

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

**State-Specific Validation Tables,  
2011**

June 28, 2013

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## **ACRONYMS**

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

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## INTRODUCTION

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

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

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

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

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

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

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

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



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

| Measure   | 2009 Value | 2010 Value | 2011 Value | % Change<br>2009-2010 | % Change<br>2010-2011 | Cross Year<br>Expected<br>Range | Cross Year<br>2009-2010<br>Within<br>Range <sup>a</sup> | Cross Year<br>2010-2011<br>Within<br>Range <sup>a</sup> |
|---|------------|------------|------------|-----------------------|-----------------------|---------------------------------|---|---|
| <b>IP Providers</b>   |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs  | 1,772      | 1,745      | 1,828      | -1.52                 | 4.76                  | 30% (+/-)                       | Yes   | Yes   |
| % billing provider on IP claim  | 47.3       | 48.1       | 49.1       | 1.79                  | 2.05                  | N/A                             | N/A   | N/A   |
| % NPI billing provider on IP claim  | 52.7       | 51.9       | 50.9       | -1.61                 | -1.90                 | N/A                             | N/A   | N/A   |
| % also a provider on LT claim   | 37.9       | 40.6       | 39.1       | 7.15                  | -3.73                 | N/A                             | N/A   | N/A   |
| % also a provider on OT claim   | 90.0       | 89.5       | 85.6       | -0.55                 | -4.36                 | N/A                             | N/A   | N/A   |
| % also a provider on RX claim   | 0.2        | 0.3        | 0.7        | 26.99                 | 147.79                | N/A                             | N/A   | N/A   |
| % provider IDs with NPI   | 92.8       | 92.6       | 92.6       | -0.24                 | 0.07                  | 30% (+/-)                       | Yes   | Yes   |
| % provider IDs linked to NPES   | 92.7       | 92.6       | 92.6       | -0.12                 | 0.07                  | 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   | 316.6      | 318.2      | 363.1      | 0.51                  | 14.10                 | 30% (+/-)                       | Yes   | Yes   |
| average number of beneficiaries with IP claims                            | 214.3      | 198.3      | 191.6      | -7.47                 | -3.39                 | 30% (+/-)                       | Yes   | Yes   |
| <b>Provider IDs with NPI</b>  |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs with NPI   | 1,644      | 1,615      | 1,693      | -1.76                 | 4.83                  | 30% (+/-)                       | Yes   | Yes   |
| % NPI source = MSIS   | 100.0      | 100.0      | 100.0      | 0.00                  | 0.00                  | 30% (+/-)                       | Yes   | Yes   |
| % NPI source = NPES   | 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   |
| <b>Provider IDs Linked to NPES</b>  |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs linked to NPES                                     | 1,642      | 1,615      | 1,693      | -1.64                 | 4.83                  | 30% (+/-)                       | Yes   | Yes   |
| % linked via NPI  | 100.0      | 100.0      | 100.0      | 0.00                  | 0.00                  | 30% (+/-)                       | Yes   | Yes   |
| % linked via Medicaid legacy provider ID                                  | 0.0        | 0.0        | 0.0        | 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  | 0.2        | 0.2        | 0.1        | -23.77                | -36.49                | 30% (+/-)                       | Yes   | Yes   |
| % with first name   | 0.7        | 0.4        | 0.6        | -49.11                | 58.78                 | 30% (+/-)                       | Yes   | Yes   |
| % with middle name  | 0.5        | 0.4        | 0.4        | -23.61                | 11.15                 | 30% (+/-)                       | Yes   | Yes   |
| % with last name  | 0.7        | 0.4        | 0.6        | -49.11                | 58.78                 | 30% (+/-)                       | Yes   | Yes   |
| % with name suffix  | 0.0        | 0.1        | 0.0        | Div by 0              | -100.00               | 30% (+/-)                       | N/A   | Yes   |
| % male  | 0.4        | 0.2        | 0.5        | -49.04                | 185.81                | 30% (+/-)                       | Yes   | Yes   |
| % female  | 0.4        | 0.2        | 0.1        | -49.04                | -68.24                | 30% (+/-)                       | Yes   | Yes   |
| % with credential   | 0.7        | 0.3        | 0.5        | -53.73                | 71.48                 | 30% (+/-)                       | Yes   | Yes   |
| % with business name  | 99.3       | 99.4       | 99.2       | 0.11                  | -0.15                 | 30% (+/-)                       | Yes   | Yes   |
| % with address line 1   | 100.0      | 99.8       | 99.8       | -0.25                 | 0.07                  | 30% (+/-)                       | Yes   | Yes   |
| % with city   | 100.0      | 99.8       | 99.8       | -0.25                 | 0.07                  | 30% (+/-)                       | Yes   | Yes   |
| % with state  | 100.0      | 99.8       | 99.8       | -0.25                 | 0.07                  | 30% (+/-)                       | Yes   | Yes   |
| % state = IP state code   | 59.9       | 62.4       | 56.3       | 4.05                  | -9.63                 | 30% (+/-)                       | Yes   | Yes   |
| % with zip code   | 100.0      | 99.8       | 99.8       | -0.25                 | 0.07                  | 30% (+/-)                       | Yes   | Yes   |
| % with primary taxonomy   | 98.5       | 98.1       | 98.8       | -0.46                 | 0.69                  | 30% (+/-)                       | Yes   | Yes   |
| % with provider entity type = individual                                  | 0.7        | 0.4        | 0.6        | -49.11                | 58.78                 | 30% (+/-)                       | Yes   | Yes   |
| % with provider entity type = organization                                | 99.3       | 99.4       | 99.2       | 0.11                  | -0.15                 | 30% (+/-)                       | Yes   | Yes   |
| <b>Provider IDs with or without NPI but linked to state provider file</b> |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs with or without NPI linked to state provider file  | 0          | 0          | 0          | Div by 0              | Div by 0              | N/A                             | N/A   | N/A   |

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

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

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

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

| Measure   | 2009 Value | 2010 Value | 2011 Value | % Change<br>2009-2010 | % Change<br>2010-2011 | Cross Year<br>Expected<br>Range | Cross Year<br>2009-2010<br>Within<br>Range <sup>a</sup> | Cross Year<br>2010-2011<br>Within<br>Range <sup>a</sup> |
|---|------------|------------|------------|-----------------------|-----------------------|---------------------------------|---|---|
| <b>Provider IDs with NPPES Primary Taxonomy</b>                                 |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs with NPPES primary taxonomy                              | 1,620      | 1,584      | 1,672      | -2.22                 | 5.56                  | 30% (+/-)                       | Yes   | Yes   |
| % individual or group of individuals  | 2.5        | 1.0        | 1.4        | -59.09                | 42.12                 | 30% (+/-)                       | Yes   | Yes   |
| % allopathic and osteopathic physicians   | 1.4        | 0.4        | 1.0        | -73.31                | 168.27                | 30% (+/-)                       | Yes   | Yes   |
| % behavioral health and social service providers                                | 0.8        | 0.3        | 0.3        | -60.60                | -5.37                 | 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        | 0.0        | 0.0        | Div by 0              | Div by 0              | 30% (+/-)                       | N/A   | N/A   |
| % nursing service-related providers   | 0.0        | 0.1        | 0.1        | Div by 0              | -5.07                 | 30% (+/-)                       | N/A   | Yes   |
| % other service providers   | 0.0        | 0.1        | 0.0        | Div by 0              | -100.00               | 30% (+/-)                       | N/A   | 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                  | 0.1        | 0.0        | 0.0        | -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        | 0.1        | 0.0        | Div by 0              | -100.00               | 30% (+/-)                       | N/A   | Yes   |
| % speech, language, and hearing service providers                               | 0.0        | 0.0        | 0.0        | Div by 0              | Div by 0              | 30% (+/-)                       | N/A   | N/A   |
| % student health care   | 0.0        | 0.0        | 0.0        | Div by 0              | Div by 0              | 30% (+/-)                       | N/A   | N/A   |
| % technologists, technicians, and other technical service providers             | 0.0        | 0.0        | 0.0        | Div by 0              | Div by 0              | 30% (+/-)                       | N/A   | N/A   |
| % group of individuals with multi- or single specialty                          | 0.1        | 0.0        | 0.0        | -100.00               | Div by 0              | 30% (+/-)                       | Yes   | N/A   |
| % nonindividuals  | 97.5       | 99.0       | 98.6       | 1.50                  | -0.43                 | 30% (+/-)                       | Yes   | Yes   |
| % agencies  | 0.6        | 0.8        | 0.5        | 36.33                 | -28.99                | 30% (+/-)                       | Yes   | Yes   |
| % ambulatory health care facilities   | 2.0        | 0.5        | 0.4        | -75.21                | -17.10                | 30% (+/-)                       | Yes   | Yes   |
| % hospital units  | 5.1        | 5.5        | 5.0        | 7.20                  | -8.52                 | 30% (+/-)                       | Yes   | Yes   |
| % hospitals   | 52.4       | 52.6       | 56.5       | 0.35                  | 7.48                  | 30% (+/-)                       | Yes   | Yes   |
| % laboratories  | 0.1        | 0.0        | 0.0        | -100.00               | Div by 0              | 30% (+/-)                       | Yes   | 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   | 33.0       | 35.4       | 33.0       | 7.05                  | -6.79                 | 30% (+/-)                       | Yes   | Yes   |
| % residential treatment facilities  | 4.0        | 3.4        | 2.2        | -13.72                | -36.84                | 30% (+/-)                       | Yes   | Yes   |
| % respite care facility   | 0.0        | 0.1        | 0.0        | Div by 0              | -100.00               | 30% (+/-)                       | N/A   | Yes   |
| % suppliers   | 0.3        | 0.8        | 0.8        | 145.31                | 10.46                 | 30% (+/-)                       | Yes   | Yes   |
| % transportation services   | 0.0        | 0.0        | 0.1        | Div by 0              | Div by 0              | 30% (+/-)                       | N/A   | N/A   |
| % nonmedical  | 0.0        | 0.0        | 0.0        | Div by 0              | Div by 0              | N/A                             | N/A   | N/A   |
| <b>Provider IDs with Entity Type = Individual</b>                               |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs with entity type = individual                            | 12         | 6          | 10         | -50.00                | 66.67                 | 30% (+/-)                       | No  | No  |
| % a sole proprietorship   | 8.3        | 66.7       | 20.0       | 700.04                | -70.00                | 30% (+/-)                       | No  | No  |
| % not a sole proprietorship   | 91.7       | 33.3       | 80.0       | -63.64                | 140.00                | 30% (+/-)                       | No  | No  |
| % not answered  | 0.0        | 0.0        | 0.0        | Div by 0              | Div by 0              | N/A                             | N/A   | N/A   |
| <b>Provider IDs with Entity Type = Organization</b>                             |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs with entity type = organization                          | 1,630      | 1,605      | 1,680      | -1.53                 | 4.67                  | 30% (+/-)                       | Yes   | Yes   |
| % organization is a subpart   | 15.2       | 20.2       | 19.0       | 33.09                 | -5.93                 | 30% (+/-)                       | No  | Yes   |
| % organization is not a subpart   | 67.0       | 68.4       | 69.8       | 2.12                  | 2.06                  | 30% (+/-)                       | Yes   | Yes   |
| % not answered  | 17.8       | 11.3       | 11.1       | -36.26                | -1.84                 | 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.

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

| Measure   | 2009 Value | 2010 Value | 2011 Value | % Change<br>2009-2010 | % Change<br>2010-2011 | Cross Year<br>Expected<br>Range | Cross Year<br>2009-2010<br>Within<br>Range <sup>a</sup> | Cross Year<br>2010-2011<br>Within<br>Range <sup>a</sup> |
|---|------------|------------|------------|-----------------------|-----------------------|---------------------------------|---|---|
| <b>LT Providers</b>   |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs  | 899        | 962        | 1,000      | 7.01                  | 3.95                  | 30% (+/-)                       | Yes   | Yes   |
| % billing provider on LT claim  | 49.4       | 50.2       | 50.9       | 1.66                  | 1.38                  | N/A                             | N/A   | N/A   |
| % NPI billing provider on LT claim  | 50.6       | 49.8       | 49.1       | -1.62                 | -1.39                 | N/A                             | N/A   | N/A   |
| % also a provider on IP claim   | 74.6       | 73.6       | 71.4       | -1.39                 | -2.99                 | N/A                             | N/A   | N/A   |
| % also a provider on OT claim   | 71.5       | 69.5       | 66.9       | -2.77                 | -3.80                 | N/A                             | N/A   | N/A   |
| % also a provider on RX claim   | 0.3        | 0.3        | 0.5        | -6.59                 | 60.26                 | N/A                             | N/A   | N/A   |
| % provider IDs with NPI   | 94.7       | 94.4       | 93.4       | -0.29                 | -1.05                 | 30% (+/-)                       | Yes   | Yes   |
| % provider IDs linked to NPPES  | 94.7       | 94.4       | 93.4       | -0.29                 | -1.05                 | 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 LT claims   | 656.5      | 806.2      | 1,204.6    | 22.80                 | 49.43                 | 30% (+/-)                       | Yes   | No  |
| average number of beneficiaries with LT claims                            | 83.2       | 77.5       | 76.0       | -6.83                 | -1.92                 | 30% (+/-)                       | Yes   | Yes   |
| <b>Provider IDs with NPI</b>  |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs with NPI   | 851        | 908        | 934        | 6.70                  | 2.86                  | 30% (+/-)                       | Yes   | Yes   |
| % NPI source = MSIS   | 100.0      | 100.0      | 100.0      | 0.00                  | 0.00                  | 30% (+/-)                       | Yes   | Yes   |
| % NPI source = NPPES  | 0.0        | 0.0        | 0.0        | 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   |
| <b>Provider IDs Linked to NPPES</b>                                       |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs linked to NPPES                                    | 851        | 908        | 934        | 6.70                  | 2.86                  | 30% (+/-)                       | Yes   | Yes   |
| % linked via NPI  | 100.0      | 100.0      | 100.0      | 0.00                  | 0.00                  | 30% (+/-)                       | Yes   | Yes   |
| % linked via Medicaid legacy provider ID                                  | 0.0        | 0.0        | 0.0        | 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  | 0.2        | 0.0        | 0.0        | -100.00               | Div by 0              | 30% (+/-)                       | Yes   | N/A   |
| % with first name   | 0.4        | 0.1        | 0.1        | -68.84                | -2.67                 | 30% (+/-)                       | Yes   | Yes   |
| % with middle name  | 0.4        | 0.1        | 0.1        | -68.84                | -2.67                 | 30% (+/-)                       | Yes   | Yes   |
| % with last name  | 0.4        | 0.1        | 0.1        | -68.84                | -2.67                 | 30% (+/-)                       | Yes   | Yes   |
| % with name suffix  | 0.0        | 0.0        | 0.0        | Div by 0              | Div by 0              | 30% (+/-)                       | N/A   | N/A   |
| % male  | 0.2        | 0.0        | 0.0        | -100.00               | Div by 0              | 30% (+/-)                       | Yes   | N/A   |
| % female  | 0.1        | 0.1        | 0.1        | -6.78                 | -2.67                 | 30% (+/-)                       | Yes   | Yes   |
| % with credential   | 0.2        | 0.0        | 0.0        | -100.00               | Div by 0              | 30% (+/-)                       | Yes   | N/A   |
| % with business name  | 99.6       | 99.9       | 99.9       | 0.24                  | 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   | 98.5       | 97.9       | 98.1       | -0.57                 | 0.17                  | 30% (+/-)                       | Yes   | Yes   |
| % with zip code   | 100.0      | 100.0      | 100.0      | 0.00                  | 0.00                  | 30% (+/-)                       | Yes   | Yes   |
| % with primary taxonomy   | 97.7       | 97.7       | 98.1       | 0.04                  | 0.39                  | 30% (+/-)                       | Yes   | Yes   |
| % with provider entity type = individual                                  | 0.4        | 0.1        | 0.1        | -68.84                | -2.67                 | 30% (+/-)                       | Yes   | Yes   |
| % with provider entity type = organization                                | 99.6       | 99.9       | 99.9       | 0.24                  | 0.00                  | 30% (+/-)                       | Yes   | Yes   |
| <b>Provider IDs with or without NPI but linked to state provider file</b> |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs with or without NPI linked to state provider file  | 0          | 0          | 0          | Div by 0              | Div by 0              | N/A                             | N/A   | N/A   |

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

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

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

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

| Measure   | 2009 Value | 2010 Value | 2011 Value | % Change<br>2009-2010 | % Change<br>2010-2011 | Cross Year<br>Expected<br>Range | Cross Year<br>2009-2010<br>Within<br>Range <sup>a</sup> | Cross Year<br>2010-2011<br>Within<br>Range <sup>a</sup> |
|---|------------|------------|------------|-----------------------|-----------------------|---------------------------------|---|---|
| <b>Provider IDs with NPPES Primary Taxonomy</b>                                 |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs with NPPES primary taxonomy                              | 831        | 887        | 916        | 6.74                  | 3.27                  | 30% (+/-)                       | Yes   | Yes   |
| % individual or group of individuals  | 1.1        | 0.7        | 0.7        | -37.58                | -3.10                 | 30% (+/-)                       | Yes   | Yes   |
| % allopathic and osteopathic physicians   | 0.5        | 0.0        | 0.0        | -100.00               | Div by 0              | 30% (+/-)                       | Yes   | N/A   |
| % behavioral health and social service providers                                | 0.6        | 0.7        | 0.7        | 12.29                 | -3.10                 | 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        | 0.0        | 0.0        | Div by 0              | Div by 0              | 30% (+/-)                       | N/A   | N/A   |
| % nursing service-related providers   | 0.0        | 0.0        | 0.0        | Div by 0              | Div by 0              | 30% (+/-)                       | N/A   | N/A   |
| % other service providers   | 0.0        | 0.0        | 0.0        | Div by 0              | Div by 0              | 30% (+/-)                       | N/A   | N/A   |
| % pharmacy service providers  | 0.0        | 0.0        | 0.0        | Div by 0              | Div by 0              | 30% (+/-)                       | N/A   | N/A   |
| % physician assistants and advanced practice nursing providers                  | 0.0        | 0.0        | 0.0        | Div by 0              | Div by 0              | 30% (+/-)                       | N/A   | N/A   |
| % podiatric medicine and surgery service providers                              | 0.0        | 0.0        | 0.0        | Div by 0              | Div by 0              | 30% (+/-)                       | N/A   | N/A   |
| % respiratory, developmental, rehabilitative, and restorative service providers | 0.0        | 0.0        | 0.0        | Div by 0              | Div by 0              | 30% (+/-)                       | N/A   | N/A   |
| % speech, language, and hearing service providers                               | 0.0        | 0.0        | 0.0        | Div by 0              | Div by 0              | 30% (+/-)                       | N/A   | N/A   |
| % student health care   | 0.0        | 0.0        | 0.0        | Div by 0              | Div by 0              | 30% (+/-)                       | N/A   | N/A   |
| % technologists, technicians, and other technical service providers             | 0.0        | 0.0        | 0.0        | Div by 0              | Div by 0              | 30% (+/-)                       | N/A   | N/A   |
| % group of individuals with multi- or single specialty                          | 0.0        | 0.0        | 0.0        | Div by 0              | Div by 0              | 30% (+/-)                       | N/A   | N/A   |
| % nonindividuals  | 98.9       | 99.3       | 99.3       | 0.41                  | 0.02                  | 30% (+/-)                       | Yes   | Yes   |
| % agencies  | 0.1        | 0.5        | 0.5        | 275.83                | 21.03                 | 30% (+/-)                       | Yes   | Yes   |
| % ambulatory health care facilities   | 0.7        | 0.3        | 0.7        | -53.19                | 93.79                 | 30% (+/-)                       | Yes   | Yes   |
| % hospital units  | 2.6        | 3.5        | 4.1        | 32.04                 | 18.70                 | 30% (+/-)                       | Yes   | Yes   |
| % hospitals   | 6.6        | 7.2        | 6.9        | 9.00                  | -4.67                 | 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   | 87.0       | 82.4       | 81.8       | -5.28                 | -0.78                 | 30% (+/-)                       | Yes   | Yes   |
| % residential treatment facilities  | 1.8        | 4.8        | 5.1        | 168.59                | 5.84                  | 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        | 0.6        | 0.2        | Div by 0              | -61.29                | 30% (+/-)                       | N/A   | Yes   |
| % transportation services   | 0.0        | 0.0        | 0.0        | Div by 0              | Div by 0              | 30% (+/-)                       | N/A   | N/A   |
| % nonmedical  | 0.0        | 0.0        | 0.0        | Div by 0              | Div by 0              | N/A                             | N/A   | N/A   |
| <b>Provider IDs with Entity Type = Individual</b>                               |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs with entity type = individual                            | 3          | 1          | 1          | -66.67                | 0.00                  | 30% (+/-)                       | Yes   | Yes   |
| % a sole proprietorship   | 33.3       | 100.0      | 100.0      | 200.00                | 0.00                  | 30% (+/-)                       | No  | Yes   |
| % not a sole proprietorship   | 66.7       | 0.0        | 0.0        | -100.00               | Div by 0              | 30% (+/-)                       | No  | N/A   |
| % not answered  | 0.0        | 0.0        | 0.0        | Div by 0              | Div by 0              | N/A                             | N/A   | N/A   |
| <b>Provider IDs with Entity Type = Organization</b>                             |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs with entity type = organization                          | 848        | 907        | 933        | 6.96                  | 2.87                  | 30% (+/-)                       | Yes   | Yes   |
| % organization is a subpart   | 18.5       | 31.1       | 31.9       | 67.94                 | 2.73                  | 30% (+/-)                       | No  | Yes   |
| % organization is not a subpart   | 50.5       | 46.6       | 46.9       | -7.60                 | 0.66                  | 30% (+/-)                       | Yes   | Yes   |
| % not answered  | 31.0       | 22.3       | 21.1       | -28.19                | -5.19                 | N/A                             | N/A   | N/A   |

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

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

| Measure   | 2009 Value | 2010 Value | 2011 Value | % Change<br>2009-2010 | % Change<br>2010-2011 | Cross Year<br>Expected<br>Range | Cross Year<br>2009-2010<br>Within<br>Range <sup>a</sup> | Cross Year<br>2010-2011<br>Within<br>Range <sup>a</sup> |
|---|------------|------------|------------|-----------------------|-----------------------|---------------------------------|---|---|
| <b>OT Providers</b>   |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs  | 73,493     | 73,001     | 75,677     | -0.67                 | 3.67                  | 30% (+/-)                       | Yes   | Yes   |
| % billing provider on OT claim  | 32.5       | 33.2       | 33.7       | 2.17                  | 1.48                  | N/A                             | N/A   | N/A   |
| % servicing provider on OT claim  | 73.6       | 73.5       | 74.5       | -0.17                 | 1.41                  | N/A                             | N/A   | N/A   |
| % NPI servicing provider on OT claim                                      | 26.6       | 27.0       | 26.4       | 1.44                  | -2.15                 | N/A                             | N/A   | N/A   |
| % also a provider on IP claim   | 2.0        | 1.6        | 1.7        | -17.22                | 4.42                  | N/A                             | N/A   | N/A   |
| % also a provider on LT claim   | 0.8        | 0.6        | 0.7        | -25.96                | 22.97                 | N/A                             | N/A   | N/A   |
| % also a provider on RX claim   | 22.4       | 24.5       | 27.9       | 9.56                  | 13.53                 | N/A                             | N/A   | N/A   |
| % provider IDs with NPI   | 76.0       | 75.6       | 75.5       | -0.50                 | -0.12                 | 30% (+/-)                       | Yes   | Yes   |
| % provider IDs linked to NPPES  | 75.8       | 75.6       | 75.5       | -0.21                 | -0.11                 | 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   | 1,045.8    | 1,246.7    | 1,184.5    | 19.21                 | -4.99                 | 30% (+/-)                       | Yes   | Yes   |
| average number of beneficiaries with OT claims                            | 235.4      | 250.8      | 244.5      | 6.55                  | -2.50                 | 30% (+/-)                       | Yes   | Yes   |
| <b>Provider IDs with NPI</b>  |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs with NPI   | 55,856     | 55,206     | 57,162     | -1.16                 | 3.54                  | 30% (+/-)                       | Yes   | Yes   |
| % NPI source = MSIS   | 98.5       | 99.1       | 99.4       | 0.65                  | 0.30                  | 30% (+/-)                       | Yes   | Yes   |
| % NPI source = NPPES  | 1.5        | 0.9        | 0.6        | -43.00                | -35.04                | 30% (+/-)                       | Yes   | Yes   |
| % NPI source = state cross-reference file                                 | 0.0        | 0.0        | 0.0        | Div by 0              | Div by 0              | N/A                             | N/A   | N/A   |
| <b>Provider IDs Linked to NPPES</b>                                       |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs linked to NPPES                                    | 55,682     | 55,194     | 57,155     | -0.88                 | 3.55                  | 30% (+/-)                       | Yes   | Yes   |
| % linked via NPI  | 98.5       | 99.1       | 99.4       | 0.66                  | 0.30                  | 30% (+/-)                       | Yes   | Yes   |
| % linked via Medicaid legacy provider ID                                  | 0.0        | 0.0        | 0.0        | 50.00                 | 42.56                 | 30% (+/-)                       | Yes   | Yes   |
| % linked via Medicare UPIN  | 1.5        | 0.8        | 0.5        | -44.32                | -37.57                | 30% (+/-)                       | Yes   | Yes   |
| % with name prefix  | 28.4       | 29.7       | 29.7       | 4.77                  | -0.14                 | 30% (+/-)                       | Yes   | Yes   |
| % with first name   | 62.8       | 65.0       | 65.3       | 3.61                  | 0.44                  | 30% (+/-)                       | Yes   | Yes   |
| % with middle name  | 49.9       | 52.3       | 52.4       | 4.76                  | 0.24                  | 30% (+/-)                       | Yes   | Yes   |
| % with last name  | 62.8       | 65.0       | 65.3       | 3.61                  | 0.44                  | 30% (+/-)                       | Yes   | Yes   |
| % with name suffix  | 3.3        | 3.5        | 3.4        | 5.28                  | -1.33                 | 30% (+/-)                       | Yes   | Yes   |
| % male  | 39.6       | 40.1       | 39.2       | 1.10                  | -2.02                 | 30% (+/-)                       | Yes   | Yes   |
| % female  | 23.1       | 25.0       | 26.1       | 7.91                  | 4.38                  | 30% (+/-)                       | Yes   | Yes   |
| % with credential   | 60.8       | 62.9       | 63.0       | 3.45                  | 0.13                  | 30% (+/-)                       | Yes   | Yes   |
| % with business name  | 37.2       | 34.6       | 34.5       | -7.08                 | -0.38                 | 30% (+/-)                       | Yes   | Yes   |
| % with address line 1   | 100.0      | 99.6       | 99.8       | -0.37                 | 0.15                  | 30% (+/-)                       | Yes   | Yes   |
| % with city   | 100.0      | 99.6       | 99.8       | -0.37                 | 0.15                  | 30% (+/-)                       | Yes   | Yes   |
| % with state  | 100.0      | 99.6       | 99.8       | -0.37                 | 0.15                  | 30% (+/-)                       | Yes   | Yes   |
| % state = OT state code   | 72.7       | 73.8       | 75.5       | 1.62                  | 2.28                  | 30% (+/-)                       | Yes   | Yes   |
| % with zip code   | 100.0      | 99.6       | 99.8       | -0.37                 | 0.15                  | 30% (+/-)                       | Yes   | Yes   |
| % with primary taxonomy   | 99.4       | 98.4       | 98.5       | -1.01                 | 0.15                  | 30% (+/-)                       | Yes   | Yes   |
| % with provider entity type = individual                                  | 62.8       | 65.0       | 65.3       | 3.61                  | 0.44                  | 30% (+/-)                       | Yes   | Yes   |
| % with provider entity type = organization                                | 37.2       | 34.6       | 34.5       | -7.08                 | -0.38                 | 30% (+/-)                       | Yes   | Yes   |
| <b>Provider IDs with or without NPI but linked to state provider file</b> |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs with or without NPI linked to state provider file  | 0          | 0          | 0          | Div by 0              | Div by 0              | N/A                             | N/A   | N/A   |

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

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

| Measure   | 2009 Value | 2010 Value | 2011 Value | % Change<br>2009-2010 | % Change<br>2010-2011 | Cross Year<br>Expected<br>Range | Cross Year<br>2009-2010<br>Within<br>Range <sup>a</sup> | Cross Year<br>2010-2011<br>Within<br>Range <sup>a</sup> |
|---|------------|------------|------------|-----------------------|-----------------------|---------------------------------|---|---|
| <b>Provider IDs with NPPES Primary Taxonomy</b>                                 |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs with NPPES primary taxonomy                              | 55,483     | 54,313     | 56,326     | -2.11                 | 3.71                  | 30% (+/-)                       | Yes   | Yes   |
| % individual or group of individuals  | 66.4       | 69.5       | 70.7       | 4.57                  | 1.72                  | 30% (+/-)                       | Yes   | Yes   |
| % allopathic and osteopathic physicians   | 37.7       | 37.1       | 36.2       | -1.64                 | -2.47                 | 30% (+/-)                       | Yes   | Yes   |
| % behavioral health and social service providers                                | 5.0        | 5.7        | 5.7        | 13.80                 | -0.59                 | 30% (+/-)                       | Yes   | Yes   |
| % chiropractic providers  | 0.4        | 0.5        | 0.4        | 18.57                 | -20.95                | 30% (+/-)                       | Yes   | Yes   |
| % dental providers  | 2.3        | 3.7        | 4.6        | 62.64                 | 24.12                 | 30% (+/-)                       | Yes   | Yes   |
| % dietary and nutritional service providers                                     | 0.0        | 0.0        | 0.0        | 16.00                 | 22.44                 | 30% (+/-)                       | Yes   | Yes   |
| % emergency medical service providers   | 0.0        | 0.1        | 0.1        | 227.78                | 2.31                  | 30% (+/-)                       | Yes   | Yes   |
| % eye and vision service providers  | 2.3        | 2.4        | 2.5        | 2.49                  | 3.02                  | 30% (+/-)                       | Yes   | Yes   |
| % nursing service providers   | 0.4        | 0.4        | 0.5        | 11.34                 | 7.25                  | 30% (+/-)                       | Yes   | Yes   |
| % nursing service-related providers   | 0.0        | 0.0        | 0.0        | 51.85                 | 12.59                 | 30% (+/-)                       | Yes   | Yes   |
| % other service providers   | 1.8        | 2.8        | 2.8        | 56.98                 | 0.14                  | 30% (+/-)                       | Yes   | Yes   |
| % pharmacy service providers  | 0.0        | 0.0        | 0.0        | 266.67                | -40.82                | 30% (+/-)                       | Yes   | Yes   |
| % physician assistants and advanced practice nursing providers                  | 10.7       | 12.2       | 13.3       | 13.71                 | 9.01                  | 30% (+/-)                       | Yes   | Yes   |
| % podiatric medicine and surgery service providers                              | 0.5        | 0.4        | 0.4        | -7.76                 | -2.27                 | 30% (+/-)                       | Yes   | Yes   |
| % respiratory, developmental, rehabilitative, and restorative service providers | 2.5        | 2.8        | 2.8        | 13.50                 | -0.61                 | 30% (+/-)                       | Yes   | Yes   |
| % speech, language, and hearing service providers                               | 0.8        | 1.0        | 1.1        | 33.33                 | 8.57                  | 30% (+/-)                       | Yes   | Yes   |
| % student health care   | 0.2        | 0.2        | 0.3        | 8.33                  | 61.93                 | 30% (+/-)                       | Yes   | Yes   |
| % technologists, technicians, and other technical service providers             | 0.0        | 0.0        | 0.0        | 242.86                | -18.63                | 30% (+/-)                       | Yes   | Yes   |
| % group of individuals with multi- or single specialty                          | 1.8        | 0.0        | 0.0        | -100.00               | Div by 0              | 30% (+/-)                       | Yes   | N/A   |
| % nonindividuals  | 33.6       | 30.5       | 29.3       | -9.05                 | -3.92                 | 30% (+/-)                       | Yes   | Yes   |
| % agencies  | 2.1        | 1.7        | 2.8        | -22.28                | 70.65                 | 30% (+/-)                       | Yes   | Yes   |
| % ambulatory health care facilities   | 2.7        | 2.4        | 2.3        | -11.57                | -2.14                 | 30% (+/-)                       | Yes   | Yes   |
| % hospital units  | 1.4        | 0.1        | 0.1        | -93.63                | -9.26                 | 30% (+/-)                       | Yes   | Yes   |
| % hospitals   | 21.6       | 20.8       | 18.5       | -3.32                 | -10.99                | 30% (+/-)                       | Yes   | Yes   |
| % laboratories  | 0.5        | 0.6        | 0.7        | 31.71                 | 3.56                  | 30% (+/-)                       | Yes   | Yes   |
| % managed care organizations  | 0.0        | 0.0        | 0.0        | 222.22                | -26.54                | 30% (+/-)                       | Yes   | Yes   |
| % nursing and custodial care facilities   | 1.3        | 0.9        | 1.1        | -32.25                | 20.41                 | 30% (+/-)                       | Yes   | Yes   |
| % residential treatment facilities  | 0.1        | 0.1        | 0.1        | 56.79                 | -6.34                 | 30% (+/-)                       | Yes   | Yes   |
| % respite care facility   | 0.0        | 0.0        | 0.0        | 175.00                | 45.26                 | 30% (+/-)                       | Yes   | Yes   |
| % suppliers   | 2.7        | 2.7        | 2.5        | -1.34                 | -6.66                 | 30% (+/-)                       | Yes   | Yes   |
| % transportation services   | 1.2        | 1.2        | 1.2        | 1.26                  | -2.56                 | 30% (+/-)                       | Yes   | Yes   |
| % nonmedical  | 0.0        | 0.0        | 0.0        | Div by 0              | Div by 0              | N/A                             | N/A   | N/A   |
| <b>Provider IDs with Entity Type = Individual</b>                               |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs with entity type = individual                            | 34,941     | 35,886     | 37,323     | 2.70                  | 4.00                  | 30% (+/-)                       | Yes   | Yes   |
| % a sole proprietorship   | 17.7       | 18.8       | 19.4       | 6.44                  | 3.17                  | 30% (+/-)                       | Yes   | Yes   |
| % not a sole proprietorship   | 71.7       | 73.8       | 73.4       | 2.88                  | -0.44                 | 30% (+/-)                       | Yes   | Yes   |
| % not answered  | 10.6       | 7.4        | 7.1        | -30.19                | -3.70                 | N/A                             | N/A   | N/A   |
| <b>Provider IDs with Entity Type = Organization</b>                             |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs with entity type = organization                          | 20,741     | 19,103     | 19,707     | -7.90                 | 3.16                  | 30% (+/-)                       | Yes   | Yes   |
| % organization is a subpart   | 10.3       | 7.9        | 8.1        | -23.25                | 2.46                  | 30% (+/-)                       | Yes   | Yes   |
| % organization is not a subpart   | 76.2       | 82.5       | 82.8       | 8.22                  | 0.35                  | 30% (+/-)                       | Yes   | Yes   |
| % not answered  | 13.5       | 9.6        | 9.2        | -28.66                | -5.01                 | N/A                             | N/A   | N/A   |

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

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

| Measure   | 2009 Value | 2010 Value | 2011 Value | % Change<br>2009-2010 | % Change<br>2010-2011 | Cross Year<br>Expected<br>Range | Cross Year<br>2009-2010<br>Within<br>Range <sup>a</sup> | Cross Year<br>2010-2011<br>Within<br>Range <sup>a</sup> |
|---|------------|------------|------------|-----------------------|-----------------------|---------------------------------|---|---|
| <b>OT Providers</b>   |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs  | 25,788     | 27,080     | 28,963     | 5.01                  | 6.95                  | 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  | 92.6       | 89.5       | 88.0       | -3.36                 | -1.64                 | 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   | 3.0        | 2.9        | 2.7        | -4.77                 | -4.82                 | N/A                             | N/A   | N/A   |
| % also a provider on LT claim   | 1.3        | 1.2        | 1.2        | -0.64                 | -4.83                 | N/A                             | N/A   | N/A   |
| % also a provider on RX claim   | 0.2        | 0.2        | 0.3        | 0.47                  | 30.69                 | N/A                             | N/A   | N/A   |
| % provider IDs with NPI   | 84.7       | 83.0       | 81.3       | -2.02                 | -2.04                 | 30% (+/-)                       | Yes   | Yes   |
| % provider IDs linked to NPPES  | 84.4       | 83.0       | 81.3       | -1.65                 | -2.04                 | 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   | 2,680.7    | 2,900.0    | 2,291.6    | 8.18                  | -20.98                | 30% (+/-)                       | Yes   | Yes   |
| average number of beneficiaries with OT claims                            | 468.8      | 488.0      | 441.8      | 4.11                  | -9.48                 | 30% (+/-)                       | Yes   | Yes   |
| <b>Provider IDs with NPI</b>  |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs with NPI   | 21,836     | 22,466     | 23,539     | 2.89                  | 4.78                  | 30% (+/-)                       | Yes   | Yes   |
| % NPI source = MSIS   | 100.0      | 100.0      | 100.0      | 0.00                  | -0.01                 | 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   |
| <b>Provider IDs Linked to NPPES</b>                                       |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs linked to NPPES                                    | 21,753     | 22,466     | 23,539     | 3.28                  | 4.78                  | 30% (+/-)                       | Yes   | Yes   |
| % linked via NPI  | 100.0      | 100.0      | 100.0      | 0.00                  | -0.01                 | 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  | 39.6       | 41.4       | 40.8       | 4.45                  | -1.45                 | 30% (+/-)                       | Yes   | Yes   |
| % with first name   | 84.8       | 86.6       | 85.5       | 2.10                  | -1.23                 | 30% (+/-)                       | Yes   | Yes   |
| % with middle name  | 68.3       | 70.6       | 69.7       | 3.39                  | -1.20                 | 30% (+/-)                       | Yes   | Yes   |
| % with last name  | 84.8       | 86.6       | 85.5       | 2.10                  | -1.23                 | 30% (+/-)                       | Yes   | Yes   |
| % with name suffix  | 5.0        | 5.2        | 5.0        | 3.90                  | -4.80                 | 30% (+/-)                       | Yes   | Yes   |
| % male  | 56.6       | 56.7       | 55.0       | 0.24                  | -3.04                 | 30% (+/-)                       | Yes   | Yes   |
| % female  | 28.2       | 29.8       | 30.5       | 5.82                  | 2.20                  | 30% (+/-)                       | Yes   | Yes   |
| % with credential   | 83.2       | 85.0       | 83.9       | 2.22                  | -1.31                 | 30% (+/-)                       | Yes   | Yes   |
| % with business name  | 15.2       | 13.0       | 14.2       | -14.48                | 9.59                  | 30% (+/-)                       | Yes   | Yes   |
| % with address line 1   | 100.0      | 99.6       | 99.8       | -0.42                 | 0.18                  | 30% (+/-)                       | Yes   | Yes   |
| % with city   | 100.0      | 99.6       | 99.8       | -0.42                 | 0.18                  | 30% (+/-)                       | Yes   | Yes   |
| % with state  | 100.0      | 99.6       | 99.8       | -0.42                 | 0.18                  | 30% (+/-)                       | Yes   | Yes   |
| % state = OT state code   | 86.0       | 86.1       | 86.5       | 0.03                  | 0.56                  | 30% (+/-)                       | Yes   | Yes   |
| % with zip code   | 100.0      | 99.6       | 99.8       | -0.42                 | 0.18                  | 30% (+/-)                       | Yes   | Yes   |
| % with primary taxonomy   | 99.2       | 98.2       | 98.4       | -1.01                 | 0.18                  | 30% (+/-)                       | Yes   | Yes   |
| % with provider entity type = individual                                  | 84.8       | 86.6       | 85.5       | 2.10                  | -1.23                 | 30% (+/-)                       | Yes   | Yes   |
| % with provider entity type = organization                                | 15.2       | 13.0       | 14.2       | -14.48                | 9.59                  | 30% (+/-)                       | Yes   | Yes   |
| <b>Provider IDs with or without NPI but linked to state provider file</b> |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs with or without NPI linked to state provider file  | 0          | 0          | 0          | Div by 0              | Div by 0              | N/A                             | N/A   | N/A   |

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

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

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



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

| Measure   | 2009 Value | 2010 Value | 2011 Value | % Change<br>2009-2010 | % Change<br>2010-2011 | Cross Year<br>Expected<br>Range | Cross Year<br>2009-2010<br>Within<br>Range <sup>a</sup> | Cross Year<br>2010-2011<br>Within<br>Range <sup>a</sup> |
|---|------------|------------|------------|-----------------------|-----------------------|---------------------------------|---|---|
| <b>Provider IDs with NPES Primary Taxonomy</b>                                  |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs with NPES primary taxonomy                               | 21,647     | 22,064     | 23,160     | 1.93                  | 4.97                  | 30% (+/-)                       | Yes   | Yes   |
| % individual or group of individuals  | 86.9       | 89.2       | 89.4       | 2.64                  | 0.24                  | 30% (+/-)                       | Yes   | Yes   |
| % allopathic and osteopathic physicians   | 56.4       | 54.4       | 54.0       | -3.51                 | -0.68                 | 30% (+/-)                       | Yes   | Yes   |
| % behavioral health and social service providers                                | 3.6        | 3.5        | 3.6        | -4.13                 | 3.45                  | 30% (+/-)                       | Yes   | Yes   |
| % chiropractic providers  | 0.5        | 0.5        | 0.5        | 5.07                  | -12.68                | 30% (+/-)                       | Yes   | Yes   |
| % dental providers  | 2.1        | 4.7        | 4.7        | 122.87                | -1.17                 | 30% (+/-)                       | Yes   | Yes   |
| % dietary and nutritional service providers                                     | 0.0        | 0.0        | 0.0        | 260.00                | -4.05                 | 30% (+/-)                       | Yes   | Yes   |
| % emergency medical service providers   | 0.0        | 0.1        | 0.1        | 177.78                | 38.17                 | 30% (+/-)                       | Yes   | Yes   |
| % eye and vision service providers  | 2.9        | 2.9        | 2.9        | 0.00                  | -1.15                 | 30% (+/-)                       | Yes   | Yes   |
| % nursing service providers   | 0.2        | 0.2        | 0.2        | 29.63                 | 0.45                  | 30% (+/-)                       | Yes   | Yes   |
| % nursing service-related providers   | 0.0        | 0.0        | 0.0        | 360.00                | -24.91                | 30% (+/-)                       | Yes   | Yes   |
| % other service providers   | 2.4        | 3.5        | 3.4        | 43.12                 | -3.73                 | 30% (+/-)                       | Yes   | Yes   |
| % pharmacy service providers  | 0.0        | 0.0        | 0.0        | 100.00                | -4.05                 | 30% (+/-)                       | Yes   | Yes   |
| % physician assistants and advanced practice nursing providers                  | 13.6       | 14.8       | 15.4       | 8.94                  | 3.95                  | 30% (+/-)                       | Yes   | Yes   |
| % podiatric medicine and surgery service providers                              | 0.8        | 0.8        | 0.8        | -4.09                 | 1.18                  | 30% (+/-)                       | Yes   | Yes   |
| % respiratory, developmental, rehabilitative, and restorative service providers | 2.2        | 2.3        | 2.2        | 3.53                  | -3.58                 | 30% (+/-)                       | Yes   | Yes   |
| % speech, language, and hearing service providers                               | 0.8        | 1.1        | 1.2        | 31.70                 | 10.20                 | 30% (+/-)                       | Yes   | Yes   |
| % student health care   | 0.2        | 0.3        | 0.4        | 59.66                 | 39.83                 | 30% (+/-)                       | Yes   | Yes   |
| % technologists, technicians, and other technical service providers             | 0.0        | 0.0        | 0.0        | 540.00                | -5.55                 | 30% (+/-)                       | Yes   | Yes   |
| % group of individuals with multi- or single specialty                          | 1.0        | 0.0        | 0.0        | -100.00               | Div by 0              | 30% (+/-)                       | Yes   | N/A   |
| % nonindividuals  | 13.1       | 10.8       | 10.6       | -17.49                | -1.98                 | 30% (+/-)                       | Yes   | Yes   |
| % agencies  | 1.4        | 1.3        | 1.2        | -7.61                 | -8.29                 | 30% (+/-)                       | Yes   | Yes   |
| % ambulatory health care facilities   | 1.6        | 0.8        | 1.2        | -51.37                | 51.07                 | 30% (+/-)                       | Yes   | Yes   |
| % hospital units  | 0.1        | 0.0        | 0.1        | -59.46                | 24.74                 | 30% (+/-)                       | Yes   | Yes   |
| % hospitals   | 4.5        | 3.3        | 2.9        | -26.78                | -11.96                | 30% (+/-)                       | Yes   | Yes   |
| % laboratories  | 0.4        | 0.5        | 0.5        | 26.76                 | 2.77                  | 30% (+/-)                       | Yes   | Yes   |
| % managed care organizations  | 0.0        | 0.0        | 0.0        | 360.00                | -43.68                | 30% (+/-)                       | Yes   | Yes   |
| % nursing and custodial care facilities   | 1.3        | 1.3        | 1.2        | 3.75                  | -8.96                 | 30% (+/-)                       | Yes   | Yes   |
| % residential treatment facilities  | 0.1        | 0.1        | 0.1        | 22.83                 | -4.47                 | 30% (+/-)                       | Yes   | Yes   |
| % respite care facility   | 0.0        | 0.0        | 0.0        | 180.00                | -7.48                 | 30% (+/-)                       | Yes   | Yes   |
| % suppliers   | 2.8        | 2.5        | 2.4        | -10.70                | -3.88                 | 30% (+/-)                       | Yes   | Yes   |
| % transportation services   | 0.9        | 0.9        | 1.0        | -1.89                 | 11.85                 | 30% (+/-)                       | Yes   | Yes   |
| % nonmedical  | 0.0        | 0.0        | 0.0        | Div by 0              | Div by 0              | N/A                             | N/A   | N/A   |
| <b>Provider IDs with Entity Type = Individual</b>                               |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs with entity type = individual                            | 18,446     | 19,450     | 20,128     | 5.44                  | 3.49                  | 30% (+/-)                       | Yes   | Yes   |
| % a sole proprietorship   | 18.3       | 19.1       | 19.0       | 4.55                  | -0.27                 | 30% (+/-)                       | Yes   | Yes   |
| % not a sole proprietorship   | 70.7       | 73.4       | 73.7       | 3.71                  | 0.53                  | 30% (+/-)                       | Yes   | Yes   |
| % not answered  | 11.0       | 7.5        | 7.2        | -31.44                | -4.42                 | N/A                             | N/A   | N/A   |
| <b>Provider IDs with Entity Type = Organization</b>                             |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs with entity type = organization                          | 3,307      | 2,921      | 3,354      | -11.67                | 14.82                 | 30% (+/-)                       | Yes   | Yes   |
| % organization is a subpart   | 9.7        | 11.4       | 10.8       | 17.44                 | -5.32                 | 30% (+/-)                       | Yes   | Yes   |
| % organization is not a subpart   | 69.7       | 72.9       | 74.0       | 4.57                  | 1.57                  | 30% (+/-)                       | Yes   | Yes   |
| % not answered  | 20.6       | 15.7       | 15.2       | -23.69                | -3.42                 | N/A                             | N/A   | N/A   |

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

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

| Measure   | 2009 Value | 2010 Value | 2011 Value | % Change<br>2009-2010 | % Change<br>2010-2011 | Cross Year<br>Expected<br>Range | Cross Year<br>2009-2010<br>Within<br>Range <sup>a</sup> | Cross Year<br>2010-2011<br>Within<br>Range <sup>a</sup> |
|---|------------|------------|------------|-----------------------|-----------------------|---------------------------------|---|---|
| <b>RX Providers</b>   |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs  | 14,399     | 15,542     | 16,224     | 7.94                  | 4.39                  | 30% (+/-)                       | Yes   | Yes   |
| % billing provider on RX claim  | 51.1       | 50.6       | 50.5       | -0.98                 | -0.25                 | N/A                             | N/A   | N/A   |
| % prescribing provider on RX claim  | 0.0        | 0.0        | 0.0        | -9.52                 | -35.12                | N/A                             | N/A   | N/A   |
| % NPI billing provider on RX claim  | 48.9       | 49.4       | 49.5       | 1.02                  | 0.25                  | N/A                             | N/A   | N/A   |
| % also a provider on IP claim   | 0.0        | 0.0        | 0.1        | -9.52                 | 191.97                | N/A                             | N/A   | N/A   |
| % also a provider on LT claim   | 0.0        | 0.0        | 0.0        | -9.52                 | 29.76                 | N/A                             | N/A   | N/A   |
| % also a provider on OT claim   | 1.2        | 1.0        | 1.1        | -11.70                | 4.00                  | N/A                             | N/A   | N/A   |
| % provider IDs with NPI   | 100.0      | 99.9       | 99.9       | -0.03                 | -0.05                 | 30% (+/-)                       | Yes   | Yes   |
| % provider IDs linked to NPES   | 99.5       | 99.9       | 99.9       | 0.41                  | -0.05                 | 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   | 2,383.5    | 1,686.4    | 1,659.6    | -29.25                | -1.59                 | 30% (+/-)                       | Yes   | Yes   |
| average number of beneficiaries with RX claims                            | 228.5      | 213.0      | 209.0      | -6.77                 | -1.90                 | 30% (+/-)                       | Yes   | Yes   |
| <b>Provider IDs with NPI</b>  |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs with NPI   | 14,392     | 15,530     | 16,203     | 7.91                  | 4.33                  | 30% (+/-)                       | Yes   | Yes   |
| % NPI source = MSIS   | 100.0      | 100.0      | 100.0      | 0.00                  | 0.00                  | 30% (+/-)                       | Yes   | Yes   |
| % NPI source = NPES   | 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   |
| <b>Provider IDs Linked to NPES</b>  |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs linked to NPES                                     | 14,329     | 15,530     | 16,203     | 8.38                  | 4.33                  | 30% (+/-)                       | Yes   | Yes   |
| % linked via NPI  | 100.0      | 100.0      | 100.0      | 0.00                  | 0.00                  | 30% (+/-)                       | Yes   | Yes   |
| % linked via Medicaid legacy provider ID                                  | 0.0        | 0.0        | 0.0        | 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        | 0.1        | 0.0        | 107.14                | -78.72                | 30% (+/-)                       | Yes   | Yes   |
| % with first name   | 0.1        | 0.1        | 0.0        | 50.00                 | -41.22                | 30% (+/-)                       | Yes   | Yes   |
| % with middle name  | 0.0        | 0.1        | 0.0        | 38.10                 | -68.08                | 30% (+/-)                       | Yes   | Yes   |
| % with last name  | 0.1        | 0.1        | 0.0        | 50.00                 | -41.22                | 30% (+/-)                       | Yes   | Yes   |
| % 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        | 11.43                 | 26.60                 | 30% (+/-)                       | Yes   | Yes   |
| % female  | 0.0        | 0.0        | 0.0        | 114.29                | -100.00               | 30% (+/-)                       | Yes   | Yes   |
| % with credential   | 0.1        | 0.1        | 0.0        | 26.79                 | -47.84                | 30% (+/-)                       | Yes   | Yes   |
| % with business name  | 99.9       | 99.5       | 99.9       | -0.43                 | 0.40                  | 30% (+/-)                       | Yes   | Yes   |
| % with address line 1   | 100.0      | 99.6       | 100.0      | -0.40                 | 0.36                  | 30% (+/-)                       | Yes   | Yes   |
| % with city   | 100.0      | 99.6       | 100.0      | -0.40                 | 0.36                  | 30% (+/-)                       | Yes   | Yes   |
| % with state  | 100.0      | 99.6       | 100.0      | -0.40                 | 0.36                  | 30% (+/-)                       | Yes   | Yes   |
| % state = RX state code   | 21.7       | 20.5       | 20.0       | -5.38                 | -2.53                 | 30% (+/-)                       | Yes   | Yes   |
| % with zip code   | 100.0      | 99.6       | 100.0      | -0.40                 | 0.36                  | 30% (+/-)                       | Yes   | Yes   |
| % with primary taxonomy   | 100.0      | 99.2       | 99.6       | -0.80                 | 0.42                  | 30% (+/-)                       | Yes   | Yes   |
| % with provider entity type = individual                                  | 0.1        | 0.1        | 0.0        | 50.00                 | -41.22                | 30% (+/-)                       | Yes   | Yes   |
| % with provider entity type = organization                                | 99.9       | 99.5       | 99.9       | -0.43                 | 0.40                  | 30% (+/-)                       | Yes   | Yes   |
| <b>Provider IDs with or without NPI but linked to state provider file</b> |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs with or without NPI linked to state provider file  | 0          | 0          | 0          | Div by 0              | Div by 0              | N/A                             | N/A   | N/A   |

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

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

| Measure   | 2009 Value | 2010 Value | 2011 Value | % Change<br>2009-2010 | % Change<br>2010-2011 | Cross Year<br>Expected<br>Range | Cross Year<br>2009-2010<br>Within<br>Range <sup>a</sup> | Cross Year<br>2010-2011<br>Within<br>Range <sup>a</sup> |
|---|------------|------------|------------|-----------------------|-----------------------|---------------------------------|---|---|
| <b>Provider IDs with NPPES Primary Taxonomy</b>                                 |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs with NPPES primary taxonomy                              | 14,384     | 15,400     | 16,135     | 7.06                  | 4.77                  | 30% (+/-)                       | Yes   | Yes   |
| % individual or group of individuals  | 0.1        | 1.1        | 1.0        | 1,485.71              | -9.55                 | 30% (+/-)                       | Yes   | Yes   |
| % allopathic and osteopathic physicians   | 0.1        | 0.2        | 0.2        | 341.07                | -27.23                | 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        | 85.71                 | -100.00               | 30% (+/-)                       | Yes   | Yes   |
| % dietary and nutritional service providers                                     | 0.0        | 0.0        | 0.0        | Div by 0              | Div by 0              | 30% (+/-)                       | N/A   | N/A   |
| % emergency medical service providers   | 0.0        | 0.0        | 0.0        | Div by 0              | Div by 0              | 30% (+/-)                       | N/A   | N/A   |
| % eye and vision service providers  | 0.0        | 0.0        | 0.0        | Div by 0              | Div by 0              | 30% (+/-)                       | N/A   | N/A   |
| % nursing service providers   | 0.0        | 0.0        | 0.0        | Div by 0              | Div by 0              | 30% (+/-)                       | N/A   | N/A   |
| % nursing service-related providers   | 0.0        | 0.0        | 0.0        | Div by 0              | Div by 0              | 30% (+/-)                       | N/A   | N/A   |
| % other service providers   | 0.0        | 0.0        | 0.0        | Div by 0              | 106.59                | 30% (+/-)                       | N/A   | Yes   |
| % pharmacy service providers  | 0.0        | 0.8        | 0.8        | 11,957.14             | -3.80                 | 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  | 99.9       | 98.9       | 99.0       | -1.04                 | 0.11                  | 30% (+/-)                       | Yes   | Yes   |
| % agencies  | 0.0        | 0.1        | 0.0        | 364.29                | -33.26                | 30% (+/-)                       | Yes   | Yes   |
| % ambulatory health care facilities   | 0.0        | 0.1        | 0.1        | 85.71                 | 90.70                 | 30% (+/-)                       | Yes   | Yes   |
| % hospital units  | 0.0        | 0.0        | 0.0        | Div by 0              | -4.65                 | 30% (+/-)                       | N/A   | Yes   |
| % hospitals   | 0.0        | 0.1        | 0.1        | 642.86                | 19.19                 | 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              | -4.65                 | 30% (+/-)                       | N/A   | Yes   |
| % nursing and custodial care facilities   | 0.0        | 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              | -4.65                 | 30% (+/-)                       | N/A   | Yes   |
| % suppliers   | 99.9       | 98.7       | 98.8       | -1.19                 | 0.07                  | 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   |
| <b>Provider IDs with Entity Type = Individual</b>                               |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs with entity type = individual                            | 8          | 13         | 8          | 62.50                 | -38.46                | 30% (+/-)                       | No  | No  |
| % a sole proprietorship   | 12.5       | 30.8       | 50.0       | 146.15                | 62.50                 | 30% (+/-)                       | No  | No  |
| % not a sole proprietorship   | 62.5       | 53.8       | 25.0       | -13.85                | -53.57                | 30% (+/-)                       | Yes   | No  |
| % not answered  | 25.0       | 15.4       | 25.0       | -38.46                | 62.50                 | N/A                             | N/A   | N/A   |
| <b>Provider IDs with Entity Type = Organization</b>                             |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs with entity type = organization                          | 14,321     | 15,455     | 16,189     | 7.92                  | 4.75                  | 30% (+/-)                       | Yes   | Yes   |
| % organization is a subpart   | 58.9       | 61.1       | 63.1       | 3.68                  | 3.22                  | 30% (+/-)                       | Yes   | Yes   |
| % organization is not a subpart   | 38.5       | 37.3       | 35.6       | -3.10                 | -4.60                 | 30% (+/-)                       | Yes   | Yes   |
| % not answered  | 2.6        | 1.6        | 1.4        | -37.33                | -15.48                | 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: TN  
Produced: 05/20/2013

| Measure   | 2009 Value | 2010 Value | 2011 Value | % Change<br>2009-2010 | % Change<br>2010-2011 | Cross Year<br>Expected<br>Range | Cross Year<br>2009-2010<br>Within<br>Range <sup>a</sup> | Cross Year<br>2010-2011<br>Within<br>Range <sup>a</sup> |
|---|------------|------------|------------|-----------------------|-----------------------|---------------------------------|---|---|
| <b>RX Providers</b>   |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs  | 61,665     | 64,729     | 64,376     | 4.97                  | -0.55                 | 30% (+/-)                       | Yes   | Yes   |
| % billing provider on RX claim  | 0.0        | 0.0        | 0.0        | Div by 0              | Div by 0              | 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        | 0.00                  | -37.87                | N/A                             | N/A   | N/A   |
| % also a provider on IP claim   | 0.0        | 0.0        | 0.0        | 50.00                 | 107.12                | N/A                             | N/A   | N/A   |
| % also a provider on LT claim   | 0.0        | 0.0        | 0.0        | Div by 0              | Div by 0              | N/A                             | N/A   | N/A   |
| % also a provider on OT claim   | 26.4       | 27.4       | 32.5       | 3.83                  | 18.43                 | N/A                             | N/A   | N/A   |
| % provider IDs with NPI   | 6.6        | 7.5        | 10.3       | 13.07                 | 37.75                 | 30% (+/-)                       | Yes   | No  |
| % provider IDs linked to NPPES  | 6.6        | 7.5        | 10.3       | 13.33                 | 37.75                 | 30% (+/-)                       | Yes   | No  |
| % 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   | 278.6      | 202.8      | 209.6      | -27.19                | 3.33                  | 30% (+/-)                       | Yes   | Yes   |
| average number of beneficiaries with RX claims                            | 47.3       | 46.4       | 49.9       | -1.79                 | 7.54                  | 30% (+/-)                       | Yes   | Yes   |
| <b>Provider IDs with NPI</b>  |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs with NPI   | 4,066      | 4,826      | 6,612      | 18.69                 | 37.01                 | 30% (+/-)                       | Yes   | No  |
| % NPI source = MSIS   | 99.2       | 99.3       | 99.5       | 0.10                  | 0.12                  | 30% (+/-)                       | Yes   | Yes   |
| % NPI source = NPPES  | 0.8        | 0.7        | 0.5        | -12.99                | -17.88                | 30% (+/-)                       | Yes   | Yes   |
| % NPI source = state cross-reference file                                 | 0.0        | 0.0        | 0.0        | Div by 0              | Div by 0              | N/A                             | N/A   | N/A   |
| <b>Provider IDs Linked to NPPES</b>                                       |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs linked to NPPES                                    | 4,057      | 4,826      | 6,612      | 18.95                 | 37.01                 | 30% (+/-)                       | Yes   | No  |
| % linked via NPI  | 99.2       | 99.3       | 99.5       | 0.10                  | 0.12                  | 30% (+/-)                       | Yes   | Yes   |
| % linked via Medicaid legacy provider ID                                  | 0.2        | 0.2        | 0.2        | -6.76                 | -19.63                | 30% (+/-)                       | Yes   | Yes   |
| % linked via Medicare UPIN  | 0.5        | 0.5        | 0.4        | -15.87                | -17.08                | 30% (+/-)                       | Yes   | Yes   |
| % with name prefix  | 32.3       | 32.3       | 34.0       | -0.08                 | 5.24                  | 30% (+/-)                       | Yes   | Yes   |
| % with first name   | 57.6       | 58.1       | 60.9       | 0.83                  | 4.94                  | 30% (+/-)                       | Yes   | Yes   |
| % with middle name  | 48.6       | 48.9       | 51.0       | 0.70                  | 4.33                  | 30% (+/-)                       | Yes   | Yes   |
| % with last name  | 57.6       | 58.1       | 60.9       | 0.83                  | 4.94                  | 30% (+/-)                       | Yes   | Yes   |
| % with name suffix  | 3.8        | 3.7        | 3.6        | -2.38                 | -3.50                 | 30% (+/-)                       | Yes   | Yes   |
| % male  | 35.0       | 34.8       | 37.6       | -0.52                 | 8.00                  | 30% (+/-)                       | Yes   | Yes   |
| % female  | 22.7       | 23.3       | 23.4       | 2.91                  | 0.37                  | 30% (+/-)                       | Yes   | Yes   |
| % with credential   | 56.1       | 56.5       | 59.2       | 0.81                  | 4.76                  | 30% (+/-)                       | Yes   | Yes   |
| % with business name  | 42.4       | 41.5       | 38.8       | -2.00                 | -6.55                 | 30% (+/-)                       | Yes   | Yes   |
| % with address line 1   | 100.0      | 99.6       | 99.8       | -0.37                 | 0.15                  | 30% (+/-)                       | Yes   | Yes   |
| % with city   | 100.0      | 99.6       | 99.8       | -0.37                 | 0.15                  | 30% (+/-)                       | Yes   | Yes   |
| % with state  | 100.0      | 99.6       | 99.8       | -0.37                 | 0.15                  | 30% (+/-)                       | Yes   | Yes   |
| % state = RX state code   | 80.1       | 80.5       | 77.7       | 0.47                  | -3.41                 | 30% (+/-)                       | Yes   | Yes   |
| % with zip code   | 100.0      | 99.6       | 99.8       | -0.37                 | 0.15                  | 30% (+/-)                       | Yes   | Yes   |
| % with primary taxonomy   | 99.9       | 99.1       | 99.3       | -0.74                 | 0.23                  | 30% (+/-)                       | Yes   | Yes   |
| % with provider entity type = individual                                  | 57.6       | 58.1       | 60.9       | 0.83                  | 4.94                  | 30% (+/-)                       | Yes   | Yes   |
| % with provider entity type = organization                                | 42.4       | 41.5       | 38.8       | -2.00                 | -6.55                 | 30% (+/-)                       | Yes   | Yes   |
| <b>Provider IDs with or without NPI but linked to state provider file</b> |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs with or without NPI linked to state provider file  | 0          | 0          | 0          | Div by 0              | Div by 0              | N/A                             | N/A   | N/A   |

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

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

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

## 2009-2011 MAX RX Prescribing Provider Characteristics Validation Table

State: TN

Produced: 05/20/2013

| Measure   | 2009 Value | 2010 Value | 2011 Value | % Change<br>2009-2010 | % Change<br>2010-2011 | Cross Year<br>Expected<br>Range | Cross Year<br>2009-2010<br>Within<br>Range <sup>a</sup> | Cross Year<br>2010-2011<br>Within<br>Range <sup>a</sup> |
|---|------------|------------|------------|-----------------------|-----------------------|---------------------------------|---|---|
| <b>Provider IDs with NPPES Primary Taxonomy</b>                                 |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs with NPPES primary taxonomy                              | 4,059      | 4,783      | 6,568      | 17.84                 | 37.32                 | 30% (+/-)                       | Yes   | No  |
| % individual or group of individuals  | 58.8       | 58.8       | 61.4       | -0.10                 | 4.40                  | 30% (+/-)                       | Yes   | Yes   |
| % allopathic and osteopathic physicians   | 17.1       | 15.8       | 16.6       | -7.43                 | 4.95                  | 30% (+/-)                       | Yes   | Yes   |
| % behavioral health and social service providers                                | 0.2        | 0.3        | 0.7        | 48.73                 | 133.84                | 30% (+/-)                       | Yes   | Yes   |
| % chiropractic providers  | 0.1        | 0.1        | 0.1        | -14.63                | -13.00                | 30% (+/-)                       | Yes   | Yes   |
| % dental providers  | 15.0       | 16.0       | 18.7       | 6.78                  | 16.61                 | 30% (+/-)                       | Yes   | Yes   |
| % dietary and nutritional service providers                                     | 0.0        | 0.0        | 0.0        | Div by 0              | Div by 0              | 30% (+/-)                       | N/A   | N/A   |
| % emergency medical service providers   | 0.0        | 0.0        | 0.0        | 68.00                 | -100.00               | 30% (+/-)                       | Yes   | Yes   |
| % eye and vision service providers  | 8.9        | 8.6        | 7.9        | -3.38                 | -7.86                 | 30% (+/-)                       | Yes   | Yes   |
| % nursing service providers   | 0.3        | 0.3        | 0.3        | -21.56                | 9.19                  | 30% (+/-)                       | Yes   | Yes   |
| % nursing service-related providers   | 0.0        | 0.0        | 0.0        | Div by 0              | Div by 0              | 30% (+/-)                       | N/A   | N/A   |
| % other service providers   | 0.7        | 0.9        | 0.8        | 27.25                 | -13.30                | 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                  | 14.4       | 15.9       | 15.2       | 10.21                 | -4.69                 | 30% (+/-)                       | Yes   | Yes   |
| % podiatric medicine and surgery service providers                              | 0.3        | 0.1        | 0.2        | -54.38                | 4.28                  | 30% (+/-)                       | Yes   | Yes   |
| % respiratory, developmental, rehabilitative, and restorative service providers | 0.1        | 0.5        | 0.7        | 428.28                | 33.91                 | 30% (+/-)                       | Yes   | Yes   |
| % speech, language, and hearing service providers                               | 0.0        | 0.0        | 0.0        | -14.29                | 8.75                  | 30% (+/-)                       | Yes   | Yes   |
| % student health care   | 0.2        | 0.2        | 0.3        | -32.11                | 82.34                 | 30% (+/-)                       | Yes   | Yes   |
| % 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                          | 1.4        | 0.0        | 0.0        | -100.00               | Div by 0              | 30% (+/-)                       | Yes   | N/A   |
| % nonindividuals  | 41.2       | 41.2       | 38.6       | 0.15                  | -6.27                 | 30% (+/-)                       | Yes   | Yes   |
| % agencies  | 0.8        | 0.4        | 0.6        | -45.29                | 42.05                 | 30% (+/-)                       | Yes   | Yes   |
| % ambulatory health care facilities   | 1.2        | 0.4        | 0.5        | -69.99                | 54.40                 | 30% (+/-)                       | Yes   | Yes   |
| % hospital units  | 2.3        | 0.1        | 0.1        | -97.28                | 93.34                 | 30% (+/-)                       | Yes   | Yes   |
| % hospitals   | 35.6       | 40.0       | 37.1       | 12.25                 | -7.28                 | 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   | 1.1        | 0.1        | 0.1        | -88.20                | -26.92                | 30% (+/-)                       | Yes   | Yes   |
| % residential treatment facilities  | 0.0        | 0.1        | 0.1        | 236.00                | -27.50                | 30% (+/-)                       | Yes   | Yes   |
| % respite care facility   | 0.0        | 0.0        | 0.0        | Div by 0              | Div by 0              | 30% (+/-)                       | N/A   | N/A   |
| % suppliers   | 0.2        | 0.2        | 0.1        | -2.91                 | -27.06                | 30% (+/-)                       | Yes   | Yes   |
| % transportation services   | 0.0        | 0.0        | 0.0        | Div by 0              | Div by 0              | 30% (+/-)                       | N/A   | N/A   |
| % nonmedical  | 0.0        | 0.0        | 0.0        | Div by 0              | Div by 0              | N/A                             | N/A   | N/A   |
| <b>Provider IDs with Entity Type = Individual</b>                               |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs with entity type = individual                            | 2,337      | 2,803      | 4,030      | 19.94                 | 43.77                 | 30% (+/-)                       | Yes   | No  |
| % a sole proprietorship   | 21.8       | 23.2       | 25.8       | 6.47                  | 11.39                 | 30% (+/-)                       | Yes   | Yes   |
| % not a sole proprietorship   | 65.7       | 67.8       | 65.9       | 3.26                  | -2.79                 | 30% (+/-)                       | Yes   | Yes   |
| % not answered  | 12.5       | 9.0        | 8.2        | -28.29                | -8.36                 | N/A                             | N/A   | N/A   |
| <b>Provider IDs with Entity Type = Organization</b>                             |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs with entity type = organization                          | 1,720      | 2,005      | 2,567      | 16.57                 | 28.03                 | 30% (+/-)                       | Yes   | Yes   |
| % organization is a subpart   | 8.7        | 5.9        | 6.2        | -31.49                | 4.36                  | 30% (+/-)                       | Yes   | Yes   |
| % organization is not a subpart   | 81.3       | 88.3       | 87.6       | 8.67                  | -0.86                 | 30% (+/-)                       | Yes   | Yes   |
| % not answered  | 10.1       | 5.7        | 6.2        | -42.97                | 8.66                  | N/A                             | N/A   | N/A   |

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

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

| Measure  | 2009 Value | 2010 Value | 2011 Value | % Change<br>2009-2010 | % Change<br>2010-2011 | Cross Year<br>Expected<br>Range | Cross Year<br>2009-2010<br>Within<br>Range <sup>a</sup> | Cross Year<br>2010-2011<br>Within<br>Range <sup>a</sup> |
|--|------------|------------|------------|-----------------------|-----------------------|---------------------------------|---|---|
| <b>All Providers</b>   |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs   | 135,392    | 138,621    | 139,182    | 2.38                  | 0.40                  | 30%(+/-)                        | Yes   | Yes   |
| % billing provider on IP claim                                       | 0.6        | 0.6        | 0.6        | -2.10                 | 6.47                  | N/A                             | N/A   | N/A   |
| % NPI billing provider on IP claim                                   | 0.7        | 0.7        | 0.7        | -5.36                 | 2.33                  | N/A                             | N/A   | N/A   |
| % billing provider on LT claim                                       | 0.3        | 0.3        | 0.4        | 6.10                  | 5.09                  | N/A                             | N/A   | N/A   |
| % NPI billing provider on LT claim                                   | 0.3        | 0.3        | 0.4        | 2.98                  | 1.96                  | N/A                             | N/A   | N/A   |
| % billing provider on OT claim                                       | 19.0       | 19.5       | 20.8       | 2.56                  | 6.52                  | N/A                             | N/A   | N/A   |
| % servicing provider on OT claim                                     | 40.0       | 38.7       | 40.5       | -3.14                 | 4.70                  | N/A                             | N/A   | N/A   |
| % NPI servicing provider on OT claim                                 | 14.4       | 14.2       | 14.3       | -1.58                 | 1.03                  | N/A                             | N/A   | N/A   |
| % billing provider on RX claim                                       | 5.4        | 5.7        | 5.9        | 4.39                  | 3.71                  | N/A                             | N/A   | N/A   |
| % prescribing provider on RX claim                                   | 45.5       | 46.7       | 46.3       | 2.52                  | -0.95                 | N/A                             | N/A   | N/A   |
| % NPI billing provider on RX claim                                   | 5.2        | 5.5        | 5.8        | 6.51                  | 4.23                  | N/A                             | N/A   | N/A   |
| % billing provider   | 24.6       | 25.3       | 26.8       | 3.01                  | 5.97                  | N/A                             | N/A   | N/A   |
| % NPI billing provider   | 6.0        | 6.3        | 6.5        | 5.11                  | 4.07                  | N/A                             | N/A   | N/A   |
| % servicing provider   | 40.0       | 38.7       | 40.5       | -3.14                 | 4.70                  | N/A                             | N/A   | N/A   |
| % NPI servicing provider   | 14.4       | 14.2       | 14.3       | -1.58                 | 1.03                  | N/A                             | N/A   | N/A   |
| % prescribing provider   | 45.5       | 46.7       | 46.3       | 2.52                  | -0.95                 | N/A                             | N/A   | N/A   |
| % provider IDs with NPI  | 52.2       | 51.5       | 53.2       | -1.29                 | 3.29                  | 30%(+/-)                        | Yes   | Yes   |
| % provider IDs linked to NPPES                                       | 52.0       | 51.5       | 53.2       | -0.98                 | 3.30                  | 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   | 1,170.6    | 1,169.6    | 1,089.3    | -0.09                 | -6.87                 | 30%(+/-)                        | Yes   | Yes   |
| average number of beneficiaries with claims                          | 195.4      | 199.0      | 193.1      | 1.85                  | -2.99                 | 30%(+/-)                        | Yes   | Yes   |
| <b>Provider IDs with NPI</b>   |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs with NPI                                      | 70,638     | 71,390     | 74,035     | 1.06                  | 3.71                  | 30%(+/-)                        | Yes   | Yes   |
| % NPI source = MSIS  | 98.8       | 99.3       | 99.5       | 0.53                  | 0.23                  | 30%(+/-)                        | Yes   | Yes   |
| % NPI source = NPPES   | 1.2        | 0.7        | 0.5        | -43.40                | -33.06                | 30%(+/-)                        | Yes   | Yes   |
| % NPI source = state cross-reference file                            | 0.0        | 0.0        | 0.0        | Div by 0              | Div by 0              | N/A                             | N/A   | N/A   |
| <b>Provider IDs Linked to NPPES</b>                                  |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs linked to NPPES                               | 70,402     | 71,378     | 74,028     | 1.39                  | 3.71                  | 30%(+/-)                        | Yes   | Yes   |
| % linked via NPI   | 98.8       | 99.3       | 99.5       | 0.53                  | 0.23                  | 30%(+/-)                        | Yes   | Yes   |
| % linked via Medicaid legacy provider ID                             | 0.0        | 0.0        | 0.0        | 50.00                 | 54.38                 | 30%(+/-)                        | Yes   | Yes   |
| % linked via Medicare UPIN   | 1.2        | 0.7        | 0.4        | -44.69                | -35.83                | 30%(+/-)                        | Yes   | Yes   |
| % with name prefix   | 22.5       | 23.0       | 22.9       | 2.44                  | -0.32                 | 30%(+/-)                        | Yes   | Yes   |
| % with first name  | 49.7       | 50.3       | 50.4       | 1.30                  | 0.27                  | 30%(+/-)                        | Yes   | Yes   |
| % with middle name   | 39.5       | 40.4       | 40.5       | 2.42                  | 0.07                  | 30%(+/-)                        | Yes   | Yes   |
| % with last name   | 49.7       | 50.3       | 50.4       | 1.30                  | 0.27                  | 30%(+/-)                        | Yes   | Yes   |
| % with name suffix   | 2.6        | 2.7        | 2.7        | 2.90                  | -1.52                 | 30%(+/-)                        | Yes   | Yes   |
| % male   | 31.4       | 31.0       | 30.3       | -1.15                 | -2.18                 | 30%(+/-)                        | Yes   | Yes   |
| % female   | 18.3       | 19.3       | 20.1       | 5.49                  | 4.21                  | 30%(+/-)                        | Yes   | Yes   |
| % with credential  | 48.1       | 48.7       | 48.6       | 1.13                  | -0.03                 | 30%(+/-)                        | Yes   | Yes   |
| % with business name   | 50.3       | 49.3       | 49.4       | -2.03                 | 0.12                  | 30%(+/-)                        | Yes   | Yes   |
| % with address line 1  | 100.0      | 99.6       | 99.8       | -0.38                 | 0.20                  | 30%(+/-)                        | Yes   | Yes   |
| % with city  | 100.0      | 99.6       | 99.8       | -0.38                 | 0.20                  | 30%(+/-)                        | Yes   | Yes   |
| % with state   | 100.0      | 99.6       | 99.8       | -0.38                 | 0.20                  | 30%(+/-)                        | Yes   | Yes   |
| % state = claim file state code                                      | 62.3       | 62.3       | 63.3       | 0.02                  | 1.56                  | 30%(+/-)                        | Yes   | Yes   |
| % with zip code  | 100.0      | 99.6       | 99.8       | -0.38                 | 0.20                  | 30%(+/-)                        | Yes   | Yes   |
| % with primary taxonomy  | 99.5       | 98.6       | 98.8       | -0.95                 | 0.21                  | 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.

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

| Measure   | 2009 Value | 2010 Value | 2011 Value | % Change<br>2009-2010 | % Change<br>2010-2011 | Cross Year<br>Expected<br>Range | Cross Year<br>2009-2010<br>Within<br>Range <sup>a</sup> | Cross Year<br>2010-2011<br>Within<br>Range <sup>a</sup> |
|---|------------|------------|------------|-----------------------|-----------------------|---------------------------------|---|---|
| % with provider entity type = individual  | 49.7       | 50.3       | 50.4       | 1.30                  | 0.27                  | 30%(+/-)                        | Yes   | Yes   |
| % with provider entity type = organization                                      | 50.3       | 49.3       | 49.4       | -2.03                 | 0.12                  | 30%(+/-)                        | Yes   | Yes   |
| <b>Provider IDs with or without NPI but linked to state provider file</b>       |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs with or without NPI linked to state provider file        | 0          | 0          | 0          | Div by 0              | Div by 0              | N/A                             | N/A   | N/A   |
| <b>Provider IDs with NPPES Primary Taxonomy</b>                                 |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs with NPPES primary taxonomy                              | 70,258     | 70,363     | 73,127     | 0.15                  | 3.93                  | 30%(+/-)                        | Yes   | Yes   |
| % individual or group of individuals  | 52.5       | 53.9       | 54.7       | 2.64                  | 1.47                  | 30%(+/-)                        | Yes   | Yes   |
| % allopathic and osteopathic physicians   | 29.8       | 28.7       | 27.9       | -3.73                 | -2.71                 | 30%(+/-)                        | Yes   | Yes   |
| % behavioral health and social service providers                                | 4.0        | 4.4        | 4.4        | 11.32                 | -0.81                 | 30%(+/-)                        | Yes   | Yes   |
| % chiropractic providers  | 0.4        | 0.4        | 0.3        | 15.86                 | -21.09                | 30%(+/-)                        | Yes   | Yes   |
| % dental providers  | 1.8        | 2.8        | 3.5        | 59.07                 | 23.90                 | 30%(+/-)                        | Yes   | Yes   |
| % dietary and nutritional service providers                                     | 0.0        | 0.0        | 0.0        | 15.00                 | 18.91                 | 30%(+/-)                        | Yes   | Yes   |
| % emergency medical service providers   | 0.0        | 0.0        | 0.0        | 221.43                | 3.32                  | 30%(+/-)                        | Yes   | Yes   |
| % eye and vision service providers  | 1.8        | 1.8        | 1.9        | 0.16                  | 2.82                  | 30%(+/-)                        | Yes   | Yes   |
| % nursing service providers   | 0.3        | 0.3        | 0.4        | 8.95                  | 7.07                  | 30%(+/-)                        | Yes   | Yes   |
| % nursing service-related providers   | 0.0        | 0.0        | 0.0        | 47.62                 | 14.69                 | 30%(+/-)                        | Yes   | Yes   |
| % other service providers   | 1.4        | 2.2        | 2.2        | 53.50                 | -0.02                 | 30%(+/-)                        | Yes   | Yes   |
| % pharmacy service providers  | 0.0        | 0.2        | 0.2        | 2,842.86              | -9.06                 | 30%(+/-)                        | Yes   | Yes   |
| % physician assistants and advanced practice nursing providers                  | 8.4        | 9.4        | 10.2       | 11.14                 | 8.79                  | 30%(+/-)                        | Yes   | Yes   |
| % podiatric medicine and surgery service providers                              | 0.4        | 0.3        | 0.3        | -9.83                 | -2.44                 | 30%(+/-)                        | Yes   | Yes   |
| % respiratory, developmental, rehabilitative, and restorative service providers | 1.9        | 2.2        | 2.1        | 11.04                 | -0.89                 | 30%(+/-)                        | Yes   | Yes   |
| % speech, language, and hearing service providers                               | 0.6        | 0.8        | 0.9        | 30.36                 | 8.31                  | 30%(+/-)                        | Yes   | Yes   |
| % student health care   | 0.1        | 0.1        | 0.2        | 6.82                  | 60.99                 | 30%(+/-)                        | Yes   | Yes   |
| % technologists, technicians, and other technical service providers             | 0.0        | 0.0        | 0.0        | 236.36                | -18.69                | 30%(+/-)                        | Yes   | Yes   |
| % group of individuals with multi- or single specialty                          | 1.4        | 0.0        | 0.0        | -100.00               | Div by 0              | 30%(+/-)                        | Yes   | N/A   |
| % nonindividuals  | 47.5       | 46.1       | 45.3       | -2.92                 | -1.72                 | 30%(+/-)                        | Yes   | Yes   |
| % agencies  | 1.7        | 1.3        | 2.2        | -23.00                | 68.92                 | 30%(+/-)                        | Yes   | Yes   |
| % ambulatory health care facilities   | 2.1        | 1.8        | 1.8        | -13.98                | -1.75                 | 30%(+/-)                        | Yes   | Yes   |
| % hospital units  | 1.2        | 0.2        | 0.2        | -85.86                | -4.69                 | 30%(+/-)                        | Yes   | Yes   |
| % hospitals   | 17.2       | 16.3       | 14.6       | -5.11                 | -10.33                | 30%(+/-)                        | Yes   | Yes   |
| % laboratories  | 0.4        | 0.5        | 0.5        | 28.53                 | 3.38                  | 30%(+/-)                        | Yes   | Yes   |
| % managed care organizations  | 0.0        | 0.0        | 0.0        | 271.43                | -26.37                | 30%(+/-)                        | Yes   | Yes   |
| % nursing and custodial care facilities   | 1.5        | 1.3        | 1.3        | -8.89                 | 0.61                  | 30%(+/-)                        | Yes   | Yes   |
| % residential treatment facilities  | 0.1        | 0.2        | 0.2        | 55.74                 | -2.12                 | 30%(+/-)                        | Yes   | Yes   |
| % respite care facility   | 0.0        | 0.0        | 0.0        | 333.33                | 15.71                 | 30%(+/-)                        | Yes   | Yes   |
| % suppliers   | 22.4       | 23.5       | 23.5       | 4.96                  | 0.22                  | 30%(+/-)                        | Yes   | Yes   |
| % transportation services   | 0.9        | 0.9        | 0.9        | -1.06                 | -2.43                 | 30%(+/-)                        | Yes   | Yes   |
| % nonmedical  | 0.0        | 0.0        | 0.0        | Div by 0              | Div by 0              | N/A                             | N/A   | N/A   |
| <b>Provider IDs with Entity Type = Individual</b>                               |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs with entity type = individual                            | 34,961     | 35,907     | 37,342     | 2.71                  | 4.00                  | 30%(+/-)                        | Yes   | Yes   |
| % a sole proprietorship   | 17.7       | 18.8       | 19.4       | 6.49                  | 3.18                  | 30%(+/-)                        | Yes   | Yes   |
| % not a sole proprietorship   | 71.7       | 73.8       | 73.4       | 2.87                  | -0.44                 | 30%(+/-)                        | Yes   | Yes   |
| % not answered  | 10.6       | 7.4        | 7.1        | -30.19                | -3.70                 | N/A                             | N/A   | N/A   |
| <b>Provider IDs with Entity Type = Organization</b>                             |            |            |            |                       |                       |                                 |   |   |
| Number of provider IDs with entity type = organization                          | 35,441     | 35,203     | 36,553     | -0.67                 | 3.83                  | 30%(+/-)                        | Yes   | Yes   |
| % organization is a subpart   | 30.0       | 31.7       | 32.8       | 5.59                  | 3.46                  | 30%(+/-)                        | Yes   | Yes   |
| % organization is not a subpart   | 60.5       | 61.9       | 61.3       | 2.33                  | -1.10                 | 30%(+/-)                        | Yes   | Yes   |
| % not answered  | 9.5        | 6.4        | 6.0        | -32.53                | -6.51                 | N/A                             | N/A   | N/A   |

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