

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

**State-Specific Validation Tables,
2011**

June 28, 2013

Deo Bencio
Mei-ling Mason



MATHEMATICA
Policy Research

This page has been left blank for double-sided copying.

Contract Number:
HHSM-500-2005-00025I

Task Number:
HHSM-500-T0002

Mathematica Reference Number:
06759.680

Submitted to:
Centers for Medicare & Medicaid Services
7500 Security Boulevard, B2-29-04
Baltimore, MD 21244-1850
Project Officer: Cara Petroski

Submitted by:
Mathematica Policy Research
1100 1st Street, NE
12th Floor
Washington, DC 20002-4221
Telephone: (202) 484-9220
Facsimile: (202) 863-1763
Project Director: Julie Sykes

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

**State-Specific Validation Tables,
2011**

June 28, 2013

Deo Bencio
Mei-ling Mason

MATHEMATICA
Policy Research

This page has been left blank for double-sided copying.

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

This page has been left blank for double-sided copying.

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 percentage change between year two and year three, if applicable, followed by the expected

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

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

The primary source of data used in the MAXPC 2011 files were the MSIS Valid claims files. The following measures in the MAXPC file were derived from original, unadjusted claims:

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

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

Measure	2009 Value	2010 Value	2011 Value	% Change 2009-2010	% Change 2010-2011	Cross Year Expected Range	Cross Year 2009-2010 Within Range ^a	Cross Year 2010-2011 Within Range ^a
IP Providers								
Number of provider IDs	223	243	249	8.97	2.47	30% (+/-)	Yes	Yes
% billing provider on IP claim	52.0	51.0	51.0	-1.90	-0.05	N/A	N/A	N/A
% NPI billing provider on IP claim	48.0	49.0	49.0	2.06	0.05	N/A	N/A	N/A
% also a provider on LT claim	48.0	23.0	28.1	-51.97	21.99	N/A	N/A	N/A
% also a provider on OT claim	79.4	81.1	77.1	2.14	-4.89	N/A	N/A	N/A
% also a provider on RX claim	10.8	7.8	6.0	-27.35	-22.96	N/A	N/A	N/A
% provider IDs with NPI	89.7	93.4	94.0	4.16	0.60	30% (+/-)	Yes	Yes
% provider IDs linked to NPPES	89.7	93.4	94.0	4.16	0.60	30% (+/-)	Yes	Yes
% provider IDs with or without NPI but linked to state provider file	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
average number of IP claims	251.8	368.9	307.3	46.49	-16.69	30% (+/-)	No	Yes
average number of beneficiaries with IP claims	157.7	178.0	170.2	12.83	-4.35	30% (+/-)	Yes	Yes
Provider IDs with NPI								
Number of provider IDs with NPI	200	227	234	13.50	3.08	30% (+/-)	Yes	Yes
% NPI source = MSIS	99.5	99.6	100.0	0.06	0.44	30% (+/-)	Yes	Yes
% NPI source = NPPES	0.5	0.4	0.0	-11.80	-100.00	30% (+/-)	Yes	Yes
% NPI source = state cross-reference file	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
Provider IDs Linked to NPPES								
Number of provider IDs linked to NPPES	200	227	234	13.50	3.08	30% (+/-)	Yes	Yes
% linked via NPI	99.5	99.6	100.0	0.06	0.44	30% (+/-)	Yes	Yes
% linked via Medicaid legacy provider ID	0.5	0.4	0.0	-11.80	-100.00	30% (+/-)	Yes	Yes
% linked via Medicare UPIN	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% with name prefix	4.0	4.0	2.6	-0.88	-35.33	30% (+/-)	Yes	Yes
% with first name	6.5	4.0	4.3	-39.00	7.78	30% (+/-)	Yes	Yes
% with middle name	5.0	3.1	3.8	-38.32	24.71	30% (+/-)	Yes	Yes
% with last name	6.5	4.0	4.3	-39.00	7.78	30% (+/-)	Yes	Yes
% with name suffix	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% male	3.5	3.5	2.6	0.69	-27.24	30% (+/-)	Yes	Yes
% female	3.0	0.4	1.7	-85.30	287.62	30% (+/-)	Yes	Yes
% with credential	6.5	4.0	3.8	-39.00	-3.00	30% (+/-)	Yes	Yes
% with business name	93.5	96.0	95.7	2.71	-0.32	30% (+/-)	Yes	Yes
% with address line 1	100.0	100.0	100.0	0.00	0.00	30% (+/-)	Yes	Yes
% with city	100.0	100.0	100.0	0.00	0.00	30% (+/-)	Yes	Yes
% with state	100.0	100.0	100.0	0.00	0.00	30% (+/-)	Yes	Yes
% state = IP state code	88.0	91.2	85.5	3.62	-6.27	30% (+/-)	Yes	Yes
% with zip code	100.0	100.0	100.0	0.00	0.00	30% (+/-)	Yes	Yes
% with primary taxonomy	100.0	100.0	100.0	0.00	0.00	30% (+/-)	Yes	Yes
% with provider entity type = individual	6.5	4.0	4.3	-39.00	7.78	30% (+/-)	Yes	Yes
% with provider entity type = organization	93.5	96.0	95.7	2.71	-0.32	30% (+/-)	Yes	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	0	Div by 0	Div by 0	N/A	N/A	N/A

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

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

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

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

Measure	2009 Value	2010 Value	2011 Value	% Change 2009-2010	% Change 2010-2011	Cross Year Expected Range	Cross Year 2009-2010 Within Range ^a	Cross Year 2010-2011 Within Range ^a
Provider IDs with NPPES Primary Taxonomy								
Number of provider IDs with NPPES primary taxonomy	200	227	234	13.50	3.08	30% (+/-)	Yes	Yes
% individual or group of individuals	11.0	9.3	8.1	-15.90	-12.23	30% (+/-)	Yes	Yes
% allopathic and osteopathic physicians	7.5	6.2	4.7	-17.77	-23.77	30% (+/-)	Yes	Yes
% behavioral health and social service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% chiropractic providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% dental providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% dietary and nutritional service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% emergency medical service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% eye and vision service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% nursing service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% nursing service-related providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% other service providers	3.0	3.1	2.6	2.80	-16.86	30% (+/-)	Yes	Yes
% pharmacy service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% physician assistants and advanced practice nursing providers	0.5	0.0	0.9	-100.00	Div by 0	30% (+/-)	Yes	N/A
% podiatric medicine and surgery service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% respiratory, developmental, rehabilitative, and restorative service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% speech, language, and hearing service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% student health care	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% technologists, technicians, and other technical service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% group of individuals with multi- or single specialty	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% nonindividuals	89.0	90.7	91.9	1.97	1.25	30% (+/-)	Yes	Yes
% agencies	5.5	14.1	11.5	156.31	-18.15	30% (+/-)	No	Yes
% ambulatory health care facilities	2.0	1.8	1.7	-11.90	-2.99	30% (+/-)	Yes	Yes
% hospital units	3.0	3.5	2.6	17.47	-27.24	30% (+/-)	Yes	Yes
% hospitals	36.5	32.2	36.8	-11.89	14.28	30% (+/-)	Yes	Yes
% laboratories	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% managed care organizations	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% nursing and custodial care facilities	40.0	37.9	36.8	-5.29	-2.99	30% (+/-)	Yes	Yes
% residential treatment facilities	1.0	0.4	1.7	-55.90	287.62	30% (+/-)	Yes	Yes
% respite care facility	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% suppliers	1.0	0.9	0.9	-11.90	-2.99	30% (+/-)	Yes	Yes
% transportation services	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% nonmedical	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
Provider IDs with Entity Type = Individual								
Number of provider IDs with entity type = individual	13	9	10	-30.77	11.11	30% (+/-)	No	Yes
% a sole proprietorship	30.8	11.1	50.0	-63.89	350.00	30% (+/-)	No	No
% not a sole proprietorship	69.2	77.8	50.0	12.35	-35.71	30% (+/-)	Yes	No
% not answered	0.0	11.1	0.0	Div by 0	-100.00	N/A	N/A	N/A
Provider IDs with Entity Type = Organization								
Number of provider IDs with entity type = organization	187	218	224	16.58	2.75	30% (+/-)	Yes	Yes
% organization is a subpart	9.6	14.2	11.6	47.72	-18.37	30% (+/-)	No	Yes
% organization is not a subpart	57.2	52.3	58.5	-8.61	11.83	30% (+/-)	Yes	Yes
% not answered	33.2	33.5	29.9	1.00	-10.68	N/A	N/A	N/A

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

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

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

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

Measure	2009 Value	2010 Value	2011 Value	% Change 2009-2010	% Change 2010-2011	Cross Year Expected Range	Cross Year 2009-2010 Within Range ^a	Cross Year 2010-2011 Within Range ^a
LT Providers								
Number of provider IDs	123	64	80	-47.97	25.00	30% (+/-)	No	Yes
% billing provider on LT claim	52.0	51.6	51.3	-0.90	-0.61	N/A	N/A	N/A
% NPI billing provider on LT claim	48.0	48.4	48.8	0.98	0.64	N/A	N/A	N/A
% also a provider on IP claim	87.0	87.5	87.5	0.58	0.00	N/A	N/A	N/A
% also a provider on OT claim	75.6	73.4	73.8	-2.87	0.42	N/A	N/A	N/A
% also a provider on RX claim	11.4	15.6	10.0	37.28	-36.00	N/A	N/A	N/A
% provider IDs with NPI	95.9	95.3	96.3	-0.65	0.98	30% (+/-)	Yes	Yes
% provider IDs linked to NPPES	95.9	95.3	96.3	-0.65	0.98	30% (+/-)	Yes	Yes
% provider IDs with or without NPI but linked to state provider file	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
average number of LT claims	108.7	37.1	29.0	-65.84	-21.78	30% (+/-)	No	Yes
average number of beneficiaries with LT claims	55.3	9.3	7.5	-83.20	-19.46	30% (+/-)	No	Yes
Provider IDs with NPI								
Number of provider IDs with NPI	118	61	77	-48.31	26.23	30% (+/-)	No	Yes
% NPI source = MSIS	100.0	100.0	100.0	0.00	0.00	30% (+/-)	Yes	Yes
% NPI source = NPPES	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% NPI source = state cross-reference file	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
Provider IDs Linked to NPPES								
Number of provider IDs linked to NPPES	118	61	77	-48.31	26.23	30% (+/-)	No	Yes
% linked via NPI	100.0	100.0	100.0	0.00	0.00	30% (+/-)	Yes	Yes
% linked via Medicaid legacy provider ID	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% linked via Medicare UPIN	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% with name prefix	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% with first name	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% with middle name	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% with last name	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% with name suffix	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% male	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% female	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% with credential	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% with business name	100.0	100.0	100.0	0.00	0.00	30% (+/-)	Yes	Yes
% with address line 1	100.0	100.0	100.0	0.00	0.00	30% (+/-)	Yes	Yes
% with city	100.0	100.0	100.0	0.00	0.00	30% (+/-)	Yes	Yes
% with state	100.0	100.0	100.0	0.00	0.00	30% (+/-)	Yes	Yes
% state = LT state code	98.3	100.0	100.0	1.72	0.00	30% (+/-)	Yes	Yes
% with zip code	100.0	100.0	100.0	0.00	0.00	30% (+/-)	Yes	Yes
% with primary taxonomy	100.0	100.0	100.0	0.00	0.00	30% (+/-)	Yes	Yes
% with provider entity type = individual	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% with provider entity type = organization	100.0	100.0	100.0	0.00	0.00	30% (+/-)	Yes	Yes
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	0	Div by 0	Div by 0	N/A	N/A	N/A

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

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

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

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

Measure	2009 Value	2010 Value	2011 Value	% Change 2009-2010	% Change 2010-2011	Cross Year Expected Range	Cross Year 2009-2010 Within Range ^a	Cross Year 2010-2011 Within Range ^a
Provider IDs with NPPES Primary Taxonomy								
Number of provider IDs with NPPES primary taxonomy	118	61	77	-48.31	26.23	30% (+/-)	No	Yes
% individual or group of individuals	6.8	6.6	3.9	-3.29	-40.58	30% (+/-)	Yes	Yes
% allopathic and osteopathic physicians	3.4	3.3	2.6	-3.27	-20.79	30% (+/-)	Yes	Yes
% behavioral health and social service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% chiropractic providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% dental providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% dietary and nutritional service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% emergency medical service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% eye and vision service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% nursing service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% nursing service-related providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% other service providers	3.4	3.3	1.3	-3.27	-60.39	30% (+/-)	Yes	Yes
% pharmacy service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% physician assistants and advanced practice nursing providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% podiatric medicine and surgery service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% respiratory, developmental, rehabilitative, and restorative service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% speech, language, and hearing service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% student health care	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% technologists, technicians, and other technical service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% group of individuals with multi- or single specialty	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% nonindividuals	93.2	93.4	96.1	0.24	2.85	30% (+/-)	Yes	Yes
% agencies	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% ambulatory health care facilities	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% hospital units	1.7	0.0	2.6	-100.00	Div by 0	30% (+/-)	Yes	N/A
% hospitals	27.1	41.0	33.8	51.13	-17.61	30% (+/-)	No	Yes
% laboratories	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% managed care organizations	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% nursing and custodial care facilities	61.0	45.9	54.5	-24.77	18.83	30% (+/-)	Yes	Yes
% residential treatment facilities	3.4	6.6	5.2	93.42	-20.77	30% (+/-)	Yes	Yes
% respite care facility	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% suppliers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% transportation services	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% nonmedical	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
Provider IDs with Entity Type = Individual								
Number of provider IDs with entity type = individual	0	0	0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% a sole proprietorship	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% not a sole proprietorship	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% not answered	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
Provider IDs with Entity Type = Organization								
Number of provider IDs with entity type = organization	118	61	77	-48.31	26.23	30% (+/-)	No	Yes
% organization is a subpart	6.8	6.6	2.6	-3.29	-60.39	30% (+/-)	Yes	Yes
% organization is not a subpart	54.2	67.2	68.8	23.92	2.41	30% (+/-)	Yes	Yes
% not answered	39.0	26.2	28.6	-32.71	8.93	N/A	N/A	N/A

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

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

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

2009-2011 MAX OT Servicing Provider Characteristics Validation Table
State: HI
Produced: 05/20/2013

Measure	2009 Value	2010 Value	2011 Value	% Change 2009-2010	% Change 2010-2011	Cross Year Expected Range	Cross Year 2009-2010 Within Range ^a	Cross Year 2010-2011 Within Range ^a
OT Providers								
Number of provider IDs	10,785	12,420	12,367	15.16	-0.43	30% (+/-)	Yes	Yes
% billing provider on OT claim	49.0	48.9	48.8	-0.17	-0.30	N/A	N/A	N/A
% servicing provider on OT claim	58.8	56.2	55.3	-4.45	-1.60	N/A	N/A	N/A
% NPI servicing provider on OT claim	41.2	43.8	44.7	6.35	2.05	N/A	N/A	N/A
% also a provider on IP claim	1.6	1.6	1.5	-1.01	-2.14	N/A	N/A	N/A
% also a provider on LT claim	0.8	0.4	0.5	-54.18	26.21	N/A	N/A	N/A
% also a provider on RX claim	6.2	5.5	5.3	-11.99	-3.72	N/A	N/A	N/A
% provider IDs with NPI	65.3	68.2	69.0	4.54	1.09	30% (+/-)	Yes	Yes
% provider IDs linked to NPPES	65.0	68.2	69.0	5.01	1.08	30% (+/-)	Yes	Yes
% provider IDs with or without NPI but linked to state provider file	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
average number of OT claims	926.6	1,167.3	1,215.6	25.99	4.14	30% (+/-)	Yes	Yes
average number of beneficiaries with OT claims	188.8	203.3	207.2	7.69	1.95	30% (+/-)	Yes	Yes
Provider IDs with NPI								
Number of provider IDs with NPI	7,040	8,475	8,531	20.38	0.66	30% (+/-)	Yes	Yes
% NPI source = MSIS	96.6	97.1	97.1	0.54	0.04	30% (+/-)	Yes	Yes
% NPI source = NPPES	3.4	2.9	2.9	-15.19	-1.48	30% (+/-)	Yes	Yes
% NPI source = state cross-reference file	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
Provider IDs Linked to NPPES								
Number of provider IDs linked to NPPES	7,008	8,475	8,530	20.93	0.65	30% (+/-)	Yes	Yes
% linked via NPI	96.6	97.1	97.1	0.56	0.04	30% (+/-)	Yes	Yes
% linked via Medicaid legacy provider ID	2.9	2.4	2.4	-16.50	-1.13	30% (+/-)	Yes	Yes
% linked via Medicare UPIN	0.5	0.5	0.5	-10.70	-3.11	30% (+/-)	Yes	Yes
% with name prefix	41.7	41.0	40.7	-1.79	-0.67	30% (+/-)	Yes	Yes
% with first name	65.5	65.6	65.5	0.16	-0.07	30% (+/-)	Yes	Yes
% with middle name	52.3	52.1	52.2	-0.27	0.05	30% (+/-)	Yes	Yes
% with last name	65.5	65.6	65.5	0.16	-0.07	30% (+/-)	Yes	Yes
% with name suffix	1.7	1.6	1.7	-6.83	6.85	30% (+/-)	Yes	Yes
% male	43.2	41.1	40.9	-4.89	-0.59	30% (+/-)	Yes	Yes
% female	22.2	24.4	24.6	9.99	0.79	30% (+/-)	Yes	Yes
% with credential	63.8	63.7	63.7	-0.05	-0.02	30% (+/-)	Yes	Yes
% with business name	34.5	33.9	34.1	-1.90	0.67	30% (+/-)	Yes	Yes
% with address line 1	100.0	99.4	99.6	-0.56	0.18	30% (+/-)	Yes	Yes
% with city	100.0	99.4	99.6	-0.56	0.18	30% (+/-)	Yes	Yes
% with state	100.0	99.4	99.6	-0.56	0.18	30% (+/-)	Yes	Yes
% state = OT state code	92.1	88.4	88.1	-4.04	-0.29	30% (+/-)	Yes	Yes
% with zip code	100.0	99.4	99.6	-0.56	0.18	30% (+/-)	Yes	Yes
% with primary taxonomy	98.0	96.6	97.1	-1.47	0.47	30% (+/-)	Yes	Yes
% with provider entity type = individual	65.5	65.6	65.5	0.16	-0.07	30% (+/-)	Yes	Yes
% with provider entity type = organization	34.5	33.9	34.1	-1.90	0.67	30% (+/-)	Yes	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	0	Div by 0	Div by 0	N/A	N/A	N/A

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

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

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

2009-2011 MAX OT Servicing Provider Characteristics Validation Table
State: HI
Produced: 05/20/2013

Measure	2009 Value	2010 Value	2011 Value	% Change 2009-2010	% Change 2010-2011	Cross Year Expected Range	Cross Year 2009-2010 Within Range ^a	Cross Year 2010-2011 Within Range ^a
Provider IDs with NPPES Primary Taxonomy								
Number of provider IDs with NPPES primary taxonomy	6,887	8,187	8,279	18.88	1.12	30% (+/-)	Yes	Yes
% individual or group of individuals	81.3	81.1	81.0	-0.25	-0.10	30% (+/-)	Yes	Yes
% allopathic and osteopathic physicians	49.2	47.6	48.0	-3.37	0.84	30% (+/-)	Yes	Yes
% behavioral health and social service providers	8.9	10.6	10.2	19.11	-3.73	30% (+/-)	Yes	Yes
% chiropractic providers	0.1	0.0	0.1	-79.31	302.63	30% (+/-)	Yes	Yes
% dental providers	4.2	3.6	3.5	-12.65	-2.77	30% (+/-)	Yes	Yes
% dietary and nutritional service providers	0.0	0.2	0.2	1,446.67	-1.08	30% (+/-)	Yes	Yes
% emergency medical service providers	0.0	0.0	0.0	-20.00	101.31	30% (+/-)	Yes	Yes
% eye and vision service providers	3.5	4.0	3.9	14.50	-1.10	30% (+/-)	Yes	Yes
% nursing service providers	0.3	0.3	0.3	23.91	-1.11	30% (+/-)	Yes	Yes
% nursing service-related providers	0.0	0.1	0.1	306.67	-0.99	30% (+/-)	Yes	Yes
% other service providers	5.9	4.8	4.7	-18.36	-2.37	30% (+/-)	Yes	Yes
% pharmacy service providers	0.1	0.0	0.0	-57.76	-1.40	30% (+/-)	Yes	Yes
% physician assistants and advanced practice nursing providers	2.8	3.2	3.3	13.92	3.83	30% (+/-)	Yes	Yes
% podiatric medicine and surgery service providers	0.8	0.7	0.7	-6.51	-1.13	30% (+/-)	Yes	Yes
% respiratory, developmental, rehabilitative, and restorative service providers	5.0	5.4	5.2	7.97	-3.81	30% (+/-)	Yes	Yes
% speech, language, and hearing service providers	0.3	0.3	0.3	-19.46	3.28	30% (+/-)	Yes	Yes
% student health care	0.1	0.1	0.3	54.02	107.32	30% (+/-)	Yes	Yes
% technologists, technicians, and other technical service providers	0.1	0.1	0.1	-15.52	35.58	30% (+/-)	Yes	Yes
% group of individuals with multi- or single specialty	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% nonindividuals	18.7	18.9	19.0	1.07	0.42	30% (+/-)	Yes	Yes
% agencies	1.6	2.7	3.0	67.50	13.79	30% (+/-)	Yes	Yes
% ambulatory health care facilities	4.6	4.3	4.1	-5.20	-4.45	30% (+/-)	Yes	Yes
% hospital units	0.1	0.1	0.1	12.64	-1.40	30% (+/-)	Yes	Yes
% hospitals	3.7	3.6	2.8	-3.27	-20.81	30% (+/-)	Yes	Yes
% laboratories	0.3	0.5	0.6	85.87	17.73	30% (+/-)	Yes	Yes
% managed care organizations	1.5	1.0	1.6	-33.22	63.66	30% (+/-)	Yes	Yes
% nursing and custodial care facilities	0.9	0.8	0.7	-13.09	-9.05	30% (+/-)	Yes	Yes
% residential treatment facilities	0.1	0.0	0.0	-43.68	-26.05	30% (+/-)	Yes	Yes
% respite care facility	0.0	0.0	0.0	60.00	0.66	30% (+/-)	Yes	Yes
% suppliers	5.7	5.5	5.6	-3.31	1.29	30% (+/-)	Yes	Yes
% transportation services	0.3	0.4	0.3	17.07	-16.59	30% (+/-)	Yes	Yes
% nonmedical	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
Provider IDs with Entity Type = Individual								
Number of provider IDs with entity type = individual	4,587	5,556	5,588	21.12	0.58	30% (+/-)	Yes	Yes
% a sole proprietorship	37.2	37.5	37.4	1.01	-0.33	30% (+/-)	Yes	Yes
% not a sole proprietorship	54.4	55.7	56.1	2.48	0.68	30% (+/-)	Yes	Yes
% not answered	8.4	6.7	6.5	-20.43	-3.76	N/A	N/A	N/A
Provider IDs with Entity Type = Organization								
Number of provider IDs with entity type = organization	2,421	2,872	2,910	18.63	1.32	30% (+/-)	Yes	Yes
% organization is a subpart	7.2	7.8	7.3	8.04	-5.74	30% (+/-)	Yes	Yes
% organization is not a subpart	68.3	71.0	71.5	3.97	0.73	30% (+/-)	Yes	Yes
% not answered	24.5	21.2	21.1	-13.43	-0.33	N/A	N/A	N/A

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

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

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

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

Measure	2009 Value	2010 Value	2011 Value	% Change 2009-2010	% Change 2010-2011	Cross Year Expected Range	Cross Year 2009-2010 Within Range ^a	Cross Year 2010-2011 Within Range ^a
OT Providers								
Number of provider IDs	6,271	6,846	6,815	9.17	-0.45	30% (+/-)	Yes	Yes
% billing provider on OT claim	100.0	100.0	100.0	0.00	0.00	N/A	N/A	N/A
% servicing provider on OT claim	84.3	88.8	88.5	5.31	-0.27	N/A	N/A	N/A
% NPI servicing provider on OT claim	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
% also a provider on IP claim	1.5	1.5	1.4	1.65	-2.51	N/A	N/A	N/A
% also a provider on LT claim	0.8	0.4	0.4	-54.12	25.41	N/A	N/A	N/A
% also a provider on RX claim	3.5	5.4	5.9	55.90	9.39	N/A	N/A	N/A
% provider IDs with NPI	32.6	35.8	35.8	9.86	0.08	30% (+/-)	Yes	Yes
% provider IDs linked to NPPES	32.4	35.8	35.8	10.45	0.08	30% (+/-)	Yes	Yes
% provider IDs with or without NPI but linked to state provider file	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
average number of OT claims	1,455.4	1,702.9	1,770.1	17.01	3.95	30% (+/-)	Yes	Yes
average number of beneficiaries with OT claims	245.4	264.4	273.1	7.76	3.27	30% (+/-)	Yes	Yes
Provider IDs with NPI								
Number of provider IDs with NPI	2,042	2,449	2,440	19.93	-0.37	30% (+/-)	Yes	Yes
% NPI source = MSIS	87.4	89.5	89.2	2.35	-0.32	30% (+/-)	Yes	Yes
% NPI source = NPPES	12.6	10.5	10.8	-16.30	2.70	30% (+/-)	Yes	Yes
% NPI source = state cross-reference file	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
Provider IDs Linked to NPPES								
Number of provider IDs linked to NPPES	2,031	2,449	2,440	20.58	-0.37	30% (+/-)	Yes	Yes
% linked via NPI	87.3	89.5	89.2	2.43	-0.32	30% (+/-)	Yes	Yes
% linked via Medicaid legacy provider ID	10.3	8.7	8.8	-15.89	1.32	30% (+/-)	Yes	Yes
% linked via Medicare UPIN	2.3	1.8	2.0	-20.61	9.32	30% (+/-)	Yes	Yes
% with name prefix	41.0	39.6	38.9	-3.43	-1.91	30% (+/-)	Yes	Yes
% with first name	64.7	62.3	61.4	-3.76	-1.47	30% (+/-)	Yes	Yes
% with middle name	52.8	49.9	49.1	-5.47	-1.68	30% (+/-)	Yes	Yes
% with last name	64.7	62.3	61.4	-3.76	-1.47	30% (+/-)	Yes	Yes
% with name suffix	1.5	1.5	1.8	-0.98	16.63	30% (+/-)	Yes	Yes
% male	42.0	37.9	37.5	-9.88	-1.04	30% (+/-)	Yes	Yes
% female	22.7	24.4	23.9	7.58	-2.15	30% (+/-)	Yes	Yes
% with credential	63.4	60.6	59.9	-4.31	-1.25	30% (+/-)	Yes	Yes
% with business name	35.3	37.0	38.1	4.82	3.14	30% (+/-)	Yes	Yes
% with address line 1	100.0	99.3	99.5	-0.73	0.24	30% (+/-)	Yes	Yes
% with city	100.0	99.3	99.5	-0.73	0.24	30% (+/-)	Yes	Yes
% with state	100.0	99.3	99.5	-0.73	0.24	30% (+/-)	Yes	Yes
% state = OT state code	92.6	87.7	86.6	-5.34	-1.22	30% (+/-)	Yes	Yes
% with zip code	100.0	99.3	99.5	-0.73	0.24	30% (+/-)	Yes	Yes
% with primary taxonomy	97.6	96.4	97.0	-1.17	0.62	30% (+/-)	Yes	Yes
% with provider entity type = individual	64.7	62.3	61.4	-3.76	-1.47	30% (+/-)	Yes	Yes
% with provider entity type = organization	35.3	37.0	38.1	4.82	3.14	30% (+/-)	Yes	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	0	Div by 0	Div by 0	N/A	N/A	N/A

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

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

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

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

Measure	2009 Value	2010 Value	2011 Value	% Change 2009-2010	% Change 2010-2011	Cross Year Expected Range	Cross Year 2009-2010 Within Range ^a	Cross Year 2010-2011 Within Range ^a
Provider IDs with NPES Primary Taxonomy								
Number of provider IDs with NPES primary taxonomy	1,988	2,362	2,368	18.81	0.25	30% (+/-)	Yes	Yes
% individual or group of individuals	77.1	76.0	75.2	-1.50	-0.98	30% (+/-)	Yes	Yes
% allopathic and osteopathic physicians	40.5	36.2	36.8	-10.82	1.73	30% (+/-)	Yes	Yes
% behavioral health and social service providers	13.1	15.6	14.9	19.13	-4.05	30% (+/-)	Yes	Yes
% chiropractic providers	0.2	0.0	0.2	-72.19	302.19	30% (+/-)	Yes	Yes
% dental providers	4.1	3.2	2.7	-21.01	-16.01	30% (+/-)	Yes	Yes
% dietary and nutritional service providers	0.0	0.3	0.3	Div by 0	-0.34	30% (+/-)	N/A	Yes
% emergency medical service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% eye and vision service providers	4.4	5.0	5.0	15.13	-1.09	30% (+/-)	Yes	Yes
% nursing service providers	0.2	0.5	0.5	131.84	-0.32	30% (+/-)	Yes	Yes
% nursing service-related providers	0.1	0.1	0.1	154.00	-0.24	30% (+/-)	Yes	Yes
% other service providers	6.0	4.8	4.6	-19.38	-4.62	30% (+/-)	Yes	Yes
% pharmacy service providers	0.2	0.1	0.1	-57.71	-0.64	30% (+/-)	Yes	Yes
% physician assistants and advanced practice nursing providers	2.4	3.1	3.0	28.04	-1.63	30% (+/-)	Yes	Yes
% podiatric medicine and surgery service providers	1.0	0.9	0.8	-7.01	-4.99	30% (+/-)	Yes	Yes
% respiratory, developmental, rehabilitative, and restorative service providers	4.3	5.6	5.4	29.17	-3.27	30% (+/-)	Yes	Yes
% speech, language, and hearing service providers	0.6	0.3	0.3	-38.70	-0.34	30% (+/-)	Yes	Yes
% student health care	0.0	0.0	0.1	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% technologists, technicians, and other technical service providers	0.2	0.2	0.2	-15.92	24.94	30% (+/-)	Yes	Yes
% group of individuals with multi- or single specialty	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% nonindividuals	22.9	24.0	24.8	5.07	3.09	30% (+/-)	Yes	Yes
% agencies	2.6	2.8	3.1	8.45	10.15	30% (+/-)	Yes	Yes
% ambulatory health care facilities	5.0	5.1	5.1	0.99	0.59	30% (+/-)	Yes	Yes
% hospital units	0.2	0.2	0.2	11.92	-0.05	30% (+/-)	Yes	Yes
% hospitals	2.6	3.3	3.7	27.87	11.10	30% (+/-)	Yes	Yes
% laboratories	0.5	0.8	0.9	77.48	15.55	30% (+/-)	Yes	Yes
% managed care organizations	0.4	0.3	0.2	-27.84	-16.87	30% (+/-)	Yes	Yes
% nursing and custodial care facilities	1.6	1.4	1.2	-13.09	-9.62	30% (+/-)	Yes	Yes
% residential treatment facilities	0.2	0.0	0.0	-72.19	0.55	30% (+/-)	Yes	Yes
% respite care facility	0.1	0.0	0.0	-16.00	0.55	30% (+/-)	Yes	Yes
% suppliers	9.3	9.4	9.6	1.00	2.44	30% (+/-)	Yes	Yes
% transportation services	0.6	0.7	0.6	19.21	-17.89	30% (+/-)	Yes	Yes
% nonmedical	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
Provider IDs with Entity Type = Individual								
Number of provider IDs with entity type = individual	1,315	1,526	1,498	16.05	-1.83	30% (+/-)	Yes	Yes
% a sole proprietorship	48.5	50.0	50.5	3.06	0.93	30% (+/-)	Yes	Yes
% not a sole proprietorship	41.7	42.3	41.9	1.24	-0.81	30% (+/-)	Yes	Yes
% not answered	9.7	7.7	7.6	-20.56	-1.59	N/A	N/A	N/A
Provider IDs with Entity Type = Organization								
Number of provider IDs with entity type = organization	716	905	930	26.40	2.76	30% (+/-)	Yes	Yes
% organization is a subpart	8.5	9.1	8.8	6.35	-2.69	30% (+/-)	Yes	Yes
% organization is not a subpart	67.7	72.5	73.4	7.01	1.32	30% (+/-)	Yes	Yes
% not answered	23.7	18.5	17.7	-22.28	-3.85	N/A	N/A	N/A

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

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

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

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

Measure	2009 Value	2010 Value	2011 Value	% Change 2009-2010	% Change 2010-2011	Cross Year Expected Range	Cross Year 2009-2010 Within Range ^a	Cross Year 2010-2011 Within Range ^a
RX Providers								
Number of provider IDs	530	479	529	-9.62	10.44	30% (+/-)	Yes	Yes
% billing provider on RX claim	51.3	50.7	50.9	-1.15	0.24	N/A	N/A	N/A
% prescribing provider on RX claim	39.2	0.2	0.4	-99.47	80.90	N/A	N/A	N/A
% NPI billing provider on RX claim	48.7	49.3	49.1	1.21	-0.24	N/A	N/A	N/A
% also a provider on IP claim	4.5	4.0	2.8	-12.39	-28.52	N/A	N/A	N/A
% also a provider on LT claim	2.6	2.1	1.5	-20.97	-27.57	N/A	N/A	N/A
% also a provider on OT claim	64.2	68.3	64.5	6.42	-5.57	N/A	N/A	N/A
% provider IDs with NPI	93.2	96.7	94.7	3.70	-2.02	30% (+/-)	Yes	Yes
% provider IDs linked to NPES	92.5	96.7	94.7	4.55	-2.02	30% (+/-)	Yes	Yes
% provider IDs with or without NPI but linked to state provider file	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
average number of RX claims	4,365.6	9,273.7	9,303.9	112.43	0.33	30% (+/-)	No	Yes
average number of beneficiaries with RX claims	756.9	1,137.6	1,141.4	50.29	0.34	30% (+/-)	No	Yes
Provider IDs with NPI								
Number of provider IDs with NPI	494	463	501	-6.28	8.21	30% (+/-)	Yes	Yes
% NPI source = MSIS	99.8	100.0	100.0	0.20	0.00	30% (+/-)	Yes	Yes
% NPI source = NPES	0.2	0.0	0.0	-100.00	Div by 0	30% (+/-)	Yes	N/A
% NPI source = state cross-reference file	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
Provider IDs Linked to NPES								
Number of provider IDs linked to NPES	490	463	501	-5.51	8.21	30% (+/-)	Yes	Yes
% linked via NPI	99.8	100.0	100.0	0.20	0.00	30% (+/-)	Yes	Yes
% linked via Medicaid legacy provider ID	0.2	0.0	0.0	-100.00	Div by 0	30% (+/-)	Yes	N/A
% linked via Medicare UPIN	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% with name prefix	3.9	0.9	0.8	-77.72	-7.59	30% (+/-)	Yes	Yes
% with first name	6.7	1.1	1.6	-83.96	47.85	30% (+/-)	Yes	Yes
% with middle name	5.5	0.9	1.6	-84.32	84.82	30% (+/-)	Yes	Yes
% with last name	6.7	1.1	1.6	-83.96	47.85	30% (+/-)	Yes	Yes
% with name suffix	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% male	5.3	0.9	1.0	-83.72	15.51	30% (+/-)	Yes	Yes
% female	1.4	0.2	0.6	-84.88	177.22	30% (+/-)	Yes	Yes
% with credential	6.1	0.9	1.4	-85.89	61.71	30% (+/-)	Yes	Yes
% with business name	93.3	98.5	98.4	5.60	-0.09	30% (+/-)	Yes	Yes
% with address line 1	100.0	99.6	100.0	-0.43	0.43	30% (+/-)	Yes	Yes
% with city	100.0	99.6	100.0	-0.43	0.43	30% (+/-)	Yes	Yes
% with state	100.0	99.6	100.0	-0.43	0.43	30% (+/-)	Yes	Yes
% state = RX state code	97.1	95.2	93.4	-1.95	-1.93	30% (+/-)	Yes	Yes
% with zip code	100.0	99.6	100.0	-0.43	0.43	30% (+/-)	Yes	Yes
% with primary taxonomy	99.2	97.0	97.8	-2.23	0.85	30% (+/-)	Yes	Yes
% with provider entity type = individual	6.7	1.1	1.6	-83.96	47.85	30% (+/-)	Yes	Yes
% with provider entity type = organization	93.3	98.5	98.4	5.60	-0.09	30% (+/-)	Yes	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	0	Div by 0	Div by 0	N/A	N/A	N/A

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

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

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

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

Measure	2009 Value	2010 Value	2011 Value	% Change 2009-2010	% Change 2010-2011	Cross Year Expected Range	Cross Year 2009-2010 Within Range ^a	Cross Year 2010-2011 Within Range ^a
Provider IDs with NPPES Primary Taxonomy								
Number of provider IDs with NPPES primary taxonomy	486	449	490	-7.61	9.13	30% (+/-)	Yes	Yes
% individual or group of individuals	9.7	2.5	3.3	-74.67	33.28	30% (+/-)	Yes	Yes
% allopathic and osteopathic physicians	6.2	1.1	2.0	-81.95	83.20	30% (+/-)	Yes	Yes
% behavioral health and social service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% chiropractic providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% dental providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% dietary and nutritional service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% emergency medical service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% eye and vision service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% nursing service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% nursing service-related providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% other service providers	0.6	0.0	0.0	-100.00	Div by 0	30% (+/-)	Yes	N/A
% pharmacy service providers	2.9	1.3	1.2	-53.63	-8.35	30% (+/-)	Yes	Yes
% physician assistants and advanced practice nursing providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% podiatric medicine and surgery service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% respiratory, developmental, rehabilitative, and restorative service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% speech, language, and hearing service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% student health care	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% technologists, technicians, and other technical service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% group of individuals with multi- or single specialty	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% nonindividuals	90.3	97.6	96.7	7.99	-0.84	30% (+/-)	Yes	Yes
% agencies	0.0	0.0	0.4	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% ambulatory health care facilities	3.3	3.1	3.3	-5.29	4.72	30% (+/-)	Yes	Yes
% hospital units	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% hospitals	3.7	3.6	2.4	-3.81	-31.27	30% (+/-)	Yes	Yes
% laboratories	0.0	0.0	1.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% managed care organizations	1.6	1.3	1.0	-18.83	-23.62	30% (+/-)	Yes	Yes
% nursing and custodial care facilities	0.4	0.0	0.0	-100.00	Div by 0	30% (+/-)	Yes	N/A
% residential treatment facilities	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% respite care facility	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% suppliers	81.3	89.5	88.6	10.16	-1.07	30% (+/-)	Yes	Yes
% transportation services	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% nonmedical	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
Provider IDs with Entity Type = Individual								
Number of provider IDs with entity type = individual	33	5	8	-84.85	60.00	30% (+/-)	No	Yes
% a sole proprietorship	36.4	20.0	37.5	-45.00	87.50	30% (+/-)	No	No
% not a sole proprietorship	63.6	80.0	62.5	25.72	-21.88	30% (+/-)	Yes	Yes
% not answered	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
Provider IDs with Entity Type = Organization								
Number of provider IDs with entity type = organization	457	456	493	-0.22	8.11	30% (+/-)	Yes	Yes
% organization is a subpart	14.0	15.4	15.4	9.62	0.42	30% (+/-)	Yes	Yes
% organization is not a subpart	71.6	72.8	76.3	1.75	4.75	30% (+/-)	Yes	Yes
% not answered	14.4	11.8	8.3	-18.00	-29.77	N/A	N/A	N/A

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

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

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

2009-2011 MAX RX Prescribing Provider Characteristics Validation Table

State: HI

Produced: 05/20/2013

Measure	2009 Value	2010 Value	2011 Value	% Change 2009-2010	% Change 2010-2011	Cross Year Expected Range	Cross Year 2009-2010 Within Range ^a	Cross Year 2010-2011 Within Range ^a
RX Providers								
Number of provider IDs	3,207	1,840	1,573	-42.63	-14.51	30% (+/-)	No	Yes
% billing provider on RX claim	6.5	0.1	0.1	-99.17	135.45	N/A	N/A	N/A
% prescribing provider on RX claim	100.0	100.0	100.0	0.00	0.00	N/A	N/A	N/A
% NPI billing provider on RX claim	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
% also a provider on IP claim	0.2	0.1	0.1	-75.23	17.73	N/A	N/A	N/A
% also a provider on LT claim	0.1	0.0	0.0	-100.00	Div by 0	N/A	N/A	N/A
% also a provider on OT claim	14.7	19.1	19.8	29.70	3.35	N/A	N/A	N/A
% provider IDs with NPI	7.9	3.0	2.5	-62.26	-17.05	30% (+/-)	Yes	Yes
% provider IDs linked to NPPES	7.9	3.0	2.5	-61.96	-17.05	30% (+/-)	Yes	Yes
% provider IDs with or without NPI but linked to state provider file	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
average number of RX claims	390.5	136.4	103.7	-65.07	-23.99	30% (+/-)	No	Yes
average number of beneficiaries with RX claims	75.1	29.0	28.8	-61.37	-0.84	30% (+/-)	No	Yes
Provider IDs with NPI								
Number of provider IDs with NPI	254	55	39	-78.35	-29.09	30% (+/-)	No	Yes
% NPI source = MSIS	98.0	83.6	79.5	-14.68	-4.96	30% (+/-)	Yes	Yes
% NPI source = NPPES	2.0	16.4	20.5	731.08	25.35	30% (+/-)	No	Yes
% NPI source = state cross-reference file	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
Provider IDs Linked to NPPES								
Number of provider IDs linked to NPPES	252	55	39	-78.17	-29.09	30% (+/-)	No	Yes
% linked via NPI	98.0	83.6	79.5	-14.67	-4.96	30% (+/-)	Yes	Yes
% linked via Medicaid legacy provider ID	1.6	10.9	15.4	587.40	41.03	30% (+/-)	No	No
% linked via Medicare UPIN	0.4	5.5	5.1	1,274.06	-5.99	30% (+/-)	Yes	Yes
% with name prefix	2.0	14.5	23.1	633.11	58.66	30% (+/-)	No	No
% with first name	3.6	21.8	35.9	510.98	64.53	30% (+/-)	No	No
% with middle name	3.2	18.2	25.6	472.66	41.02	30% (+/-)	No	No
% with last name	3.6	21.8	35.9	510.98	64.53	30% (+/-)	No	No
% with name suffix	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% male	3.2	12.7	17.9	300.85	41.03	30% (+/-)	No	No
% female	0.4	9.1	17.9	2,189.92	97.43	30% (+/-)	Yes	No
% with credential	3.6	20.0	33.3	460.07	66.67	30% (+/-)	No	No
% with business name	96.4	78.2	64.1	-18.92	-18.01	30% (+/-)	Yes	Yes
% with address line 1	100.0	100.0	100.0	0.00	0.00	30% (+/-)	Yes	Yes
% with city	100.0	100.0	100.0	0.00	0.00	30% (+/-)	Yes	Yes
% with state	100.0	100.0	100.0	0.00	0.00	30% (+/-)	Yes	Yes
% state = RX state code	98.4	94.5	94.9	-3.93	0.35	30% (+/-)	Yes	Yes
% with zip code	100.0	100.0	100.0	0.00	0.00	30% (+/-)	Yes	Yes
% with primary taxonomy	99.2	100.0	100.0	0.80	0.00	30% (+/-)	Yes	Yes
% with provider entity type = individual	3.6	21.8	35.9	510.98	64.53	30% (+/-)	No	No
% with provider entity type = organization	96.4	78.2	64.1	-18.92	-18.01	30% (+/-)	Yes	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	0	Div by 0	Div by 0	N/A	N/A	N/A

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

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

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

2009-2011 MAX RX Prescribing Provider Characteristics Validation Table

State: HI

Produced: 05/20/2013

Measure	2009 Value	2010 Value	2011 Value	% Change 2009-2010	% Change 2010-2011	Cross Year Expected Range	Cross Year 2009-2010 Within Range ^a	Cross Year 2010-2011 Within Range ^a
Provider IDs with NPPES Primary Taxonomy								
Number of provider IDs with NPPES primary taxonomy	250	55	39	-78.00	-29.09	30% (+/-)	No	Yes
% individual or group of individuals	7.2	25.5	35.9	253.54	41.02	30% (+/-)	No	No
% allopathic and osteopathic physicians	3.6	20.0	25.6	455.56	28.21	30% (+/-)	No	Yes
% behavioral health and social service providers	0.4	1.8	2.6	354.50	41.04	30% (+/-)	Yes	Yes
% chiropractic providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% dental providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% dietary and nutritional service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% emergency medical service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% eye and vision service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% nursing service providers	0.0	1.8	2.6	Div by 0	41.04	30% (+/-)	N/A	Yes
% nursing service-related providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% other service providers	0.4	1.8	0.0	354.50	-100.00	30% (+/-)	Yes	Yes
% pharmacy service providers	2.8	0.0	0.0	-100.00	Div by 0	30% (+/-)	Yes	N/A
% physician assistants and advanced practice nursing providers	0.0	0.0	5.1	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% podiatric medicine and surgery service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% respiratory, developmental, rehabilitative, and restorative service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% speech, language, and hearing service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% student health care	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% technologists, technicians, and other technical service providers	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% group of individuals with multi- or single specialty	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% nonindividuals	92.8	74.5	64.1	-19.67	-14.01	30% (+/-)	Yes	Yes
% agencies	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% ambulatory health care facilities	0.4	0.0	0.0	-100.00	Div by 0	30% (+/-)	Yes	N/A
% hospital units	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% hospitals	21.6	72.7	30.8	236.70	-57.69	30% (+/-)	No	No
% laboratories	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% managed care organizations	2.0	1.8	33.3	-9.10	1,733.52	30% (+/-)	Yes	No
% nursing and custodial care facilities	0.4	0.0	0.0	-100.00	Div by 0	30% (+/-)	Yes	N/A
% residential treatment facilities	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% respite care facility	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% suppliers	68.4	0.0	0.0	-100.00	Div by 0	30% (+/-)	No	N/A
% transportation services	0.0	0.0	0.0	Div by 0	Div by 0	30% (+/-)	N/A	N/A
% nonmedical	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
Provider IDs with Entity Type = Individual								
Number of provider IDs with entity type = individual	9	12	14	33.33	16.67	30% (+/-)	No	Yes
% a sole proprietorship	33.3	25.0	14.3	-25.00	-42.86	30% (+/-)	Yes	No
% not a sole proprietorship	66.7	58.3	71.4	-12.50	22.45	30% (+/-)	Yes	Yes
% not answered	0.0	16.7	14.3	Div by 0	-14.29	N/A	N/A	N/A
Provider IDs with Entity Type = Organization								
Number of provider IDs with entity type = organization	243	43	25	-82.30	-41.86	30% (+/-)	No	No
% organization is a subpart	9.9	0.0	0.0	-100.00	Div by 0	30% (+/-)	Yes	N/A
% organization is not a subpart	79.8	100.0	100.0	25.26	0.00	30% (+/-)	Yes	Yes
% not answered	10.3	0.0	0.0	-100.00	Div by 0	N/A	N/A	N/A

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

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

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

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

Measure	2009 Value	2010 Value	2011 Value	% Change 2009-2010	% Change 2010-2011	Cross Year Expected Range	Cross Year 2009-2010 Within Range ^a	Cross Year 2010-2011 Within Range ^a
All Providers								
Number of provider IDs	14,679	14,881	14,662	1.38	-1.47	30%(+/-)	Yes	Yes
% billing provider on IP claim	0.8	0.8	0.9	5.44	3.98	N/A	N/A	N/A
% NPI billing provider on IP claim	0.7	0.8	0.8	9.74	4.01	N/A	N/A	N/A
% billing provider on LT claim	0.4	0.2	0.3	-49.08	25.96	N/A	N/A	N/A
% NPI billing provider on LT claim	0.4	0.2	0.3	-48.26	27.88	N/A	N/A	N/A
% billing provider on OT claim	42.7	46.0	46.5	7.69	1.03	N/A	N/A	N/A
% servicing provider on OT claim	43.2	46.9	46.6	8.54	-0.56	N/A	N/A	N/A
% NPI servicing provider on OT claim	30.3	36.6	37.7	20.81	3.13	N/A	N/A	N/A
% billing provider on RX claim	1.9	1.6	1.8	-11.87	12.35	N/A	N/A	N/A
% prescribing provider on RX claim	21.8	12.4	10.7	-43.40	-13.24	N/A	N/A	N/A
% NPI billing provider on RX claim	1.8	1.6	1.8	-9.78	11.81	N/A	N/A	N/A
% billing provider	43.7	46.7	47.4	7.00	1.42	N/A	N/A	N/A
% NPI billing provider	2.5	2.3	2.6	-4.36	10.23	N/A	N/A	N/A
% servicing provider	43.2	46.9	46.6	8.54	-0.56	N/A	N/A	N/A
% NPI servicing provider	30.3	36.6	37.7	20.81	3.13	N/A	N/A	N/A
% prescribing provider	21.8	12.4	10.7	-43.40	-13.24	N/A	N/A	N/A
% provider IDs with NPI	49.7	58.4	60.0	17.54	2.72	30%(+/-)	Yes	Yes
% provider IDs linked to NPPES	49.5	58.4	60.0	18.09	2.71	30%(+/-)	Yes	Yes
% provider IDs with or without NPI but linked to state provider file	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
average number of claims	1,104.2	1,553.0	1,656.2	40.65	6.64	30%(+/-)	No	Yes
average number of beneficiaries with claims	196.8	233.6	247.9	18.66	6.15	30%(+/-)	Yes	Yes
Provider IDs with NPI								
Number of provider IDs with NPI	7,297	8,695	8,800	19.16	1.21	30%(+/-)	Yes	Yes
% NPI source = MSIS	96.3	96.9	96.9	0.61	0.01	30%(+/-)	Yes	Yes
% NPI source = NPPES	3.7	3.1	3.1	-16.07	-0.46	30%(+/-)	Yes	Yes
% NPI source = state cross-reference file	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
Provider IDs Linked to NPPES								
Number of provider IDs linked to NPPES	7,263	8,695	8,799	19.72	1.20	30%(+/-)	Yes	Yes
% linked via NPI	96.3	96.9	96.9	0.63	0.01	30%(+/-)	Yes	Yes
% linked via Medicaid legacy provider ID	3.0	2.5	2.5	-16.10	-0.72	30%(+/-)	Yes	Yes
% linked via Medicare UPIN	0.7	0.6	0.6	-18.02	0.75	30%(+/-)	Yes	Yes
% with name prefix	40.4	40.0	39.5	-0.96	-1.27	30%(+/-)	Yes	Yes
% with first name	63.3	64.0	63.6	1.04	-0.63	30%(+/-)	Yes	Yes
% with middle name	50.6	50.9	50.6	0.63	-0.49	30%(+/-)	Yes	Yes
% with last name	63.3	64.0	63.6	1.04	-0.63	30%(+/-)	Yes	Yes
% with name suffix	1.6	1.5	1.6	-5.85	6.22	30%(+/-)	Yes	Yes
% male	41.8	40.1	39.7	-3.91	-1.15	30%(+/-)	Yes	Yes
% female	21.6	23.9	23.9	10.63	0.25	30%(+/-)	Yes	Yes
% with credential	61.7	62.2	61.9	0.83	-0.58	30%(+/-)	Yes	Yes
% with business name	36.7	35.5	36.0	-3.26	1.64	30%(+/-)	Yes	Yes
% with address line 1	100.0	99.5	99.6	-0.54	0.18	30%(+/-)	Yes	Yes
% with city	100.0	99.5	99.6	-0.54	0.18	30%(+/-)	Yes	Yes
% with state	100.0	99.5	99.6	-0.54	0.18	30%(+/-)	Yes	Yes
% state = claim file state code	91.9	88.4	88.0	-3.78	-0.48	30%(+/-)	Yes	Yes
% with zip code	100.0	99.5	99.6	-0.54	0.18	30%(+/-)	Yes	Yes
% with primary taxonomy	98.1	96.6	97.0	-1.52	0.43	30%(+/-)	Yes	Yes

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

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

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

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

Measure	2009 Value	2010 Value	2011 Value	% Change 2009-2010	% Change 2010-2011	Cross Year Expected Range	Cross Year 2009-2010 Within Range ^a	Cross Year 2010-2011 Within Range ^a
% with provider entity type = individual	63.3	64.0	63.6	1.04	-0.63	30%(+/-)	Yes	Yes
% with provider entity type = organization	36.7	35.5	36.0	-3.26	1.64	30%(+/-)	Yes	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	0	Div by 0	Div by 0	N/A	N/A	N/A
Provider IDs with NPPES Primary Taxonomy								
Number of provider IDs with NPPES primary taxonomy	7,141	8,400	8,537	17.63	1.63	30%(+/-)	Yes	Yes
% individual or group of individuals	78.9	79.3	78.8	0.51	-0.57	30%(+/-)	Yes	Yes
% allopathic and osteopathic physicians	47.7	46.5	46.7	-2.48	0.33	30%(+/-)	Yes	Yes
% behavioral health and social service providers	8.6	10.4	9.9	20.07	-4.20	30%(+/-)	Yes	Yes
% chiropractic providers	0.1	0.0	0.1	-78.57	290.46	30%(+/-)	Yes	Yes
% dental providers	4.0	3.6	3.5	-11.73	-2.61	30%(+/-)	Yes	Yes
% dietary and nutritional service providers	0.0	0.2	0.2	1,514.29	-1.52	30%(+/-)	Yes	Yes
% emergency medical service providers	0.0	0.0	0.0	-14.29	95.23	30%(+/-)	Yes	Yes
% eye and vision service providers	3.3	3.9	3.8	15.95	-1.91	30%(+/-)	Yes	Yes
% nursing service providers	0.3	0.3	0.3	25.19	-1.51	30%(+/-)	Yes	Yes
% nursing service-related providers	0.0	0.1	0.1	328.57	-2.39	30%(+/-)	Yes	Yes
% other service providers	5.7	4.7	4.6	-17.49	-2.84	30%(+/-)	Yes	Yes
% pharmacy service providers	0.2	0.1	0.1	-63.78	-1.01	30%(+/-)	Yes	Yes
% physician assistants and advanced practice nursing providers	2.7	3.1	3.2	13.77	3.68	30%(+/-)	Yes	Yes
% podiatric medicine and surgery service providers	0.8	0.7	0.7	-7.27	-1.57	30%(+/-)	Yes	Yes
% respiratory, developmental, rehabilitative, and restorative service providers	4.8	5.2	5.0	9.13	-4.29	30%(+/-)	Yes	Yes
% speech, language, and hearing service providers	0.4	0.3	0.3	-28.02	2.83	30%(+/-)	Yes	Yes
% student health care	0.1	0.1	0.3	55.95	105.66	30%(+/-)	Yes	Yes
% technologists, technicians, and other technical service providers	0.1	0.1	0.1	-15.18	35.63	30%(+/-)	Yes	Yes
% group of individuals with multi- or single specialty	0.0	0.0	0.0	Div by 0	Div by 0	30%(+/-)	N/A	N/A
% nonindividuals	21.1	20.7	21.2	-1.92	2.18	30%(+/-)	Yes	Yes
% agencies	1.6	2.6	3.0	68.53	13.60	30%(+/-)	Yes	Yes
% ambulatory health care facilities	4.4	4.2	4.0	-4.19	-4.65	30%(+/-)	Yes	Yes
% hospital units	0.1	0.2	0.2	49.11	-1.80	30%(+/-)	Yes	Yes
% hospitals	3.7	3.5	2.9	-4.39	-18.12	30%(+/-)	Yes	Yes
% laboratories	0.3	0.5	0.6	87.97	24.17	30%(+/-)	Yes	Yes
% managed care organizations	1.4	1.0	1.6	-32.49	62.83	30%(+/-)	Yes	Yes
% nursing and custodial care facilities	1.3	1.2	1.1	-9.45	-5.61	30%(+/-)	Yes	Yes
% residential treatment facilities	0.1	0.1	0.1	-15.18	10.97	30%(+/-)	Yes	Yes
% respite care facility	0.0	0.0	0.0	71.43	-2.39	30%(+/-)	Yes	Yes
% suppliers	7.9	7.0	7.4	-11.07	4.73	30%(+/-)	Yes	Yes
% transportation services	0.3	0.4	0.3	18.32	-16.99	30%(+/-)	Yes	Yes
% nonmedical	0.0	0.0	0.0	Div by 0	Div by 0	N/A	N/A	N/A
Provider IDs with Entity Type = Individual								
Number of provider IDs with entity type = individual	4,600	5,564	5,595	20.96	0.56	30%(+/-)	Yes	Yes
% a sole proprietorship	37.2	37.5	37.4	1.01	-0.32	30%(+/-)	Yes	Yes
% not a sole proprietorship	54.4	55.8	56.1	2.45	0.66	30%(+/-)	Yes	Yes
% not answered	8.4	6.7	6.5	-20.31	-3.76	N/A	N/A	N/A
Provider IDs with Entity Type = Organization								
Number of provider IDs with entity type = organization	2,663	3,084	3,172	15.81	2.85	30%(+/-)	Yes	Yes
% organization is a subpart	7.6	7.8	7.9	2.18	2.10	30%(+/-)	Yes	Yes
% organization is not a subpart	67.6	70.5	71.1	4.18	0.85	30%(+/-)	Yes	Yes
% not answered	24.8	21.8	21.0	-12.08	-3.50	N/A	N/A	N/A

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

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

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

This page has been left blank for double-sided copying.

MATHEMATICA Policy Research

www.mathematica-mpr.com

Improving public well-being by conducting high quality, objective research and surveys

Princeton, NJ ■ Ann Arbor, MI ■ Cambridge, MA ■ Chicago, IL ■ Oakland, CA ■ Washington, DC

Mathematica® is a registered trademark of Mathematica Policy Research