	-1.91	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	726	578	-20.39	30% (+/-)	Yes
% individual or group of individuals	26.2	23.9	-8.77	30% (+/-)	Yes
% allopathic and osteopathic physicians	22.5	23.0	2.49	30% (+/-)	Yes
% behavioral health and social service providers	0.6	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 IP Billing Provider Characteristics Validation Table

State: MO

Produced: 03/11/2013

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	0.1	0.0	-100.00	30% (+/-)	Yes
% 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	1.9	0.7	-64.11	30% (+/-)	Yes
% pharmacy service providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% physician assistants and advanced practice nursing providers	0.4	0.2	-58.11	30% (+/-)	Yes
% podiatric medicine and surgery service providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% respiratory, developmental, rehabilitative, and restorative service providers	0.0	0.0	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	0.7	0.0	-100.00	30% (+/-)	Yes
% nonindividuals	73.8	76.1	3.11	30% (+/-)	Yes
% agencies	0.1	0.2	25.36	30% (+/-)	Yes
% ambulatory health care facilities	5.9	7.6	28.52	30% (+/-)	Yes
% hospital units	5.0	5.9	18.61	30% (+/-)	Yes
% hospitals	62.1	61.1	-1.69	30% (+/-)	Yes
% laboratories	0.0	0.0	Div by 0	30% (+/-)	N/A
% managed care organizations	0.0	0.0	Div by 0	30% (+/-)	N/A
% nursing and custodial care facilities	0.0	0.0	Div by 0	30% (+/-)	N/A
% residential treatment facilities	0.6	0.7	25.59	30% (+/-)	Yes
% respite care facility	0.0	0.0	Div by 0	30% (+/-)	N/A
% suppliers	0.0	0.2	Div by 0	30% (+/-)	N/A
% transportation services	0.1	0.5	276.09	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	42	41	-2.38	30% (+/-)	Yes
% a sole proprietorship	50.0	36.6	-26.83	30% (+/-)	Yes
% not a sole proprietorship	42.9	61.0	42.28	30% (+/-)	No
% not answered	7.1	2.4	-65.85	N/A	N/A
Provider IDs with Entity Type = Organization					
Number of provider IDs with entity type = organization	689	539	-21.77	30% (+/-)	Yes
% organization is a subpart	13.4	16.0	19.49	30% (+/-)	Yes
% organization is not a subpart	71.1	75.0	5.39	30% (+/-)	Yes
% not answered	15.5	9.1	-41.46	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: MO

Produced: 03/11/2013

Measure	2009 Value	2010 Value	% Change 2009-2010	Cross Year Expected Range	Cross Year Within Range ^a
LT Providers					
Number of provider IDs	1,074	1,077	0.28	30% (+/-)	Yes
% billing provider on LT claim	49.3	49.1	-0.47	N/A	N/A
% NPI billing provider on LT claim	50.7	50.9	0.45	N/A	N/A
% also a provider on IP claim	0.0	0.0	Div by 0	N/A	N/A
% also a provider on OT claim	2.3	1.8	-24.23	N/A	N/A
% also a provider on RX claim	0.0	0.0	Div by 0	N/A	N/A
% provider IDs with NPI	98.4	98.1	-0.28	30% (+/-)	Yes
% provider IDs linked to NPPES	98.0	98.1	0.10	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	1,156.2	1,140.6	-1.35	30% (+/-)	Yes
average number of beneficiaries with LT claims	78.8	78.2	-0.74	30% (+/-)	Yes
Provider IDs with NPI					
Number of provider IDs with NPI	1,057	1,057	0.00	30% (+/-)	Yes
% NPI source = MSIS	98.3	96.8	-1.54	30% (+/-)	Yes
% NPI source = NPPES	1.7	3.2	88.90	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	1,053	1,057	0.38	30% (+/-)	Yes
% linked via NPI	98.3	96.8	-1.53	30% (+/-)	Yes
% linked via Medicaid legacy provider ID	1.7	3.2	88.24	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	99.9	-0.09	30% (+/-)	Yes
% with address line 1	100.0	99.9	-0.09	30% (+/-)	Yes
% with city	100.0	99.9	-0.09	30% (+/-)	Yes
% with state	100.0	99.9	-0.09	30% (+/-)	Yes
% state = LT state code	99.2	99.3	0.10	30% (+/-)	Yes
% with zip code	100.0	99.9	-0.09	30% (+/-)	Yes
% with primary taxonomy	99.2	99.5	0.29	30% (+/-)	Yes
% with provider entity type = individual	0.0	0.0	Div by 0	30% (+/-)	N/A
% with provider entity type = organization	100.0	99.9	-0.09	30% (+/-)	Yes
Provider IDs with or without NPI but linked to state provider file					
Number of provider IDs with or without NPI linked to state provider file	0	0	Div by 0	N/A	N/A
Provider IDs with NPPES Primary Taxonomy					
Number of provider IDs with NPPES primary taxonomy	1,046	1,052	0.57	30% (+/-)	Yes
% individual or group of individuals	0.2	0.0	-100.00	30% (+/-)	Yes
% 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 eExtract (MAX) Provider Characteristics Files, 2009-2010.

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

2009-2010 MAX LT Billing Provider Characteristics Validation Table

State: MO

Produced: 03/11/2013

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	0.2	0.0	-100.00	30% (+/-)	Yes
% 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	99.8	100.0	0.19	30% (+/-)	Yes
% agencies	0.0	0.3	Div by 0	30% (+/-)	N/A
% ambulatory health care facilities	0.0	0.0	Div by 0	30% (+/-)	N/A
% hospital units	0.0	0.0	Div by 0	30% (+/-)	N/A
% hospitals	0.9	0.8	-11.63	30% (+/-)	Yes
% laboratories	0.0	0.0	Div by 0	30% (+/-)	N/A
% managed care organizations	0.0	0.0	Div by 0	30% (+/-)	N/A
% nursing and custodial care facilities	98.5	98.6	0.11	30% (+/-)	Yes
% residential treatment facilities	0.5	0.4	-20.50	30% (+/-)	Yes
% respite care facility	0.0	0.0	Div by 0	30% (+/-)	N/A
% suppliers	0.0	0.0	Div by 0	30% (+/-)	N/A
% transportation services	0.0	0.0	Div by 0	30% (+/-)	N/A
% nonmedical	0.0	0.0	Div by 0	N/A	N/A
Provider IDs with Entity Type = Individual					
Number of provider IDs with entity type = individual	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	1,053	1,056	0.28	30% (+/-)	Yes
% organization is a subpart	8.0	7.5	-6.22	30% (+/-)	Yes
% organization is not a subpart	56.1	74.5	32.79	30% (+/-)	No
% not answered	35.9	18.0	-49.88	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: MO

Produced: 03/11/2013

Measure	2009 Value	2010 Value	% Change 2009-2010	Cross Year Expected Range	Cross Year Within Range ^a
OT Providers					
Number of provider IDs	57,595	59,506	3.32	30% (+/-)	Yes
% billing provider on OT claim	5.8	6.0	2.45	N/A	N/A
% servicing provider on OT claim	79.3	80.2	1.19	N/A	N/A
% NPI servicing provider on OT claim	20.7	19.8	-4.56	N/A	N/A
% also a provider on IP claim	0.8	0.7	-7.52	N/A	N/A
% also a provider on LT claim	0.0	0.0	-23.68	N/A	N/A
% also a provider on RX claim	16.7	17.4	4.18	N/A	N/A
% provider IDs with NPI	74.4	82.7	11.17	30% (+/-)	Yes
% provider IDs linked to NPPES	53.0	52.9	-0.28	30% (+/-)	Yes
% provider IDs with or without NPI but linked to state provider file	0.0	0.0	Div by 0	N/A	N/A
average number of OT claims	1,052.2	1,142.8	8.61	30% (+/-)	Yes
average number of beneficiaries with OT claims	168.4	163.3	-3.04	30% (+/-)	Yes
Provider IDs with NPI					
Number of provider IDs with NPI	42,855	49,222	14.86	30% (+/-)	Yes
% NPI source = MSIS	94.1	94.6	0.48	30% (+/-)	Yes
% NPI source = NPPES	5.9	5.4	-7.65	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	30,540	31,466	3.03	30% (+/-)	Yes
% linked via NPI	91.7	91.5	-0.26	30% (+/-)	Yes
% linked via Medicaid legacy provider ID	8.2	8.5	3.02	30% (+/-)	Yes
% linked via Medicare UPIN	0.0	0.0	-10.26	30% (+/-)	Yes
% with name prefix	12.0	11.4	-4.50	30% (+/-)	Yes
% with first name	20.4	19.9	-2.44	30% (+/-)	Yes
% with middle name	17.0	16.6	-2.48	30% (+/-)	Yes
% with last name	20.4	19.9	-2.44	30% (+/-)	Yes
% with name suffix	0.7	0.7	-3.04	30% (+/-)	Yes
% male	13.2	12.7	-3.81	30% (+/-)	Yes
% female	7.2	7.2	0.07	30% (+/-)	Yes
% with credential	19.6	19.2	-2.13	30% (+/-)	Yes
% with business name	79.7	79.8	0.17	30% (+/-)	Yes
% with address line 1	100.0	99.6	-0.36	30% (+/-)	Yes
% with city	100.0	99.6	-0.36	30% (+/-)	Yes
% with state	100.0	99.6	-0.36	30% (+/-)	Yes
% state = OT state code	81.8	82.3	0.56	30% (+/-)	Yes
% with zip code	100.0	99.6	-0.36	30% (+/-)	Yes
% with primary taxonomy	98.5	97.6	-0.91	30% (+/-)	Yes
% with provider entity type = individual	20.4	19.9	-2.44	30% (+/-)	Yes
% with provider entity type = organization	79.7	79.8	0.17	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	33,741	30,698	-9.02	30% (+/-)	Yes
% individual or group of individuals	66.6	58.5	-12.23	30% (+/-)	Yes
% allopathic and osteopathic physicians	46.1	41.7	-9.45	30% (+/-)	Yes

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

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

2009-2010 MAX OT Servicing Provider Characteristics Validation Table

State: MO

Produced: 03/11/2013

Measure	2009 Value	2010 Value	% Change 2009-2010	Cross Year Expected Range	Cross Year Within Range ^a
% behavioral health and social service providers	5.0	6.0	20.85	30% (+/-)	Yes
% chiropractic providers	0.3	0.3	2.81	30% (+/-)	Yes
% dental providers	1.4	1.7	17.22	30% (+/-)	Yes
% dietary and nutritional service providers	0.0	0.0	-53.33	30% (+/-)	Yes
% emergency medical service providers	0.2	0.1	-26.49	30% (+/-)	Yes
% eye and vision service providers	2.0	2.2	8.82	30% (+/-)	Yes
% nursing service providers	0.1	0.1	-2.73	30% (+/-)	Yes
% nursing service-related providers	0.4	0.3	-39.45	30% (+/-)	Yes
% other service providers	1.4	2.1	46.58	30% (+/-)	Yes
% pharmacy service providers	0.0	0.1	254.17	30% (+/-)	Yes
% physician assistants and advanced practice nursing providers	4.8	1.7	-65.11	30% (+/-)	Yes
% podiatric medicine and surgery service providers	0.9	1.0	5.97	30% (+/-)	Yes
% respiratory, developmental, rehabilitative, and restorative service providers	0.6	0.6	10.43	30% (+/-)	Yes
% speech, language, and hearing service providers	0.6	0.5	-8.26	30% (+/-)	Yes
% student health care	0.0	0.0	-16.67	30% (+/-)	Yes
% technologists, technicians, and other technical service providers	0.0	0.0	16.67	30% (+/-)	Yes
% group of individuals with multi- or single specialty	2.7	0.0	-100.00	30% (+/-)	Yes
% nonindividuals	33.4	41.5	24.43	30% (+/-)	Yes
% agencies	8.1	9.6	18.69	30% (+/-)	Yes
% ambulatory health care facilities	8.9	14.9	67.00	30% (+/-)	No
% hospital units	0.1	0.1	-0.68	30% (+/-)	Yes
% hospitals	2.8	3.9	37.18	30% (+/-)	Yes
% laboratories	0.8	1.0	29.11	30% (+/-)	Yes
% managed care organizations	0.0	0.1	31.91	30% (+/-)	Yes
% nursing and custodial care facilities	0.8	1.1	30.09	30% (+/-)	Yes
% residential treatment facilities	3.5	2.6	-27.61	30% (+/-)	Yes
% respite care facility	0.0	0.1	118.52	30% (+/-)	Yes
% suppliers	6.9	6.8	-1.62	30% (+/-)	Yes
% transportation services	1.3	1.5	12.88	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	6,215	6,247	0.51	30% (+/-)	Yes
% a sole proprietorship	34.3	36.3	6.03	30% (+/-)	Yes
% not a sole proprietorship	57.2	57.6	0.75	30% (+/-)	Yes
% not answered	8.6	6.1	-29.12	N/A	N/A
Provider IDs with Entity Type = Organization					
Number of provider IDs with entity type = organization	24,325	25,105	3.21	30% (+/-)	Yes
% organization is a subpart	12.0	13.0	9.01	30% (+/-)	Yes
% organization is not a subpart	68.6	72.1	5.01	30% (+/-)	Yes
% not answered	19.4	14.9	-23.27	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: MO

Produced: 03/11/2013

Measure	2009 Value	2010 Value	% Change 2009-2010	Cross Year Expected Range	Cross Year Within Range ^a
OT Providers					
Number of provider IDs	12,541	12,813	2.17	30% (+/-)	Yes
% billing provider on OT claim	100.0	100.0	0.00	N/A	N/A
% servicing provider on OT claim	26.8	27.7	3.59	N/A	N/A
% NPI servicing provider on OT claim	0.0	0.0	Div by 0	N/A	N/A
% also a provider on IP claim	3.4	3.4	1.61	N/A	N/A
% also a provider on LT claim	0.0	0.0	-33.33	N/A	N/A
% also a provider on RX claim	19.6	19.3	-1.41	N/A	N/A
% provider IDs with NPI	41.8	43.4	4.04	30% (+/-)	Yes
% provider IDs linked to NPES	41.0	42.1	2.56	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	4,905.0	5,366.4	9.41	30% (+/-)	Yes
average number of beneficiaries with OT claims	498.9	743.6	49.05	30% (+/-)	No
Provider IDs with NPI					
Number of provider IDs with NPI	5,237	5,567	6.30	30% (+/-)	Yes
% NPI source = MSIS	65.7	63.7	-2.97	30% (+/-)	Yes
% NPI source = NPES	34.3	36.3	5.69	30% (+/-)	Yes
% NPI source = state cross-reference file	0.0	0.0	Div by 0	N/A	N/A
Provider IDs Linked to NPES					
Number of provider IDs linked to NPES	5,146	5,392	4.78	30% (+/-)	Yes
% linked via NPI	65.1	62.5	-3.88	30% (+/-)	Yes
% linked via Medicaid legacy provider ID	34.9	37.4	7.23	30% (+/-)	Yes
% linked via Medicare UPIN	0.0	0.0	-5.13	30% (+/-)	Yes
% with name prefix	13.9	15.7	13.01	30% (+/-)	Yes
% with first name	22.7	25.2	10.86	30% (+/-)	Yes
% with middle name	19.1	21.0	10.21	30% (+/-)	Yes
% with last name	22.7	25.2	10.86	30% (+/-)	Yes
% with name suffix	1.1	1.2	7.35	30% (+/-)	Yes
% male	15.9	16.7	5.13	30% (+/-)	Yes
% female	6.8	8.5	24.18	30% (+/-)	Yes
% with credential	22.1	24.4	10.74	30% (+/-)	Yes
% with business name	77.3	74.6	-3.53	30% (+/-)	Yes
% with address line 1	100.0	99.7	-0.26	30% (+/-)	Yes
% with city	100.0	99.7	-0.26	30% (+/-)	Yes
% with state	100.0	99.7	-0.26	30% (+/-)	Yes
% state = OT state code	86.4	87.4	1.15	30% (+/-)	Yes
% with zip code	100.0	99.7	-0.26	30% (+/-)	Yes
% with primary taxonomy	99.2	98.8	-0.47	30% (+/-)	Yes
% with provider entity type = individual	22.7	25.2	10.86	30% (+/-)	Yes
% with provider entity type = organization	77.3	74.6	-3.53	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 NPES Primary Taxonomy					
Number of provider IDs with NPES primary taxonomy	5,115	5,326	4.13	30% (+/-)	Yes
% individual or group of individuals	46.4	46.5	0.25	30% (+/-)	Yes
% allopathic and osteopathic physicians	27.6	26.8	-2.81	30% (+/-)	Yes

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

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

2009-2010 MAX OT Billing Provider Characteristics Validation Table

State: MO

Produced: 03/11/2013

Measure	2009 Value	2010 Value	% Change 2009-2010	Cross Year Expected Range	Cross Year Within Range ^a
% behavioral health and social service providers	4.7	6.7	41.85	30% (+/-)	Yes
% chiropractic providers	0.4	0.5	15.35	30% (+/-)	Yes
% dental providers	2.8	2.9	3.49	30% (+/-)	Yes
% dietary and nutritional service providers	0.0	0.0	90.00	30% (+/-)	Yes
% emergency medical service providers	0.1	0.2	91.84	30% (+/-)	Yes
% eye and vision service providers	3.3	3.1	-5.70	30% (+/-)	Yes
% nursing service providers	0.2	0.2	14.80	30% (+/-)	Yes
% nursing service-related providers	0.8	0.7	-15.71	30% (+/-)	Yes
% other service providers	1.4	1.9	36.01	30% (+/-)	Yes
% pharmacy service providers	0.1	0.3	440.68	30% (+/-)	Yes
% physician assistants and advanced practice nursing providers	1.3	0.7	-41.49	30% (+/-)	Yes
% podiatric medicine and surgery service providers	1.4	1.5	3.92	30% (+/-)	Yes
% respiratory, developmental, rehabilitative, and restorative service providers	0.6	0.4	-26.41	30% (+/-)	Yes
% speech, language, and hearing service providers	0.4	0.5	19.95	30% (+/-)	Yes
% student health care	0.0	0.0	-5.00	30% (+/-)	Yes
% technologists, technicians, and other technical service providers	0.1	0.1	-4.08	30% (+/-)	Yes
% group of individuals with multi- or single specialty	1.3	0.0	-100.00	30% (+/-)	Yes
% nonindividuals	53.6	53.5	-0.22	30% (+/-)	Yes
% agencies	9.0	10.8	20.20	30% (+/-)	Yes
% ambulatory health care facilities	10.8	12.9	19.70	30% (+/-)	Yes
% hospital units	0.0	0.0	Div by 0	30% (+/-)	N/A
% hospitals	5.5	3.2	-42.25	30% (+/-)	Yes
% laboratories	1.8	2.0	10.62	30% (+/-)	Yes
% managed care organizations	0.1	0.1	11.97	30% (+/-)	Yes
% nursing and custodial care facilities	0.7	1.0	36.47	30% (+/-)	Yes
% residential treatment facilities	2.4	1.8	-23.49	30% (+/-)	Yes
% respite care facility	0.1	0.1	122.03	30% (+/-)	Yes
% suppliers	19.9	17.8	-10.29	30% (+/-)	Yes
% transportation services	3.3	3.6	9.60	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	1,169	1,358	16.17	30% (+/-)	Yes
% a sole proprietorship	46.6	51.2	9.77	30% (+/-)	Yes
% not a sole proprietorship	41.3	40.9	-1.08	30% (+/-)	Yes
% not answered	12.1	8.0	-34.07	N/A	N/A
Provider IDs with Entity Type = Organization					
Number of provider IDs with entity type = organization	3,977	4,020	1.08	30% (+/-)	Yes
% organization is a subpart	15.2	16.3	6.93	30% (+/-)	Yes
% organization is not a subpart	73.6	76.6	4.07	30% (+/-)	Yes
% not answered	11.2	7.1	-36.28	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: MO

Produced: 03/11/2013

Measure	2009 Value	2010 Value	% Change 2009-2010	Cross Year Expected Range	Cross Year Within Range ^a
RX Providers					
Number of provider IDs	6,847	5,623	-17.88	30% (+/-)	Yes
% billing provider on RX claim	41.8	51.3	22.62	N/A	N/A
% prescribing provider on RX claim	8.8	4.1	-52.95	N/A	N/A
% NPI billing provider on RX claim	58.2	48.7	-16.25	N/A	N/A
% also a provider on IP claim	6.1	7.2	17.68	N/A	N/A
% also a provider on LT claim	0.0	0.0	Div by 0	N/A	N/A
% also a provider on OT claim	57.1	71.7	25.44	N/A	N/A
% provider IDs with NPI	95.4	94.9	-0.48	30% (+/-)	Yes
% provider IDs linked to NPES	79.9	94.9	18.78	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	3,835.5	5,333.4	39.05	30% (+/-)	No
average number of beneficiaries with RX claims	386.6	523.7	35.45	30% (+/-)	No
Provider IDs with NPI					
Number of provider IDs with NPI	6,529	5,336	-18.27	30% (+/-)	Yes
% NPI source = MSIS	97.7	96.7	-1.02	30% (+/-)	Yes
% NPI source = NPES	2.3	3.3	43.73	30% (+/-)	Yes
% NPI source = state cross-reference file	0.0	0.0	Div by 0	N/A	N/A
Provider IDs Linked to NPES					
Number of provider IDs linked to NPES	5,468	5,334	-2.45	30% (+/-)	Yes
% linked via NPI	97.3	96.7	-0.57	30% (+/-)	Yes
% linked via Medicaid legacy provider ID	2.7	3.3	20.40	30% (+/-)	Yes
% linked via Medicare UPIN	0.0	0.0	Div by 0	30% (+/-)	N/A
% with name prefix	2.9	2.9	1.20	30% (+/-)	Yes
% with first name	5.7	5.5	-3.09	30% (+/-)	Yes
% with middle name	5.1	5.0	-1.56	30% (+/-)	Yes
% with last name	5.7	5.5	-3.09	30% (+/-)	Yes
% with name suffix	0.3	0.3	-9.65	30% (+/-)	Yes
% male	4.1	3.9	-4.37	30% (+/-)	Yes
% female	1.6	1.6	0.19	30% (+/-)	Yes
% with credential	5.5	5.4	-2.92	30% (+/-)	Yes
% with business name	94.3	94.2	-0.11	30% (+/-)	Yes
% with address line 1	100.0	99.7	-0.28	30% (+/-)	Yes
% with city	100.0	99.7	-0.28	30% (+/-)	Yes
% with state	100.0	99.7	-0.28	30% (+/-)	Yes
% state = RX state code	85.2	89.8	5.35	30% (+/-)	Yes
% with zip code	100.0	99.7	-0.28	30% (+/-)	Yes
% with primary taxonomy	98.9	98.7	-0.22	30% (+/-)	Yes
% with provider entity type = individual	5.7	5.5	-3.09	30% (+/-)	Yes
% with provider entity type = organization	94.3	94.2	-0.11	30% (+/-)	Yes
Provider IDs with or without NPI but linked to state provider file					
Number of provider IDs with or without NPI linked to state provider file	0	0	Div by 0	N/A	N/A
Provider IDs with NPES Primary Taxonomy					
Number of provider IDs with NPES primary taxonomy	5,413	5,262	-2.79	30% (+/-)	Yes
% individual or group of individuals	26.2	27.2	3.59	30% (+/-)	Yes
% allopathic and osteopathic physicians	20.8	22.9	10.00	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: MO

Produced: 03/11/2013

Measure	2009 Value	2010 Value	% Change 2009-2010	Cross Year Expected Range	Cross Year Within Range ^a
% behavioral health and social service providers	0.2	0.0	-100.00	30% (+/-)	Yes
% chiropractic providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% dental providers	0.0	0.0	-100.00	30% (+/-)	Yes
% dietary and nutritional service providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% emergency medical service providers	0.0	0.0	2.70	30% (+/-)	Yes
% eye and vision service providers	0.0	0.0	2.70	30% (+/-)	Yes
% nursing service providers	0.1	0.1	3.64	30% (+/-)	Yes
% nursing service-related providers	0.0	0.0	5.56	30% (+/-)	Yes
% other service providers	0.9	1.5	61.36	30% (+/-)	Yes
% pharmacy service providers	1.3	1.7	31.14	30% (+/-)	Yes
% physician assistants and advanced practice nursing providers	1.1	0.5	-50.33	30% (+/-)	Yes
% podiatric medicine and surgery service providers	0.5	0.4	-5.41	30% (+/-)	Yes
% 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	1.3	0.0	-100.00	30% (+/-)	Yes
% nonindividuals	73.8	72.8	-1.28	30% (+/-)	Yes
% agencies	2.0	2.3	17.30	30% (+/-)	Yes
% ambulatory health care facilities	11.6	14.7	26.58	30% (+/-)	Yes
% hospital units	0.1	0.2	2.70	30% (+/-)	Yes
% hospitals	4.5	3.8	-15.75	30% (+/-)	Yes
% laboratories	0.0	0.0	Div by 0	30% (+/-)	N/A
% managed care organizations	0.1	0.2	36.94	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	55.4	51.7	-6.67	30% (+/-)	Yes
% transportation services	0.0	0.0	-100.00	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	311	294	-5.47	30% (+/-)	Yes
% a sole proprietorship	41.8	50.0	19.61	30% (+/-)	Yes
% not a sole proprietorship	44.7	43.2	-3.35	30% (+/-)	Yes
% not answered	13.5	6.8	-49.63	N/A	N/A
Provider IDs with Entity Type = Organization					
Number of provider IDs with entity type = organization	5,157	5,025	-2.56	30% (+/-)	Yes
% organization is a subpart	30.3	28.6	-5.58	30% (+/-)	Yes
% organization is not a subpart	59.2	64.0	8.07	30% (+/-)	Yes
% not answered	10.5	7.4	-29.55	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: MO

Produced: 03/11/2013

Measure	2009 Value	2010 Value	% Change 2009-2010	Cross Year Expected Range	Cross Year Within Range ^a
RX Providers					
Number of provider IDs	38,641	40,445	4.67	30% (+/-)	Yes
% billing provider on RX claim	1.6	0.6	-63.10	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	0.4	0.1	-60.28	N/A	N/A
% also a provider on LT claim	0.0	0.0	Div by 0	N/A	N/A
% also a provider on OT claim	20.5	20.2	-1.19	N/A	N/A
% provider IDs with NPI	13.1	14.0	6.56	30% (+/-)	Yes
% provider IDs linked to NPPES	13.1	14.0	6.77	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	371.3	373.9	0.69	30% (+/-)	Yes
average number of beneficiaries with RX claims	55.2	56.7	2.63	30% (+/-)	Yes
Provider IDs with NPI					
Number of provider IDs with NPI	5,081	5,667	11.53	30% (+/-)	Yes
% NPI source = MSIS	69.1	68.5	-0.92	30% (+/-)	Yes
% NPI source = NPPES	30.9	31.5	2.05	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	5,053	5,647	11.76	30% (+/-)	Yes
% linked via NPI	68.9	68.4	-0.83	30% (+/-)	Yes
% linked via Medicaid legacy provider ID	30.9	31.6	2.08	30% (+/-)	Yes
% linked via Medicare UPIN	0.1	0.1	-48.92	30% (+/-)	Yes
% with name prefix	19.0	18.4	-2.95	30% (+/-)	Yes
% with first name	33.5	34.5	2.90	30% (+/-)	Yes
% with middle name	28.2	28.8	2.09	30% (+/-)	Yes
% with last name	33.5	34.5	2.90	30% (+/-)	Yes
% with name suffix	1.3	1.2	-6.39	30% (+/-)	Yes
% male	25.3	25.6	1.23	30% (+/-)	Yes
% female	8.2	8.9	8.07	30% (+/-)	Yes
% with credential	33.0	34.0	3.08	30% (+/-)	Yes
% with business name	66.5	65.4	-1.62	30% (+/-)	Yes
% with address line 1	100.0	99.9	-0.11	30% (+/-)	Yes
% with city	100.0	99.9	-0.11	30% (+/-)	Yes
% with state	100.0	99.9	-0.11	30% (+/-)	Yes
% state = RX state code	91.7	92.7	1.03	30% (+/-)	Yes
% with zip code	100.0	99.9	-0.11	30% (+/-)	Yes
% with primary taxonomy	99.4	99.3	-0.17	30% (+/-)	Yes
% with provider entity type = individual	33.5	34.5	2.90	30% (+/-)	Yes
% with provider entity type = organization	66.5	65.4	-1.62	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	5,026	5,605	11.52	30% (+/-)	Yes
% individual or group of individuals	86.9	81.9	-5.79	30% (+/-)	Yes
% allopathic and osteopathic physicians	74.1	74.1	0.03	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: MO

Produced: 03/11/2013

Measure	2009 Value	2010 Value	% Change 2009-2010	Cross Year Expected Range	Cross Year Within Range ^a
% behavioral health and social service providers	0.2	0.1	-40.22	30% (+/-)	Yes
% chiropractic providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% dental providers	1.2	1.2	0.34	30% (+/-)	Yes
% dietary and nutritional service providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% emergency medical service providers	0.3	0.3	-16.11	30% (+/-)	Yes
% eye and vision service providers	1.0	0.9	-12.21	30% (+/-)	Yes
% nursing service providers	0.0	0.1	170.00	30% (+/-)	Yes
% nursing service-related providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% other service providers	2.0	2.5	28.58	30% (+/-)	Yes
% pharmacy service providers	0.0	0.0	-10.00	30% (+/-)	Yes
% physician assistants and advanced practice nursing providers	2.2	1.8	-18.58	30% (+/-)	Yes
% podiatric medicine and surgery service providers	1.0	1.0	-1.74	30% (+/-)	Yes
% 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	-100.00	30% (+/-)	Yes
% 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	5.0	0.0	-100.00	30% (+/-)	Yes
% nonindividuals	13.1	18.1	38.46	30% (+/-)	No
% agencies	0.8	0.5	-32.79	30% (+/-)	Yes
% ambulatory health care facilities	7.7	12.7	64.97	30% (+/-)	No
% hospital units	0.0	0.0	Div by 0	30% (+/-)	N/A
% hospitals	3.0	4.4	47.08	30% (+/-)	Yes
% laboratories	0.1	0.1	-10.00	30% (+/-)	Yes
% managed care organizations	0.1	0.0	-77.50	30% (+/-)	Yes
% nursing and custodial care facilities	0.0	0.0	-10.00	30% (+/-)	Yes
% residential treatment facilities	0.0	0.0	Div by 0	30% (+/-)	N/A
% respite care facility	0.0	0.0	Div by 0	30% (+/-)	N/A
% suppliers	1.3	0.4	-73.22	30% (+/-)	Yes
% transportation services	0.1	0.1	-54.62	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	1,694	1,948	14.99	30% (+/-)	Yes
% a sole proprietorship	16.8	16.5	-2.06	30% (+/-)	Yes
% not a sole proprietorship	80.8	82.2	1.84	30% (+/-)	Yes
% not answered	2.4	1.3	-46.98	N/A	N/A
Provider IDs with Entity Type = Organization					
Number of provider IDs with entity type = organization	3,359	3,693	9.94	30% (+/-)	Yes
% organization is a subpart	12.0	12.0	-0.24	30% (+/-)	Yes
% organization is not a subpart	80.8	82.5	2.05	30% (+/-)	Yes
% not answered	7.2	5.6	-22.58	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: MO

Produced: 03/11/2013

Measure	2009 Value	2010 Value	% Change 2009-2010	Cross Year Expected Range	Cross Year Within Range ^a
All Providers					
Number of provider IDs	101,554	103,770	2.18	30%(+/-)	Yes
% billing provider on IP claim	0.5	0.5	4.33	N/A	N/A
% NPI billing provider on IP claim	0.4	0.4	-5.24	N/A	N/A
% billing provider on LT claim	0.5	0.5	-2.30	N/A	N/A
% NPI billing provider on LT claim	0.5	0.5	-1.49	N/A	N/A
% billing provider on OT claim	12.3	12.3	-0.02	N/A	N/A
% servicing provider on OT claim	45.0	46.0	2.32	N/A	N/A
% NPI servicing provider on OT claim	11.8	11.3	-3.49	N/A	N/A
% billing provider on RX claim	2.8	2.8	-1.45	N/A	N/A
% prescribing provider on RX claim	38.1	39.0	2.43	N/A	N/A
% NPI billing provider on RX claim	3.9	2.6	-32.70	N/A	N/A
% billing provider	13.9	13.9	-0.38	N/A	N/A
% NPI billing provider	4.7	3.4	-27.70	N/A	N/A
% servicing provider	45.0	46.0	2.32	N/A	N/A
% NPI servicing provider	11.8	11.3	-3.49	N/A	N/A
% prescribing provider	38.1	39.0	2.43	N/A	N/A
% provider IDs with NPI	49.0	52.9	8.07	30%(+/-)	Yes
% provider IDs linked to NPPES	35.8	35.8	-0.09	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	1,544.2	1,676.0	8.53	30%(+/-)	Yes
average number of beneficiaries with claims	190.5	221.6	16.36	30%(+/-)	Yes
Provider IDs with NPI					
Number of provider IDs with NPI	49,724	54,910	10.43	30%(+/-)	Yes
% NPI source = MSIS	91.8	91.9	0.09	30%(+/-)	Yes
% NPI source = NPPES	8.2	8.1	-1.02	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	36,357	37,116	2.09	30%(+/-)	Yes
% linked via NPI	88.8	88.0	-0.89	30%(+/-)	Yes
% linked via Medicaid legacy provider ID	11.1	11.9	7.21	30%(+/-)	Yes
% linked via Medicare UPIN	0.1	0.0	-23.08	30%(+/-)	Yes
% with name prefix	10.5	10.1	-3.51	30%(+/-)	Yes
% with first name	17.8	17.5	-1.48	30%(+/-)	Yes
% with middle name	14.8	14.6	-1.58	30%(+/-)	Yes
% with last name	17.8	17.5	-1.48	30%(+/-)	Yes
% with name suffix	0.6	0.6	-2.51	30%(+/-)	Yes
% male	11.5	11.2	-2.73	30%(+/-)	Yes
% female	6.3	6.3	0.78	30%(+/-)	Yes
% with credential	17.1	16.9	-1.21	30%(+/-)	Yes
% with business name	82.2	82.2	-0.08	30%(+/-)	Yes
% with address line 1	100.0	99.7	-0.33	30%(+/-)	Yes
% with city	100.0	99.7	-0.33	30%(+/-)	Yes
% with state	100.0	99.7	-0.33	30%(+/-)	Yes
% state = claim file state code	82.3	83.4	1.40	30%(+/-)	Yes
% with zip code	100.0	99.7	-0.33	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: MO

Produced: 03/11/2013

Measure	2009 Value	2010 Value	% Change 2009-2010	Cross Year Expected Range	Cross Year Within Range ^a
% with primary taxonomy	98.5	97.8	-0.75	30%(+/-)	Yes
% with provider entity type = individual	17.8	17.5	-1.48	30%(+/-)	Yes
% with provider entity type = organization	82.2	82.2	-0.08	30%(+/-)	Yes
Provider IDs with or without NPI but linked to state provider file					
Number of provider IDs with or without NPI linked to state provider file	0	0	Div by 0	N/A	N/A
Provider IDs with NPPES Primary Taxonomy					
Number of provider IDs with NPPES primary taxonomy	39,504	36,301	-8.11	30%(+/-)	Yes
% individual or group of individuals	60.2	53.0	-11.99	30%(+/-)	Yes
% allopathic and osteopathic physicians	41.4	37.7	-9.00	30%(+/-)	Yes
% behavioral health and social service providers	4.4	5.3	19.33	30%(+/-)	Yes
% chiropractic providers	0.3	0.3	4.84	30%(+/-)	Yes
% dental providers	1.3	1.4	13.80	30%(+/-)	Yes
% dietary and nutritional service providers	0.0	0.0	-46.67	30%(+/-)	Yes
% emergency medical service providers	0.1	0.1	-20.15	30%(+/-)	Yes
% eye and vision service providers	1.8	1.9	7.02	30%(+/-)	Yes
% nursing service providers	0.1	0.1	3.51	30%(+/-)	Yes
% nursing service-related providers	0.5	0.3	-35.31	30%(+/-)	Yes
% other service providers	1.4	2.0	44.30	30%(+/-)	Yes
% pharmacy service providers	0.2	0.3	51.10	30%(+/-)	Yes
% physician assistants and advanced practice nursing providers	4.3	1.5	-64.47	30%(+/-)	Yes
% podiatric medicine and surgery service providers	0.8	0.9	5.33	30%(+/-)	Yes
% respiratory, developmental, rehabilitative, and restorative service providers	0.5	0.6	7.75	30%(+/-)	Yes
% speech, language, and hearing service providers	0.5	0.5	-7.82	30%(+/-)	Yes
% student health care	0.0	0.0	-15.00	30%(+/-)	Yes
% technologists, technicians, and other technical service providers	0.0	0.0	20.00	30%(+/-)	Yes
% group of individuals with multi- or single specialty	2.5	0.0	-100.00	30%(+/-)	Yes
% nonindividuals	39.8	47.0	18.12	30%(+/-)	Yes
% agencies	7.9	9.5	20.70	30%(+/-)	Yes
% ambulatory health care facilities	8.6	14.1	63.55	30%(+/-)	No
% hospital units	0.1	0.1	0.70	30%(+/-)	Yes
% hospitals	3.2	3.8	19.04	30%(+/-)	Yes
% laboratories	0.7	0.9	28.86	30%(+/-)	Yes
% managed care organizations	0.1	0.1	35.85	30%(+/-)	Yes
% nursing and custodial care facilities	3.4	3.8	14.39	30%(+/-)	Yes
% residential treatment facilities	3.3	2.4	-26.90	30%(+/-)	Yes
% respite care facility	0.0	0.1	117.86	30%(+/-)	Yes
% suppliers	11.4	10.9	-4.36	30%(+/-)	Yes
% transportation services	1.2	1.3	13.86	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	6,464	6,501	0.57	30%(+/-)	Yes
% a sole proprietorship	34.5	36.7	6.38	30%(+/-)	Yes
% not a sole proprietorship	57.2	57.4	0.43	30%(+/-)	Yes
% not answered	8.3	5.9	-29.40	N/A	N/A
Provider IDs with Entity Type = Organization					
Number of provider IDs with entity type = organization	29,893	30,494	2.01	30%(+/-)	Yes
% organization is a subpart	14.0	14.4	3.17	30%(+/-)	Yes
% organization is not a subpart	67.8	71.9	6.11	30%(+/-)	Yes
% not answered	18.2	13.7	-25.12	N/A	N/A

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

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