

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

**State-Specific Validation Tables,  
2010**

**Colorado**

May 31, 2013

Deo Bencio  
Mei-ling Mason



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**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.<sup>1</sup> The NPI is a unique 10-digit, sequentially assigned national identification number, unstructured so as not to carry any way information such as the state or medical specialty of the health care provider who “owns” the identifier. Beginning in February 2009, states were required to include NPIs on claims submitted to MSIS. The main limitation of this identifier, however, is that certain classes of nonmedical providers are not required to obtain an NPI. Nonetheless, the availability of the NPI on MSIS claims makes the development of a uniform provider characteristic file more feasible. The MAX Provider Characteristics (MAXPC) file is such a file.

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

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

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<sup>1</sup> 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: CO

Produced: 04/18/2013

Measure	2009 Value	2010 Value	% Change 2009-2010	Cross Year Expected Range	Cross Year Within Range <sup>a</sup>
<b>IP Providers</b>					
Number of provider IDs	421	455	8.08	30% (+/-)	Yes
% billing provider on IP claim	49.4	49.5	0.09	N/A	N/A
% NPI billing provider on IP claim	50.6	50.5	-0.09	N/A	N/A
% also a provider on LT claim	1.4	0.9	-38.32	N/A	N/A
% also a provider on OT claim	63.4	64.8	2.23	N/A	N/A
% also a provider on RX claim	4.3	4.0	-7.48	N/A	N/A
% provider IDs with NPI	92.6	96.9	4.63	30% (+/-)	Yes
% provider IDs linked to NPPES	92.6	96.9	4.63	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	357.2	337.8	-5.43	30% (+/-)	Yes
average number of beneficiaries with IP claims	298.2	284.1	-4.70	30% (+/-)	Yes
<b>Provider IDs with NPI</b>					
Number of provider IDs with NPI	390	441	13.08	30% (+/-)	Yes
% NPI source = MSIS	96.2	99.8	3.76	30% (+/-)	Yes
% NPI source = NPPES	3.8	0.2	-94.10	30% (+/-)	Yes
% NPI source = state cross-reference file	0.0	0.0	Div by 0	N/A	N/A
<b>Provider IDs Linked to NPPES</b>					
Number of provider IDs linked to NPPES	390	441	13.08	30% (+/-)	Yes
% linked via NPI	96.2	99.8	3.76	30% (+/-)	Yes
% linked via Medicaid legacy provider ID	3.8	0.2	-94.10	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	43.1	39.5	-8.41	30% (+/-)	Yes
% with zip code	100.0	100.0	0.00	30% (+/-)	Yes
% with primary taxonomy	99.2	99.1	-0.14	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
<b>Provider IDs with or without NPI but linked to state provider file</b>					
Number of provider IDs with or without NPI linked to state provider file	0	0	Div by 0	N/A	N/A
<b>Provider IDs with NPPES Primary Taxonomy</b>					
Number of provider IDs with NPPES primary taxonomy	387	437	12.92	30% (+/-)	Yes
% individual or group of individuals	2.6	0.7	-73.45	30% (+/-)	Yes
% allopathic and osteopathic physicians	1.8	0.7	-62.08	30% (+/-)	Yes
% 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.

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

2009-2010 MAX IP Billing Provider Characteristics Validation Table

State: CO

Produced: 04/18/2013

Measure	2009 Value	2010 Value	% Change 2009-2010	Cross Year Expected Range	Cross Year Within Range <sup>a</sup>
% 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	0.5	0.0	-100.00	30% (+/-)	Yes
% 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	0.3	0.0	-100.00	30% (+/-)	Yes
% nonindividuals	97.4	99.3	1.95	30% (+/-)	Yes
% agencies	0.0	0.0	Div by 0	30% (+/-)	N/A
% ambulatory health care facilities	0.5	0.9	76.98	30% (+/-)	Yes
% hospital units	3.4	2.1	-38.70	30% (+/-)	Yes
% hospitals	92.8	96.3	3.85	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	0.5	0.0	-100.00	30% (+/-)	Yes
% residential treatment facilities	0.0	0.0	Div by 0	30% (+/-)	N/A
% respite care facility	0.0	0.0	Div by 0	30% (+/-)	N/A
% suppliers	0.0	0.0	Div by 0	30% (+/-)	N/A
% transportation services	0.3	0.0	-100.00	30% (+/-)	Yes
% nonmedical	0.0	0.0	Div by 0	N/A	N/A
<b>Provider IDs with Entity Type = Individual</b>					
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
<b>Provider IDs with Entity Type = Organization</b>					
Number of provider IDs with entity type = organization	390	441	13.08	30% (+/-)	Yes
% organization is a subpart	13.1	8.4	-35.84	30% (+/-)	No
% organization is not a subpart	73.8	82.3	11.47	30% (+/-)	Yes
% not answered	13.1	9.3	-28.91	N/A	N/A

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

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

2009-2010 MAX LT Billing Provider Characteristics Validation Table

State: CO

Produced: 04/18/2013

Measure	2009 Value	2010 Value	% Change 2009-2010	Cross Year Expected Range	Cross Year Within Range <sup>a</sup>
<b>LT Providers</b>					
Number of provider IDs	449	453	0.89	30% (+/-)	Yes
% billing provider on LT claim	51.0	50.6	-0.88	N/A	N/A
% NPI billing provider on LT claim	49.0	49.4	0.92	N/A	N/A
% also a provider on IP claim	1.3	0.9	-33.91	N/A	N/A
% also a provider on OT claim	3.6	7.1	98.26	N/A	N/A
% also a provider on RX claim	0.4	0.0	-100.00	N/A	N/A
% provider IDs with NPI	100.0	100.0	0.00	30% (+/-)	Yes
% provider IDs linked to NPPES	100.0	100.0	0.00	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	2,399.3	2,456.1	2.36	30% (+/-)	Yes
average number of beneficiaries with LT claims	75.0	74.8	-0.34	30% (+/-)	Yes
<b>Provider IDs with NPI</b>					
Number of provider IDs with NPI	449	453	0.89	30% (+/-)	Yes
% NPI source = MSIS	100.0	100.0	0.00	30% (+/-)	Yes
% NPI source = NPPES	0.0	0.0	Div by 0	30% (+/-)	N/A
% NPI source = state cross-reference file	0.0	0.0	Div by 0	N/A	N/A
<b>Provider IDs Linked to NPPES</b>					
Number of provider IDs linked to NPPES	449	453	0.89	30% (+/-)	Yes
% linked via NPI	100.0	100.0	0.00	30% (+/-)	Yes
% linked via Medicaid legacy provider ID	0.0	0.0	Div by 0	30% (+/-)	N/A
% linked via Medicare UPIN	0.0	0.0	Div by 0	30% (+/-)	N/A
% with name prefix	0.0	0.0	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	99.6	-0.44	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 = LT state code	97.6	98.5	0.93	30% (+/-)	Yes
% with zip code	100.0	99.6	-0.44	30% (+/-)	Yes
% with primary taxonomy	99.1	98.7	-0.44	30% (+/-)	Yes
% with provider entity type = individual	0.0	0.0	Div by 0	30% (+/-)	N/A
% with provider entity type = organization	100.0	99.6	-0.44	30% (+/-)	Yes
<b>Provider IDs with or without NPI but linked to state provider file</b>					
Number of provider IDs with or without NPI linked to state provider file	0	0	Div by 0	N/A	N/A
<b>Provider IDs with NPPES Primary Taxonomy</b>					
Number of provider IDs with NPPES primary taxonomy	445	447	0.45	30% (+/-)	Yes
% individual or group of individuals	4.5	0.0	-100.00	30% (+/-)	Yes
% allopathic and osteopathic physicians	4.3	0.0	-100.00	30% (+/-)	Yes
% 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.

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

2009-2010 MAX LT Billing Provider Characteristics Validation Table

State: CO

Produced: 04/18/2013

Measure	2009 Value	2010 Value	% Change 2009-2010	Cross Year Expected Range	Cross Year Within Range <sup>a</sup>
% 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	0.2	0.0	-100.00	30% (+/-)	Yes
% 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	95.5	100.0	4.71	30% (+/-)	Yes
% agencies	0.4	0.9	99.33	30% (+/-)	Yes
% ambulatory health care facilities	0.4	0.0	-100.00	30% (+/-)	Yes
% hospital units	4.9	3.1	-36.65	30% (+/-)	Yes
% hospitals	1.3	2.7	99.18	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	85.6	92.2	7.65	30% (+/-)	Yes
% residential treatment facilities	2.5	1.1	-54.73	30% (+/-)	Yes
% respite care facility	0.2	0.0	-100.00	30% (+/-)	Yes
% 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
<b>Provider IDs with Entity Type = Individual</b>					
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
<b>Provider IDs with Entity Type = Organization</b>					
Number of provider IDs with entity type = organization	449	451	0.45	30% (+/-)	Yes
% organization is a subpart	12.5	12.9	3.11	30% (+/-)	Yes
% organization is not a subpart	62.6	66.7	6.64	30% (+/-)	Yes
% not answered	24.9	20.4	-18.22	N/A	N/A

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

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

2009-2010 MAX OT Servicing Provider Characteristics Validation Table

State: CO

Produced: 04/18/2013

Measure	2009 Value	2010 Value	% Change 2009-2010	Cross Year Expected Range	Cross Year Within Range <sup>a</sup>
<b>OT Providers</b>					
Number of provider IDs	39,822	43,901	10.24	30% (+/-)	Yes
% billing provider on OT claim	13.0	11.7	-10.16	N/A	N/A
% servicing provider on OT claim	48.5	47.3	-2.48	N/A	N/A
% NPI servicing provider on OT claim	51.5	52.7	2.33	N/A	N/A
% also a provider on IP claim	0.5	0.3	-31.09	N/A	N/A
% also a provider on LT claim	0.0	0.1	77.50	N/A	N/A
% also a provider on RX claim	60.7	59.4	-2.17	N/A	N/A
% provider IDs with NPI	97.1	97.4	0.26	30% (+/-)	Yes
% provider IDs linked to NPPES	96.5	97.2	0.68	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	1,194.4	1,233.9	3.31	30% (+/-)	Yes
average number of beneficiaries with OT claims	191.5	193.4	0.98	30% (+/-)	Yes
<b>Provider IDs with NPI</b>					
Number of provider IDs with NPI	38,668	42,740	10.53	30% (+/-)	Yes
% NPI source = MSIS	96.6	97.3	0.70	30% (+/-)	Yes
% NPI source = NPPES	3.4	2.7	-20.09	30% (+/-)	Yes
% NPI source = state cross-reference file	0.0	0.0	Div by 0	N/A	N/A
<b>Provider IDs Linked to NPPES</b>					
Number of provider IDs linked to NPPES	38,429	42,652	10.99	30% (+/-)	Yes
% linked via NPI	96.6	97.3	0.72	30% (+/-)	Yes
% linked via Medicaid legacy provider ID	3.4	2.7	-20.49	30% (+/-)	Yes
% linked via Medicare UPIN	0.0	0.0	Div by 0	30% (+/-)	N/A
% with name prefix	34.3	34.5	0.77	30% (+/-)	Yes
% with first name	85.2	85.0	-0.23	30% (+/-)	Yes
% with middle name	63.2	62.8	-0.67	30% (+/-)	Yes
% with last name	85.2	85.0	-0.23	30% (+/-)	Yes
% with name suffix	1.6	1.5	-5.21	30% (+/-)	Yes
% male	48.7	46.3	-5.06	30% (+/-)	Yes
% female	36.4	38.7	6.23	30% (+/-)	Yes
% with credential	82.1	81.5	-0.67	30% (+/-)	Yes
% with business name	14.8	14.7	-1.00	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	88.3	87.4	-1.03	30% (+/-)	Yes
% with zip code	100.0	99.7	-0.35	30% (+/-)	Yes
% with primary taxonomy	99.2	98.8	-0.39	30% (+/-)	Yes
% with provider entity type = individual	85.2	85.0	-0.23	30% (+/-)	Yes
% with provider entity type = organization	14.8	14.7	-1.00	30% (+/-)	Yes
<b>Provider IDs with or without NPI but linked to state provider file</b>					
Number of provider IDs with or without NPI linked to state provider file	0	0	Div by 0	N/A	N/A
<b>Provider IDs with NPPES Primary Taxonomy</b>					
Number of provider IDs with NPPES primary taxonomy	38,171	42,147	10.42	30% (+/-)	Yes
% individual or group of individuals	64.3	89.5	39.16	30% (+/-)	No
% allopathic and osteopathic physicians	41.0	56.1	36.79	30% (+/-)	No

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

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

2009-2010 MAX OT Servicing Provider Characteristics Validation Table

State: CO

Produced: 04/18/2013

Measure	2009 Value	2010 Value	% Change 2009-2010	Cross Year Expected Range	Cross Year Within Range <sup>a</sup>
% behavioral health and social service providers	2.2	4.2	85.52	30% (+/-)	Yes
% chiropractic providers	0.1	0.1	70.42	30% (+/-)	Yes
% dental providers	3.8	4.4	17.37	30% (+/-)	Yes
% dietary and nutritional service providers	0.0	0.0	180.00	30% (+/-)	Yes
% emergency medical service providers	0.0	0.1	11.11	30% (+/-)	Yes
% eye and vision service providers	1.5	1.6	7.93	30% (+/-)	Yes
% nursing service providers	0.9	1.8	92.77	30% (+/-)	Yes
% nursing service-related providers	0.0	0.0	-41.38	30% (+/-)	Yes
% other service providers	1.9	3.1	64.30	30% (+/-)	Yes
% pharmacy service providers	0.0	0.1	40.54	30% (+/-)	Yes
% physician assistants and advanced practice nursing providers	7.4	12.6	70.49	30% (+/-)	No
% podiatric medicine and surgery service providers	0.5	0.8	50.39	30% (+/-)	Yes
% respiratory, developmental, rehabilitative, and restorative service providers	1.5	2.3	48.14	30% (+/-)	Yes
% speech, language, and hearing service providers	1.3	2.0	52.79	30% (+/-)	Yes
% student health care	0.2	0.5	100.00	30% (+/-)	Yes
% technologists, technicians, and other technical service providers	0.1	0.1	-11.63	30% (+/-)	Yes
% group of individuals with multi- or single specialty	1.8	0.0	-100.00	30% (+/-)	Yes
% nonindividuals	35.7	10.5	-70.58	30% (+/-)	No
% agencies	2.6	1.4	-44.83	30% (+/-)	Yes
% ambulatory health care facilities	1.8	1.4	-23.27	30% (+/-)	Yes
% hospital units	0.0	0.0	-53.85	30% (+/-)	Yes
% hospitals	23.6	0.6	-97.28	30% (+/-)	No
% laboratories	0.4	0.4	2.48	30% (+/-)	Yes
% managed care organizations	0.0	0.1	94.12	30% (+/-)	Yes
% nursing and custodial care facilities	0.7	0.6	-3.02	30% (+/-)	Yes
% residential treatment facilities	0.5	0.3	-29.83	30% (+/-)	Yes
% respite care facility	0.1	0.1	-26.76	30% (+/-)	Yes
% suppliers	5.3	4.8	-9.15	30% (+/-)	Yes
% transportation services	0.7	0.7	-0.81	30% (+/-)	Yes
% nonmedical	0.0	0.0	Div by 0	N/A	N/A
<b>Provider IDs with Entity Type = Individual</b>					
Number of provider IDs with entity type = individual	32,723	36,234	10.73	30% (+/-)	Yes
% a sole proprietorship	13.9	15.0	8.06	30% (+/-)	Yes
% not a sole proprietorship	78.4	80.1	2.18	30% (+/-)	Yes
% not answered	7.6	4.8	-37.09	N/A	N/A
<b>Provider IDs with Entity Type = Organization</b>					
Number of provider IDs with entity type = organization	5,706	6,270	9.88	30% (+/-)	Yes
% organization is a subpart	13.7	14.1	2.79	30% (+/-)	Yes
% organization is not a subpart	62.3	66.2	6.15	30% (+/-)	Yes
% not answered	24.0	19.8	-17.57	N/A	N/A

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

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

2009-2010 MAX OT Billing Provider Characteristics Validation Table

State: CO

Produced: 04/18/2013

Measure	2009 Value	2010 Value	% Change 2009-2010	Cross Year Expected Range	Cross Year Within Range <sup>a</sup>
<b>OT Providers</b>					
Number of provider IDs	7,666	8,028	4.72	30% (+/-)	Yes
% billing provider on OT claim	100.0	100.0	0.00	N/A	N/A
% servicing provider on OT claim	67.5	63.9	-5.41	N/A	N/A
% NPI servicing provider on OT claim	0.0	0.0	-100.00	N/A	N/A
% also a provider on IP claim	2.3	2.5	7.84	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 RX claim	23.1	20.7	-10.70	N/A	N/A
% provider IDs with NPI	69.5	68.5	-1.39	30% (+/-)	Yes
% provider IDs linked to NPPES	69.3	68.5	-1.18	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	3,386.1	3,849.7	13.69	30% (+/-)	Yes
average number of beneficiaries with OT claims	417.1	431.0	3.32	30% (+/-)	Yes
<b>Provider IDs with NPI</b>					
Number of provider IDs with NPI	5,325	5,499	3.27	30% (+/-)	Yes
% NPI source = MSIS	63.0	64.9	2.95	30% (+/-)	Yes
% NPI source = NPPES	37.0	35.1	-5.03	30% (+/-)	Yes
% NPI source = state cross-reference file	0.0	0.0	Div by 0	N/A	N/A
<b>Provider IDs Linked to NPPES</b>					
Number of provider IDs linked to NPPES	5,313	5,498	3.48	30% (+/-)	Yes
% linked via NPI	62.9	64.9	3.08	30% (+/-)	Yes
% linked via Medicaid legacy provider ID	37.1	35.1	-5.23	30% (+/-)	Yes
% linked via Medicare UPIN	0.0	0.0	Div by 0	30% (+/-)	N/A
% with name prefix	15.4	13.0	-15.52	30% (+/-)	Yes
% with first name	27.8	24.2	-12.92	30% (+/-)	Yes
% with middle name	22.9	19.6	-14.24	30% (+/-)	Yes
% with last name	27.8	24.2	-12.92	30% (+/-)	Yes
% with name suffix	0.8	0.7	-10.62	30% (+/-)	Yes
% male	17.8	14.6	-18.16	30% (+/-)	Yes
% female	10.0	9.6	-3.55	30% (+/-)	Yes
% with credential	26.6	22.9	-13.90	30% (+/-)	Yes
% with business name	72.2	75.4	4.47	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	93.5	93.1	-0.51	30% (+/-)	Yes
% with zip code	100.0	99.6	-0.36	30% (+/-)	Yes
% with primary taxonomy	98.4	98.3	-0.11	30% (+/-)	Yes
% with provider entity type = individual	27.8	24.2	-12.92	30% (+/-)	Yes
% with provider entity type = organization	72.2	75.4	4.47	30% (+/-)	Yes
<b>Provider IDs with or without NPI but linked to state provider file</b>					
Number of provider IDs with or without NPI linked to state provider file	0	0	Div by 0	N/A	N/A
<b>Provider IDs with NPPES Primary Taxonomy</b>					
Number of provider IDs with NPPES primary taxonomy	5,231	5,405	3.33	30% (+/-)	Yes
% individual or group of individuals	45.9	51.0	11.12	30% (+/-)	Yes
% allopathic and osteopathic physicians	24.4	26.3	7.54	30% (+/-)	Yes

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

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

2009-2010 MAX OT Billing Provider Characteristics Validation Table

State: CO

Produced: 04/18/2013

Measure	2009 Value	2010 Value	% Change 2009-2010	Cross Year Expected Range	Cross Year Within Range <sup>a</sup>
% behavioral health and social service providers	2.4	2.8	15.82	30% (+/-)	Yes
% chiropractic providers	0.2	0.1	-31.94	30% (+/-)	Yes
% dental providers	6.1	7.2	18.10	30% (+/-)	Yes
% dietary and nutritional service providers	0.0	0.0	Div by 0	30% (+/-)	N/A
% emergency medical service providers	0.2	0.0	-75.82	30% (+/-)	Yes
% eye and vision service providers	2.6	2.7	4.72	30% (+/-)	Yes
% nursing service providers	0.1	0.1	-30.60	30% (+/-)	Yes
% nursing service-related providers	0.1	0.1	-2.63	30% (+/-)	Yes
% other service providers	3.3	3.8	14.23	30% (+/-)	Yes
% pharmacy service providers	0.1	0.2	60.87	30% (+/-)	Yes
% physician assistants and advanced practice nursing providers	0.5	0.8	73.42	30% (+/-)	Yes
% podiatric medicine and surgery service providers	1.2	1.4	16.09	30% (+/-)	Yes
% respiratory, developmental, rehabilitative, and restorative service providers	2.0	2.3	16.72	30% (+/-)	Yes
% speech, language, and hearing service providers	2.6	3.2	20.62	30% (+/-)	Yes
% student health care	0.0	0.0	-50.00	30% (+/-)	Yes
% technologists, technicians, and other technical service providers	0.1	0.1	94.74	30% (+/-)	Yes
% group of individuals with multi- or single specialty	0.1	0.0	-100.00	30% (+/-)	Yes
% nonindividuals	54.1	49.0	-9.45	30% (+/-)	Yes
% agencies	8.6	8.5	-1.93	30% (+/-)	Yes
% ambulatory health care facilities	7.2	8.1	12.23	30% (+/-)	Yes
% hospital units	0.0	0.0	0.00	30% (+/-)	Yes
% hospitals	10.0	4.6	-54.29	30% (+/-)	Yes
% laboratories	1.4	1.4	6.34	30% (+/-)	Yes
% managed care organizations	0.1	0.3	93.28	30% (+/-)	Yes
% nursing and custodial care facilities	3.0	3.1	2.32	30% (+/-)	Yes
% residential treatment facilities	1.8	1.7	-5.29	30% (+/-)	Yes
% respite care facility	0.3	0.2	-31.69	30% (+/-)	Yes
% suppliers	18.8	18.1	-3.62	30% (+/-)	Yes
% transportation services	2.8	3.0	7.25	30% (+/-)	Yes
% nonmedical	0.0	0.0	Div by 0	N/A	N/A
<b>Provider IDs with Entity Type = Individual</b>					
Number of provider IDs with entity type = individual	1,477	1,331	-9.88	30% (+/-)	Yes
% a sole proprietorship	48.3	51.9	7.54	30% (+/-)	Yes
% not a sole proprietorship	41.8	40.9	-2.32	30% (+/-)	Yes
% not answered	9.9	7.2	-27.03	N/A	N/A
<b>Provider IDs with Entity Type = Organization</b>					
Number of provider IDs with entity type = organization	3,836	4,147	8.11	30% (+/-)	Yes
% organization is a subpart	11.5	11.8	2.57	30% (+/-)	Yes
% organization is not a subpart	64.9	68.4	5.40	30% (+/-)	Yes
% not answered	23.6	19.8	-16.07	N/A	N/A

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

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

2009-2010 MAX RX Billing Provider Characteristics Validation Table

State: CO

Produced: 04/18/2013

Measure	2009 Value	2010 Value	% Change 2009-2010	Cross Year Expected Range	Cross Year Within Range <sup>a</sup>
<b>RX Providers</b>					
Number of provider IDs	21,075	23,096	9.59	30% (+/-)	Yes
% billing provider on RX claim	4.0	3.7	-7.66	N/A	N/A
% prescribing provider on RX claim	1.1	0.4	-66.35	N/A	N/A
% NPI billing provider on RX claim	96.0	96.3	0.32	N/A	N/A
% also a provider on IP claim	0.0	0.0	2.13	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	62.1	61.1	-1.61	N/A	N/A
% provider IDs with NPI	99.4	99.4	0.00	30% (+/-)	Yes
% provider IDs linked to NPPES	99.0	99.2	0.30	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	319.1	384.1	20.40	30% (+/-)	Yes
average number of beneficiaries with RX claims	52.6	60.3	14.64	30% (+/-)	Yes
<b>Provider IDs with NPI</b>					
Number of provider IDs with NPI	20,955	22,964	9.59	30% (+/-)	Yes
% NPI source = MSIS	96.6	96.9	0.30	30% (+/-)	Yes
% NPI source = NPPES	3.4	3.1	-8.35	30% (+/-)	Yes
% NPI source = state cross-reference file	0.0	0.0	Div by 0	N/A	N/A
<b>Provider IDs Linked to NPPES</b>					
Number of provider IDs linked to NPPES	20,854	22,922	9.92	30% (+/-)	Yes
% linked via NPI	96.6	96.9	0.31	30% (+/-)	Yes
% linked via Medicaid legacy provider ID	3.4	3.1	-8.66	30% (+/-)	Yes
% linked via Medicare UPIN	0.0	0.0	Div by 0	30% (+/-)	N/A
% with name prefix	41.8	42.8	2.38	30% (+/-)	Yes
% with first name	94.1	94.4	0.31	30% (+/-)	Yes
% with middle name	71.8	73.0	1.59	30% (+/-)	Yes
% with last name	94.1	94.4	0.31	30% (+/-)	Yes
% with name suffix	2.0	1.9	-3.01	30% (+/-)	Yes
% male	54.6	53.9	-1.26	30% (+/-)	Yes
% female	39.5	40.5	2.47	30% (+/-)	Yes
% with credential	90.9	91.5	0.64	30% (+/-)	Yes
% with business name	5.9	5.2	-12.56	30% (+/-)	Yes
% with address line 1	100.0	99.5	-0.45	30% (+/-)	Yes
% with city	100.0	99.5	-0.45	30% (+/-)	Yes
% with state	100.0	99.5	-0.45	30% (+/-)	Yes
% state = RX state code	78.6	76.2	-3.07	30% (+/-)	Yes
% with zip code	100.0	99.5	-0.45	30% (+/-)	Yes
% with primary taxonomy	99.0	98.7	-0.28	30% (+/-)	Yes
% with provider entity type = individual	94.1	94.4	0.31	30% (+/-)	Yes
% with provider entity type = organization	5.9	5.2	-12.56	30% (+/-)	Yes
<b>Provider IDs with or without NPI but linked to state provider file</b>					
Number of provider IDs with or without NPI linked to state provider file	0	0	Div by 0	N/A	N/A
<b>Provider IDs with NPPES Primary Taxonomy</b>					
Number of provider IDs with NPPES primary taxonomy	20,653	22,625	9.55	30% (+/-)	Yes
% individual or group of individuals	74.8	95.6	27.87	30% (+/-)	Yes
% allopathic and osteopathic physicians	44.8	58.4	30.36	30% (+/-)	No

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

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

2009-2010 MAX RX Billing Provider Characteristics Validation Table

State: CO

Produced: 04/18/2013

Measure	2009 Value	2010 Value	% Change 2009-2010	Cross Year Expected Range	Cross Year Within Range <sup>a</sup>
% behavioral health and social service providers	1.0	0.9	-5.06	30% (+/-)	Yes
% chiropractic providers	0.2	0.2	-4.74	30% (+/-)	Yes
% dental providers	9.0	10.2	12.70	30% (+/-)	Yes
% dietary and nutritional service providers	0.0	0.0	45.83	30% (+/-)	Yes
% emergency medical service providers	0.0	0.0	-20.59	30% (+/-)	Yes
% eye and vision service providers	2.0	2.1	5.38	30% (+/-)	Yes
% nursing service providers	0.6	0.6	7.61	30% (+/-)	Yes
% nursing service-related providers	0.0	0.0	-35.29	30% (+/-)	Yes
% other service providers	2.0	3.0	48.67	30% (+/-)	Yes
% pharmacy service providers	0.2	0.1	-8.75	30% (+/-)	Yes
% physician assistants and advanced practice nursing providers	11.4	16.8	46.99	30% (+/-)	No
% podiatric medicine and surgery service providers	0.4	0.6	62.27	30% (+/-)	Yes
% respiratory, developmental, rehabilitative, and restorative service providers	0.4	0.3	-5.03	30% (+/-)	Yes
% speech, language, and hearing service providers	0.1	0.1	-24.29	30% (+/-)	Yes
% student health care	2.1	2.1	-0.19	30% (+/-)	Yes
% technologists, technicians, and other technical service providers	0.1	0.1	-15.87	30% (+/-)	Yes
% group of individuals with multi- or single specialty	0.5	0.0	-100.00	30% (+/-)	Yes
% nonindividuals	25.2	4.4	-82.57	30% (+/-)	No
% agencies	0.3	0.0	-95.45	30% (+/-)	Yes
% ambulatory health care facilities	0.4	0.2	-47.00	30% (+/-)	Yes
% hospital units	0.0	0.0	-62.50	30% (+/-)	Yes
% hospitals	19.9	0.1	-99.33	30% (+/-)	No
% laboratories	0.0	0.0	-100.00	30% (+/-)	Yes
% managed care organizations	0.0	0.0	120.00	30% (+/-)	Yes
% nursing and custodial care facilities	0.0	0.0	-78.95	30% (+/-)	Yes
% residential treatment facilities	0.0	0.0	-60.00	30% (+/-)	Yes
% respite care facility	0.0	0.0	Div by 0	30% (+/-)	N/A
% suppliers	4.5	4.0	-11.83	30% (+/-)	Yes
% transportation services	0.0	0.0	-100.00	30% (+/-)	Yes
% nonmedical	0.0	0.0	Div by 0	N/A	N/A
<b>Provider IDs with Entity Type = Individual</b>					
Number of provider IDs with entity type = individual	19,624	21,636	10.25	30% (+/-)	Yes
% a sole proprietorship	15.7	16.2	3.33	30% (+/-)	Yes
% not a sole proprietorship	75.5	77.8	3.13	30% (+/-)	Yes
% not answered	8.9	6.0	-32.50	N/A	N/A
<b>Provider IDs with Entity Type = Organization</b>					
Number of provider IDs with entity type = organization	1,230	1,182	-3.90	30% (+/-)	Yes
% organization is a subpart	32.8	32.9	0.19	30% (+/-)	Yes
% organization is not a subpart	57.0	59.6	4.51	30% (+/-)	Yes
% not answered	10.2	7.5	-25.91	N/A	N/A

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

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

2009-2010 MAX RX Prescribing Provider Characteristics Validation Table

State: CO

Produced: 04/18/2013

Measure	2009 Value	2010 Value	% Change 2009-2010	Cross Year Expected Range	Cross Year Within Range <sup>a</sup>
<b>RX Providers</b>					
Number of provider IDs	13,213	13,899	5.19	30% (+/-)	Yes
% billing provider on RX claim	1.8	0.6	-64.91	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	0.1	0.1	-18.03	N/A	N/A
% also a provider on LT claim	0.0	0.0	-100.00	N/A	N/A
% also a provider on OT claim	86.1	87.1	1.17	N/A	N/A
% provider IDs with NPI	88.6	90.2	1.88	30% (+/-)	Yes
% provider IDs linked to NPPES	88.4	90.2	2.08	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	338.2	350.7	3.68	30% (+/-)	Yes
average number of beneficiaries with RX claims	61.9	65.0	4.98	30% (+/-)	Yes
<b>Provider IDs with NPI</b>					
Number of provider IDs with NPI	11,704	12,543	7.17	30% (+/-)	Yes
% NPI source = MSIS	92.1	93.8	1.94	30% (+/-)	Yes
% NPI source = NPPES	7.9	6.2	-22.45	30% (+/-)	Yes
% NPI source = state cross-reference file	0.0	0.0	Div by 0	N/A	N/A
<b>Provider IDs Linked to NPPES</b>					
Number of provider IDs linked to NPPES	11,681	12,543	7.38	30% (+/-)	Yes
% linked via NPI	92.0	93.8	1.95	30% (+/-)	Yes
% linked via Medicaid legacy provider ID	7.9	6.1	-22.63	30% (+/-)	Yes
% linked via Medicare UPIN	0.0	0.0	-11.11	30% (+/-)	Yes
% with name prefix	39.8	41.1	3.18	30% (+/-)	Yes
% with first name	96.7	97.7	1.02	30% (+/-)	Yes
% with middle name	72.7	73.4	1.05	30% (+/-)	Yes
% with last name	96.7	97.7	1.02	30% (+/-)	Yes
% with name suffix	1.8	1.8	-0.38	30% (+/-)	Yes
% male	57.6	56.9	-1.14	30% (+/-)	Yes
% female	39.1	40.8	4.19	30% (+/-)	Yes
% with credential	93.7	94.9	1.32	30% (+/-)	Yes
% with business name	3.3	2.0	-38.41	30% (+/-)	Yes
% with address line 1	100.0	99.7	-0.27	30% (+/-)	Yes
% with city	100.0	99.7	-0.27	30% (+/-)	Yes
% with state	100.0	99.7	-0.27	30% (+/-)	Yes
% state = RX state code	93.5	92.4	-1.17	30% (+/-)	Yes
% with zip code	100.0	99.7	-0.27	30% (+/-)	Yes
% with primary taxonomy	99.3	99.1	-0.20	30% (+/-)	Yes
% with provider entity type = individual	96.7	97.7	1.02	30% (+/-)	Yes
% with provider entity type = organization	3.3	2.0	-38.41	30% (+/-)	Yes
<b>Provider IDs with or without NPI but linked to state provider file</b>					
Number of provider IDs with or without NPI linked to state provider file	0	0	Div by 0	N/A	N/A
<b>Provider IDs with NPPES Primary Taxonomy</b>					
Number of provider IDs with NPPES primary taxonomy	11,613	12,434	7.07	30% (+/-)	Yes
% individual or group of individuals	69.0	99.0	43.52	30% (+/-)	No
% allopathic and osteopathic physicians	49.8	70.5	41.53	30% (+/-)	No

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

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

2009-2010 MAX RX Prescribing Provider Characteristics Validation Table

State: CO

Produced: 04/18/2013

Measure	2009 Value	2010 Value	% Change 2009-2010	Cross Year Expected Range	Cross Year Within Range <sup>a</sup>
% behavioral health and social service providers	0.2	0.2	-10.58	30% (+/-)	Yes
% chiropractic providers	0.0	0.0	-100.00	30% (+/-)	Yes
% dental providers	4.4	5.4	21.49	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	166.67	30% (+/-)	Yes
% eye and vision service providers	1.5	1.8	13.76	30% (+/-)	Yes
% nursing service providers	0.3	0.4	32.58	30% (+/-)	Yes
% nursing service-related providers	0.0	0.0	-100.00	30% (+/-)	Yes
% other service providers	1.9	3.4	76.46	30% (+/-)	Yes
% pharmacy service providers	0.0	0.0	-100.00	30% (+/-)	Yes
% physician assistants and advanced practice nursing providers	9.0	15.8	76.66	30% (+/-)	No
% podiatric medicine and surgery service providers	0.5	0.9	93.28	30% (+/-)	Yes
% respiratory, developmental, rehabilitative, and restorative service providers	0.1	0.1	27.37	30% (+/-)	Yes
% speech, language, and hearing service providers	0.0	0.0	11.63	30% (+/-)	Yes
% student health care	0.3	0.4	68.22	30% (+/-)	Yes
% technologists, technicians, and other technical service providers	0.1	0.0	-48.05	30% (+/-)	Yes
% group of individuals with multi- or single specialty	0.8	0.0	-100.00	30% (+/-)	Yes
% nonindividuals	31.0	1.0	-96.86	30% (+/-)	No
% agencies	0.5	0.0	-98.25	30% (+/-)	Yes
% ambulatory health care facilities	0.5	0.2	-67.74	30% (+/-)	Yes
% hospital units	0.0	0.0	-52.94	30% (+/-)	Yes
% hospitals	28.0	0.1	-99.69	30% (+/-)	No
% laboratories	0.0	0.0	-100.00	30% (+/-)	Yes
% managed care organizations	0.0	0.0	Div by 0	30% (+/-)	N/A
% nursing and custodial care facilities	0.0	0.0	-100.00	30% (+/-)	Yes
% residential treatment facilities	0.0	0.0	-100.00	30% (+/-)	Yes
% respite care facility	0.0	0.0	Div by 0	30% (+/-)	N/A
% suppliers	1.9	0.7	-63.86	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
<b>Provider IDs with Entity Type = Individual</b>					
Number of provider IDs with entity type = individual	11,300	12,257	8.47	30% (+/-)	Yes
% a sole proprietorship	10.6	11.1	4.60	30% (+/-)	Yes
% not a sole proprietorship	81.4	83.7	2.89	30% (+/-)	Yes
% not answered	8.0	5.1	-35.63	N/A	N/A
<b>Provider IDs with Entity Type = Organization</b>					
Number of provider IDs with entity type = organization	381	252	-33.86	30% (+/-)	No
% organization is a subpart	39.9	28.2	-29.38	30% (+/-)	Yes
% organization is not a subpart	50.1	61.9	23.49	30% (+/-)	Yes
% not answered	10.0	9.9	-0.53	N/A	N/A

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

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

2009-2010 MAX All Provider Characteristics Validation Table

State: CO

Produced: 04/18/2013

Measure	2009 Value	2010 Value	% Change 2009-2010	Cross Year Expected Range	Cross Year Within Range <sup>a</sup>
<b>All Providers</b>					
Number of provider IDs	52,712	58,162	10.34	30%(+/-)	Yes
% billing provider on IP claim	0.4	0.4	-2.03	N/A	N/A
% NPI billing provider on IP claim	0.4	0.4	-2.23	N/A	N/A
% billing provider on LT claim	0.4	0.4	-9.22	N/A	N/A
% NPI billing provider on LT claim	0.4	0.4	-7.67	N/A	N/A
% billing provider on OT claim	14.5	13.8	-5.09	N/A	N/A
% servicing provider on OT claim	36.7	35.7	-2.57	N/A	N/A
% NPI servicing provider on OT claim	38.9	39.8	2.24	N/A	N/A
% billing provider on RX claim	1.6	1.5	-8.34	N/A	N/A
% prescribing provider on RX claim	25.1	23.9	-4.66	N/A	N/A
% NPI billing provider on RX claim	38.4	38.2	-0.36	N/A	N/A
% billing provider	15.3	14.5	-5.29	N/A	N/A
% NPI billing provider	39.2	39.0	-0.45	N/A	N/A
% servicing provider	36.7	35.7	-2.57	N/A	N/A
% NPI servicing provider	38.9	39.8	2.24	N/A	N/A
% prescribing provider	25.1	23.9	-4.66	N/A	N/A
% provider IDs with NPI	92.3	92.7	0.40	30%(+/-)	Yes
% provider IDs linked to NPPES	91.7	92.5	0.81	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	1,213.0	1,312.1	8.17	30%(+/-)	Yes
average number of beneficiaries with claims	179.8	185.1	2.96	30%(+/-)	Yes
<b>Provider IDs with NPI</b>					
Number of provider IDs with NPI	48,664	53,909	10.78	30%(+/-)	Yes
% NPI source = MSIS	94.2	94.9	0.66	30%(+/-)	Yes
% NPI source = NPPES	5.8	5.1	-10.79	30%(+/-)	Yes
% NPI source = state cross-reference file	0.0	0.0	Div by 0	N/A	N/A
<b>Provider IDs Linked to NPPES</b>					
Number of provider IDs linked to NPPES	48,351	53,780	11.23	30%(+/-)	Yes
% linked via NPI	94.2	94.8	0.69	30%(+/-)	Yes
% linked via Medicaid legacy provider ID	5.8	5.2	-11.19	30%(+/-)	Yes
% linked via Medicare UPIN	0.0	0.0	100.00	30%(+/-)	Yes
% with name prefix	35.4	35.8	0.96	30%(+/-)	Yes
% with first name	84.4	84.4	-0.10	30%(+/-)	Yes
% with middle name	63.4	63.4	0.04	30%(+/-)	Yes
% with last name	84.4	84.4	-0.10	30%(+/-)	Yes
% with name suffix	1.7	1.6	-4.61	30%(+/-)	Yes
% male	48.2	46.2	-4.05	30%(+/-)	Yes
% female	36.3	38.1	5.16	30%(+/-)	Yes
% with credential	81.3	81.1	-0.33	30%(+/-)	Yes
% with business name	15.6	15.2	-1.98	30%(+/-)	Yes
% with address line 1	100.0	99.6	-0.39	30%(+/-)	Yes
% with city	100.0	99.6	-0.39	30%(+/-)	Yes
% with state	100.0	99.6	-0.39	30%(+/-)	Yes
% state = claim file state code	82.8	81.3	-1.75	30%(+/-)	Yes
% with zip code	100.0	99.6	-0.39	30%(+/-)	Yes

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

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## 2009-2010 MAX All Provider Characteristics Validation Table

State: CO

Produced: 04/18/2013

Measure	2009 Value	2010 Value	% Change 2009-2010	Cross Year Expected Range	Cross Year Within Range <sup>a</sup>
% with primary taxonomy	99.0	98.7	-0.31	30%(+/-)	Yes
% with provider entity type = individual	84.4	84.4	-0.10	30%(+/-)	Yes
% with provider entity type = organization	15.6	15.2	-1.98	30%(+/-)	Yes
<b>Provider IDs with or without NPI but linked to state provider file</b>					
Number of provider IDs with or without NPI linked to state provider file	0	0	Div by 0	N/A	N/A
<b>Provider IDs with NPPES Primary Taxonomy</b>					
Number of provider IDs with NPPES primary taxonomy	47,922	53,082	10.77	30%(+/-)	Yes
% individual or group of individuals	69.2	89.4	29.08	30%(+/-)	Yes
% allopathic and osteopathic physicians	41.7	53.6	28.68	30%(+/-)	Yes
% behavioral health and social service providers	2.2	3.7	67.81	30%(+/-)	Yes
% chiropractic providers	0.2	0.2	19.75	30%(+/-)	Yes
% dental providers	6.0	6.7	12.67	30%(+/-)	Yes
% dietary and nutritional service providers	0.0	0.0	73.33	30%(+/-)	Yes
% emergency medical service providers	0.0	0.0	-2.08	30%(+/-)	Yes
% eye and vision service providers	1.7	1.8	3.71	30%(+/-)	Yes
% nursing service providers	1.0	1.6	65.46	30%(+/-)	Yes
% nursing service-related providers	0.0	0.0	-30.30	30%(+/-)	Yes
% other service providers	2.0	3.0	45.17	30%(+/-)	Yes
% pharmacy service providers	0.1	0.1	0.00	30%(+/-)	Yes
% physician assistants and advanced practice nursing providers	8.8	13.2	49.40	30%(+/-)	No
% podiatric medicine and surgery service providers	0.5	0.7	43.01	30%(+/-)	Yes
% respiratory, developmental, rehabilitative, and restorative service providers	1.4	2.0	42.12	30%(+/-)	Yes
% speech, language, and hearing service providers	1.1	1.7	48.11	30%(+/-)	Yes
% student health care	1.0	1.1	5.53	30%(+/-)	Yes
% technologists, technicians, and other technical service providers	0.1	0.1	-5.19	30%(+/-)	Yes
% group of individuals with multi- or single specialty	1.5	0.0	-100.00	30%(+/-)	Yes
% nonindividuals	30.8	10.6	-65.44	30%(+/-)	No
% agencies	2.4	1.4	-40.43	30%(+/-)	Yes
% ambulatory health care facilities	1.8	1.5	-17.43	30%(+/-)	Yes
% hospital units	0.1	0.1	-40.63	30%(+/-)	Yes
% hospitals	19.4	1.1	-94.12	30%(+/-)	No
% laboratories	0.3	0.3	0.61	30%(+/-)	Yes
% managed care organizations	0.0	0.1	93.94	30%(+/-)	Yes
% nursing and custodial care facilities	1.3	1.2	-4.82	30%(+/-)	Yes
% residential treatment facilities	0.4	0.3	-26.87	30%(+/-)	Yes
% respite care facility	0.1	0.0	-29.31	30%(+/-)	Yes
% suppliers	4.4	4.0	-9.86	30%(+/-)	Yes
% transportation services	0.6	0.6	-0.84	30%(+/-)	Yes
% nonmedical	0.0	0.0	Div by 0	N/A	N/A
<b>Provider IDs with Entity Type = Individual</b>					
Number of provider IDs with entity type = individual	40,831	45,372	11.12	30%(+/-)	Yes
% a sole proprietorship	15.5	16.4	6.35	30%(+/-)	Yes
% not a sole proprietorship	76.4	78.3	2.47	30%(+/-)	Yes
% not answered	8.2	5.3	-35.09	N/A	N/A
<b>Provider IDs with Entity Type = Organization</b>					
Number of provider IDs with entity type = organization	7,520	8,199	9.03	30%(+/-)	Yes
% organization is a subpart	12.6	12.7	0.64	30%(+/-)	Yes
% organization is not a subpart	64.3	68.2	6.08	30%(+/-)	Yes
% not answered	23.1	19.1	-17.25	N/A	N/A

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

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