

# Medicaid Long-Term Services and Supports Beneficiaries in 2012

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## Acknowledgement

Data for this study were compiled from the 2010 through 2012 Medicaid Analytical eXtract (MAX) by a team at Mathematica Policy Research led by Carol Irvin. The methods used by the Mathematica team are described in Appendix A.

## Executive Summary

Over 4.8 million people received Medicaid-funded LTSS during calendar year 2012, the third consecutive year of almost 5 million estimated beneficiaries. This number of Medicaid LTSS beneficiaries should be considered an underestimate because data do not include people who enrolled in a comprehensive managed care plan. During 2012, 16 states provided LTSS through managed care programs.<sup>1</sup>

Most LTSS beneficiaries (3.4 million or 70 percent) received home and community-based services (HCBS), including people who also received institutional services during the year. Over 1.6 million individuals (34 percent) received institutional services, including people who also received HCBS during the year. In a majority of states, between 60 and 80 percent of beneficiaries used HCBS.

A majority of beneficiaries were under age 65, including both children and youth under age 21 (16 percent) and people age 21 through 64 (39 percent). In each age group, a majority of individuals received HCBS, including people who received both HCBS and institutional services. Older adults comprised 45

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<sup>1</sup> Saucier P, Kasten J, Burwell B, Gold L. *The Growth of Managed Long-Term Services and Supports (MLTSS) Programs: A 2012 Update* CMS, July 2012. Available on-line at <http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Delivery-Systems/Medicaid-Managed-Long-Term-Services-and-Supports-MLTSS.html>.

percent of beneficiaries, but were less likely to receive HCBS than LTSS beneficiaries under age 65.

The data in this report were obtained from the Medicaid Analytic eXtract (MAX). We compared these data to previously published data using other sources and note differences within the report. Please see Appendix A for information about data and methods.

# Medicaid Long-Term Services and Supports Beneficiaries in 2012

Medicaid is the primary source of funding for people in need of long-term services and supports (LTSS), accounting for over 60 percent of total spending across all sources, including private out-of-pocket payment.<sup>2</sup> While data on Medicaid spending for LTSS have been available for many years,<sup>3</sup> counts of the number of people receiving LTSS under Medicaid generally were not available until recently.

This report is the third annual estimate of the number of Medicaid LTSS beneficiaries. Truven Health Analytics developed the estimate with assistance from Mathematica Policy Research and the Centers for Medicare & Medicaid Services (CMS). We use data from the Medicaid Analytic eXtract (MAX), a set of Medicaid administrative data files designed to facilitate Medicaid research. This report provides updated 2012 data from 44 states. For four additional states and the District of Columbia, we used 2010 or 2011 data to provide a national estimate of LTSS beneficiaries that is as comprehensive as possible. Two states, Kansas and Maine, did not have MAX data for any year from 2010 through 2012.

In addition to missing data from two states, data in this report should be considered an underestimate because people who enrolled in a comprehensive managed care plan are not included. Estimates may be particularly low in the 16 states that provided LTSS through a managed care program in 2012 (Arizona, California, Delaware, Florida, Hawaii, Massachusetts, Michigan, Minnesota, New Mexico, New York, North Carolina, Pennsylvania, Tennessee, Texas, Wisconsin, and Washington).<sup>4</sup> Appendix A describes the MAX data source and compares data to previously published benchmarks when such benchmarks are available.

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<sup>2</sup> O'Shaughnessy, C. *The Basics: National Spending for Long-Term Services and Supports (LTSS), 2012*. National Health Policy Forum, 2014. [http://www.nhpf.org/library/the-basics/Basics\\_LTSS\\_03-27-14.pdf](http://www.nhpf.org/library/the-basics/Basics_LTSS_03-27-14.pdf).

<sup>3</sup> Wenzlow A, Eiken S, and Sredl K. *Improving the Balance: The Evolution of Medicaid Expenditures for Long-Term Services and Supports (LTSS), FY 1981-2014* CMS, June 3, 2016. Available on-line at <http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Long-Term-Services-and-Supports/Long-Term-Services-and-Supports.html>.

<sup>4</sup> Saucier P, Kasten J, Burwell B, Gold L. *The Growth of Managed Long-Term Services and Supports (MLTSS) Programs: A 2012 Update* CMS, July 2012. Available on-line at <http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Delivery-Systems/Medicaid-Managed-Long-Term-Services-and-Supports-MLTSS.html>.

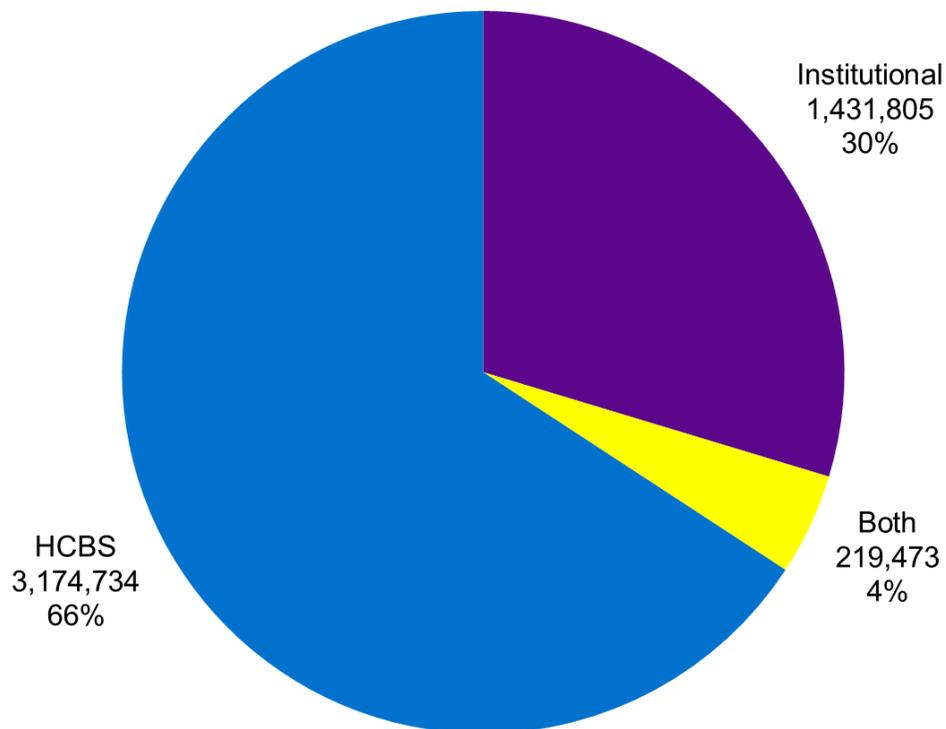
This report also updates beneficiary data for three major age groups: children and youth under age 21, adults age 21 through 64, and older adults starting at age 65. Age group data are particularly important for policy makers because available services can vary based on a person's age. For example, children under age 21 are eligible for Medicaid state plan services under the Early and Periodic Screening, Diagnosis, and Treatment requirement that are unavailable to adults in some states, including types of LTSS such as personal care and private duty nursing. Also, states often target Section 1915(c) waivers specifically to children or to older adults. Age-group data were only obtained for the 45 states with 2011 or 2012 MAX data.

## National Beneficiary Data Summary

An estimated 4.8 million people received Medicaid-funded LTSS during calendar year 2012. This estimate includes 2012 data for 44 states, 2011 data for one state, and 2010 data for three states and the District of Columbia. MAX did not have data for any of these years for two states, Kansas and Maine.

Figure 1 shows the distribution of LTSS beneficiaries among institutional services and home and community-based services (HCBS). Almost two-thirds of people only received HCBS (3.2 million; 66 percent). About 30 percent of beneficiaries only received institutional services (1.4 million). Only four percent (219 thousand) received both HCBS and institutional services during the year, indicating a relatively small number of people moved from one to the other.

**Figure 1. Number and Percentage of Medicaid LTSS Beneficiaries Receiving Institutional Services and HCBS, 2012**



Source: Medicaid Analytic eXtract (MAX). Data for 2011 are used for Rhode Island because MAX does not include 2012 data for that state. Data for 2010 are used for Arizona, Colorado, the District of Columbia, and Idaho because these states did not have 2011 or 2012 data in MAX. Kansas and Maine are excluded because MAX did not include data for 2010 through 2012.

Data do not include LTSS beneficiaries enrolled in comprehensive managed care plans.

While about two-thirds of LTSS beneficiaries received HCBS, only 49 percent of spending on LTSS expenditures were for HCBS during an overlapping time period (federal fiscal year 2012).<sup>5</sup> Community supports accounted for a higher percentage of people than spending because HCBS have a lower average cost per person than institutional services.<sup>6</sup>

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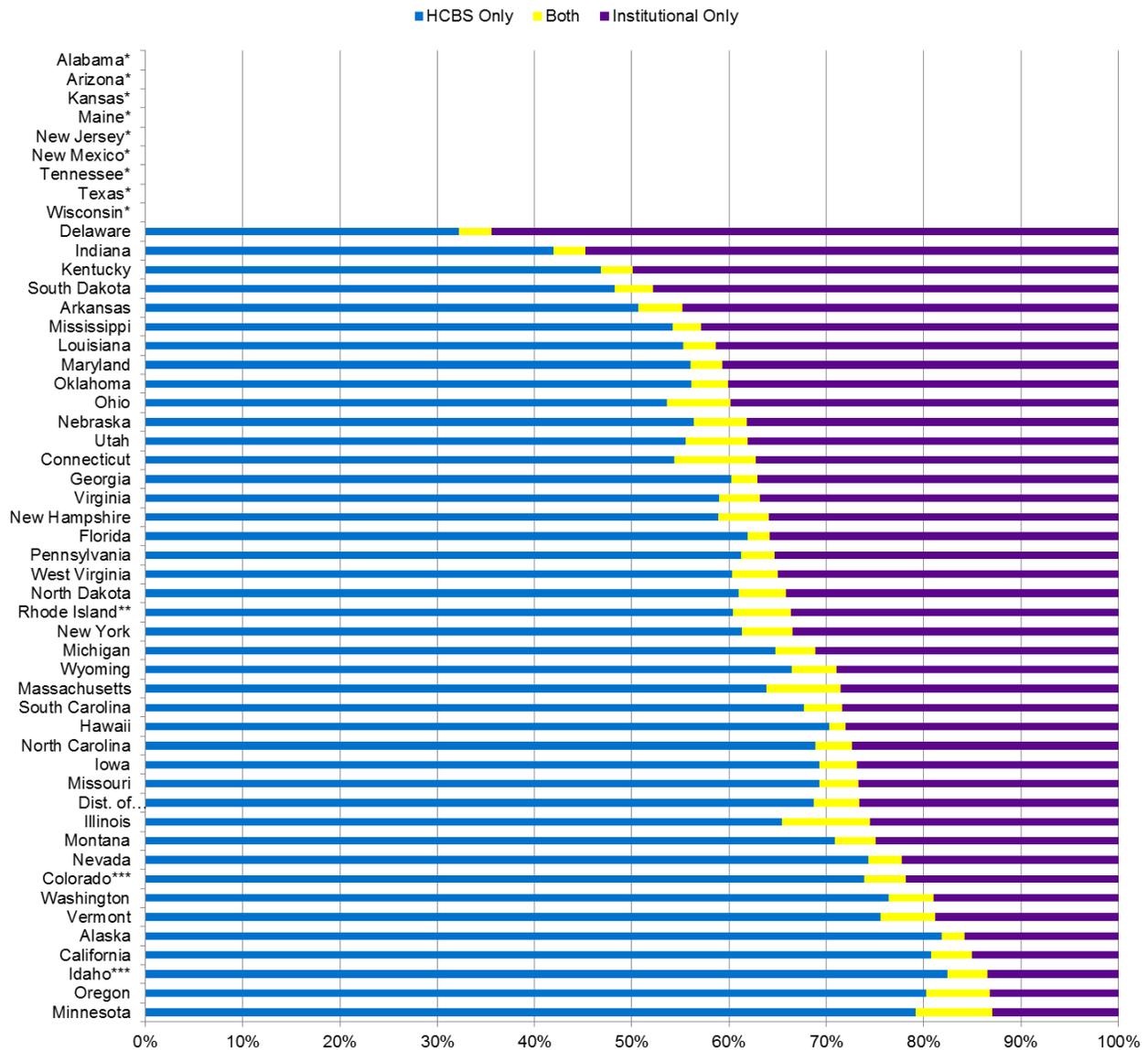
<sup>5</sup> Eiken S, Sredl K, Burwell B, and Saucier P. *Medicaid Expenditures for Long-Term Services and Supports in FFY 2014: Managed LTSS Reached 15 Percent of LTSS Spending* CMS, April 15, 2016. Available on-line at <http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Long-Term-Services-and-Supports/Long-Term-Services-and-Supports.html>.

<sup>6</sup> Larson S, Hallas-Muchow L, Aiken F, Taylor B, Pettingell S, Hewitt A, Sowers M, and Fay ML. *In-Home and Residential Long-Term Supports and Services for Persons with Intellectual or Developmental Disabilities: Status and Trends Through 2013* University of Minnesota, 2016 Available on-line at <https://rispumn.edu/> and Reinhard S, Kassner E, Houser A, Ujvari K, Mollica R, and Hendrickson L. *Raising Expectations: A State Scorecard on Long-Term Services and Supports for Older Adults, People with Physical Disabilities, and Family Caregivers* Second Edition. AARP Public Policy Institute, 2014. Available on-line at <http://www.longtermscorecard.org>.

## State Beneficiary Data Summary

In all but two states, people who received HCBS, including people who also received institutional services, were a majority of LTSS beneficiaries (See Figure 2). Only Indiana and Delaware served a majority of LTSS users in institutions. The percentage of beneficiaries who received HCBS was between 60 and 80 percent for the majority of states (25 states and the District of Columbia; 53 percent).

**Figure 2: Percentage of Medicaid LTSS Beneficiaries who Received HCBS and Institutional Services by State, 2012**



Source: Medicaid Analytic eExtract (MAX). Data do not include LTSS beneficiaries enrolled in comprehensive managed care plans.

\* Data for these states are not included because data are unavailable, a data anomaly exists, or data in an available benchmark indicate the number of beneficiaries is at least 50% greater than the number of beneficiaries in MAX data. See Appendix A for more information.

\*\* Data for 2011 are used for Rhode Island because it did not have 2012 MAX data.

\*\*\* Data for 2010 are used for Colorado, the District of Columbia, and Idaho because they did not have MAX data for 2011 or 2012.

Minnesota, Oregon, and Idaho each provided HCBS to 87 percent of all people who received Medicaid LTSS. Four other states also provided HCBS to more than 80 percent of LTSS beneficiaries: California, Alaska, Vermont, and Washington. As explained in Table 1 on the following pages, nine states were excluded from state-level analysis. States were excluded for three reasons:

- Missing claims data from Kansas and Maine
- A data anomaly in Alabama data
- Data from available benchmarks for three types of HCBS showed at least 50 percent more beneficiaries than the data from MAX for Arizona, New Jersey, New Mexico, Tennessee, Texas, and Wisconsin. All of these states except New Jersey provided LTSS through managed care programs, which are not included in the MAX data. New Jersey data from MAX decreased for state plan personal care, from over 31,000 participants in 2011 to fewer than 5,000 participants in 2012. The reason for this decrease is not known, but it may reflect missing data rather than a change in service delivery – a similar decrease was not recorded in a report by the Kaiser Family Foundation based on a survey of states.<sup>7</sup>

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<sup>7</sup> Ng T, Harrington C, Musumeci M, and Reeves E. *Medicaid Home and Community-Based Services Programs: 2012 Data Update* Kaiser Family Foundation, November 2015. Available on-line at <http://kff.org/medicaid/report/medicaid-home-and-community-based-services-programs-2012-data-update/>.

**Table 1: Beneficiaries who Received Any Type of Medicaid LTSS, 2012**

State	Total Unduplicated	Total Institutional Only <sup>1</sup>	Percent Institutional Only	Total HCBS Only <sup>2</sup>	Percent HCBS Only	Total Both Institutional and HCBS	Percent Both
Alabama <sup>3, 4</sup>	207,052	21,339	10.3	179,578	86.7	6,135	3.0
Alaska <sup>4</sup>	11,296	1,785	15.8	9,242	81.8	269	2.4
Arizona <sup>5, 6</sup>	19,475	19,220	98.7	221	1.1	34	0.2
Arkansas	55,639	24,924	44.8	28,216	50.7	2,499	4.5
California	778,118	116,906	15.0	628,236	80.7	32,976	4.2
Colorado <sup>5</sup>	57,336	12,502	21.8	42,351	73.9	2,483	4.3
Connecticut	72,174	26,865	37.2	39,250	54.4	6,059	8.4
Delaware	11,430	7,359	64.4	3,684	32.2	387	3.4
Dist. of Columbia <sup>5</sup>	15,036	4,002	26.6	10,323	68.7	711	4.7
Florida	186,607	66,879	35.8	115,582	61.9	4,146	2.2
Georgia	88,566	32,812	37.0	53,354	60.2	2,400	2.7
Hawaii <sup>7</sup>	5,526	1,550	28.0	3,883	70.3	93	1.7
Idaho <sup>5</sup>	26,159	3,511	13.4	21,563	82.4	1,085	4.1
Illinois <sup>4</sup>	248,970	63,451	25.5	162,878	65.4	22,641	9.1
Indiana	74,416	40,790	54.8	31,254	42.0	2,372	3.2
Iowa <sup>4</sup>	65,985	17,733	26.9	45,735	69.3	2,517	3.8
Kansas <sup>8</sup>	-	-	-	-	-	-	-
Kentucky <sup>4</sup>	55,740	27,801	49.9	26,077	46.8	1,862	3.3
Louisiana <sup>4</sup>	97,834	40,472	41.4	54,082	55.3	3,280	3.4
Maine <sup>8</sup>	-	-	-	-	-	-	-
Maryland	59,784	24,328	40.7	33,482	56.0	1,974	3.3
Massachusetts	148,378	42,396	28.6	94,742	63.9	11,240	7.6
Michigan	142,111	44,231	31.1	91,980	64.7	5,900	4.2
Minnesota <sup>4</sup>	147,972	19,200	13.0	117,114	79.1	11,658	7.9
Mississippi	53,718	23,011	42.8	29,098	54.2	1,609	3.0
Missouri	117,548	31,428	26.7	81,467	69.3	4,653	4.0
Montana	17,757	4,429	24.9	12,592	70.9	736	4.1
Nebraska	24,643	9,400	38.1	13,888	56.4	1,355	5.5
Nevada	23,420	5,216	22.3	17,407	74.3	797	3.4
New Hampshire	18,036	6,478	35.9	10,622	58.9	936	5.2
New Jersey <sup>6</sup>	90,899	39,458	43.4	48,027	52.8	3,414	3.8
New Mexico <sup>6</sup>	16,249	8,531	52.5	7,519	46.3	199	1.2
New York	423,387	141,834	33.5	259,672	61.3	21,881	5.2
North Carolina	148,091	40,565	27.4	101,959	68.8	5,567	3.8
North Dakota <sup>4</sup>	13,490	4,604	34.1	8,225	61.0	661	4.9
Ohio	196,398	78,326	39.9	105,361	53.6	12,711	6.5
Oklahoma	59,020	23,668	40.1	33,124	56.1	2,228	3.8
Oregon	59,183	7,830	13.2	47,513	80.3	3,840	6.5

State	Total Unduplicated	Total Institutional Only <sup>1</sup>	Percent Institutional Only	Total HCBS Only <sup>2</sup>	Percent HCBS Only	Total Both Institutional and HCBS	Percent Both
Pennsylvania <sup>4</sup>	224,794	79,494	35.4	137,667	61.2	7,633	3.4
Rhode Island <sup>9</sup>	23,483	7,904	33.7	14,176	60.4	1,403	6.0
South Carolina	55,399	15,709	28.4	37,509	67.7	2,181	3.9
South Dakota <sup>4</sup>	11,972	5,721	47.8	5,774	48.2	477	4.0
Tennessee <sup>6</sup>	44,357	34,176	77.0	9,875	22.3	306	0.7
Texas <sup>6</sup>	325,837	107,709	33.1	207,535	63.7	10,593	3.3
Utah	14,438	5,505	38.1	8,023	55.6	910	6.3
Vermont	15,248	2,864	18.8	11,522	75.6	862	5.7
Virginia	73,516	27,057	36.8	43,349	59.0	3,110	4.2
Washington	92,521	17,599	19.0	70,661	76.4	4,261	4.6
West Virginia	37,006	12,942	35.0	22,330	60.3	1,734	4.7
Wisconsin <sup>6</sup>	62,011	27,978	45.1	31,703	51.1	2,330	3.8
Wyoming	7,987	2,313	29.0	5,309	66.5	365	4.6
United States	4,826,012	1,431,805	29.7	3,174,734	65.8	219,473	4.5

Data Source: Medicaid Analytic eXtract (MAX). Data do not include LTSS beneficiaries enrolled in comprehensive managed care plans.

<sup>1</sup> Institutional services include nursing facilities, intermediate care facilities for individuals with intellectual disabilities, inpatient psychiatric facilities for individuals under age 21, and hospital services for people age 65 and older in an institution for mental disease.

<sup>2</sup> HCBS include Section 1915(c) waivers, services similar to Section 1915(c) waiver services provided in a Section 1115 demonstration, targeted case management, personal care services, home health, rehabilitation services, adult day care, private duty nursing, and the Program of All-Inclusive Care for the Elderly.

<sup>3</sup> Alabama was not included in state-level analysis in Figure 2 because the number of private duty nursing beneficiaries is 100,000 more than the next highest state. The reason for this data anomaly is not known.

<sup>4</sup> The sum of beneficiaries using Section 1915(c) waiver, personal care, and home health services in available benchmarks differs from the sum of beneficiaries in this MAX analysis by more than 20 percent for these states. See Tables A-3, A-4, and A-5 for benchmarks.

<sup>5</sup> This report uses 2010 data for Arizona, Colorado, the District of Columbia, and Idaho because MAX does not include 2011 or 2012 data for these states.

<sup>6</sup> These states are not included in state-level analysis in Figure 2 because the sum of beneficiaries using Section 1915(c) waiver, personal care, and home health services in available benchmarks is more than 50 percent greater than the sum of beneficiaries in this MAX analysis. See Tables A-3, A-4, and A-5 for benchmarks.

<sup>7</sup> The sum of Hawaii beneficiaries using nursing facility and ICF/IID in available point-in-time benchmarks is greater than the sum of beneficiaries over a year in this MAX analysis. See Tables A-1 and A-2 for benchmarks.

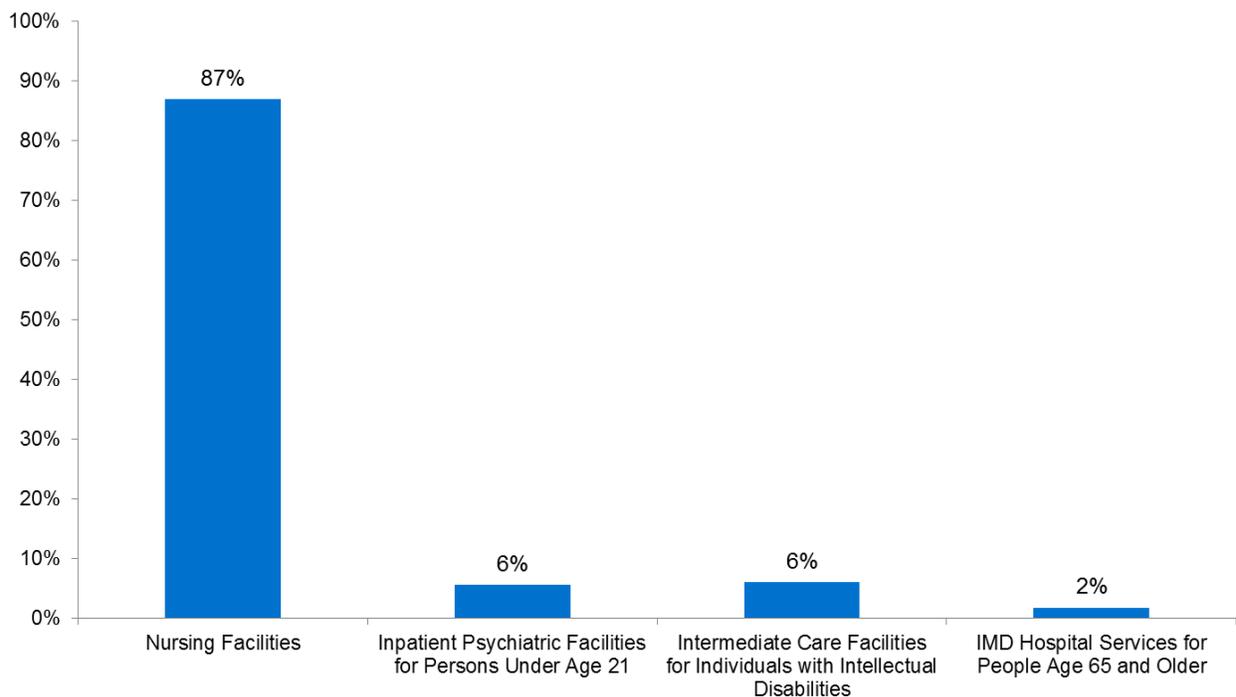
<sup>8</sup> MAX does not include data for 2010 through 2012 for Kansas and Maine. These states are not included in state-level analysis.

<sup>9</sup> This report uses 2011 data for Rhode Island because MAX does not include 2012 data for that state.

## Beneficiaries by Type of Institutional Service

Four types of institutional LTSS were used in this analysis: nursing facilities, inpatient psychiatric facilities for people under age 21, intermediate care facilities for individuals with intellectual disabilities (ICF/IID), and hospital services for people age 65 and older in an institution for mental disease (IMD), hereafter referred to as IMD hospital services for people age 65 and older.<sup>8</sup> Figure 3 shows the percentage of total institutional beneficiaries who received each type of service. Data include people who also received HCBS during 2012.

**Figure 3: Percentage of Medicaid Institutional LTSS Beneficiaries who Received Each Type of Institutional Service, 2012**



Source: Medicaid Analytic eXtract (MAX). Data for 2011 are used for Rhode Island because MAX does not include 2012 data for that state. Data for 2010 are used for Arizona, Colorado, the District of Columbia, and Idaho because these states did not have 2011 or 2012 data in MAX. Kansas and Maine are excluded because MAX did not include data for 2010 through 2012.

Data do not include LTSS beneficiaries enrolled in comprehensive managed care plans.

Percentages exceed 100% because some individuals received more than one type of institutional LTSS.

<sup>8</sup> The MAX data dictionary calls this benefit “mental hospital services for the aged”.

Table 2 presents state institutional LTSS beneficiary data. Nursing facilities were the most common type of institutional LTSS in every state except Alaska, where more people received inpatient psychiatric facilities for children and youth under age 21. Nursing facility residents were more than 95 percent of institutional LTSS beneficiaries in Colorado, Florida, Georgia, Massachusetts, Missouri, and Rhode Island. In 23 states (47 percent of the 49 states with data), nursing facility residents were between 80 and 90 percent of all institutional LTSS beneficiaries.

**Table 2: Beneficiaries who Received Medicaid Institutional LTSS: 2012**

State	Total Institutional <sup>1</sup>	Nursing Facilities	Intermediate Care Facilities for Individuals with Intellectual Disabilities	Inpatient Psychiatric Facilities for People Under Age 21	IMD Hospital Services for People Age 65 and Older
Alabama	27,474	24,589	42	2,758	174
Alaska <sup>3</sup>	2,054	847	19	1,170	24
Arizona <sup>2, 3</sup>	19,254	17,478	0	1,697	108
Arkansas	27,423	18,947	1,612	7,046	0
California <sup>3</sup>	149,882	138,531	12,393	0	0
Colorado <sup>2</sup>	14,985	14,704	221	44	24
Connecticut	32,924	31,114	1,042	662	129
Delaware <sup>3</sup>	7,746	4,265	132	87	3,305
Dist. of Columbia <sup>2, 3</sup>	4,713	3,533	656	446	92
Florida	71,025	68,175	2,808	0	84
Georgia <sup>3</sup>	35,212	34,704	516	0	0
Hawaii <sup>3, 4</sup>	1,643	1,075	754	0	0
Idaho <sup>2, 3</sup>	4,596	3,569	686	398	0
Illinois	86,092	69,381	8,706	6,921	2,424
Indiana	43,162	36,943	4,129	2,066	204
Iowa	20,250	17,432	2,131	673	102
Kansas <sup>5</sup>	-	-	-	-	-
Kentucky <sup>3</sup>	29,663	25,770	502	3,273	315
Louisiana	43,752	26,884	5,030	4,708	8,813
Maine <sup>5</sup>	-	-	-	-	-
Maryland <sup>3</sup>	26,302	23,362	134	2,784	33
Massachusetts	53,636	51,462	661	295	1,328
Michigan <sup>3</sup>	50,131	44,798	1	5,103	339
Minnesota <sup>3</sup>	30,858	27,257	2,870	718	80
Mississippi	24,620	18,604	2,872	3,160	74
Missouri	36,081	35,341	608	133	6
Montana	5,165	4,626	59	446	44
Nebraska	10,755	9,700	420	645	0
Nevada	6,013	4,491	113	1,398	16
New Hampshire <sup>3</sup>	7,414	7,000	39	381	0

State	Total Institutional <sup>1</sup>	Nursing Facilities	Intermediate Care Facilities for Individuals with Intellectual Disabilities	Inpatient Psychiatric Facilities for People Under Age 21	IMD Hospital Services for People Age 65 and Older
New Jersey <sup>3</sup>	42,872	38,475	2,514	1,760	229
New Mexico	8,730	6,556	272	1,903	66
New York	163,715	142,116	8,179	11,563	3,248
North Carolina	46,132	39,488	3,655	2,993	54
North Dakota	5,265	4,525	587	163	5
Ohio	91,037	81,184	7,302	1,987	918
Oklahoma	25,896	19,583	1,729	4,652	161
Oregon	11,670	10,309	0	1,349	17
Pennsylvania	87,127	79,950	3,566	1,222	2,698
Rhode Island <sup>6</sup>	9,307	8,998	40	159	160
South Carolina	17,890	15,249	1,414	1,123	160
South Dakota	6,198	5,188	224	715	96
Tennessee	34,482	30,394	1,059	2,935	177
Texas	118,302	94,281	10,206	14,072	93
Utah	6,415	5,489	837	123	14
Vermont	3,726	3,454	7	0	271
Virginia	30,167	27,036	1,527	940	835
Washington <sup>3</sup>	21,860	18,327	58	893	2,700
West Virginia	14,676	11,286	560	2,185	766
Wisconsin	30,308	26,578	849	2,706	201
Wyoming	2,678	2,330	84	260	4
United States	1,651,278	1,435,378	93,825	100,715	30,591

Data Source: Medicaid Analytic eXtract (MAX). Data do not include LTSS beneficiaries enrolled in comprehensive managed care plans.

<sup>1</sup> Total Institutional is the unduplicated total of beneficiaries who received one or more institutional services.

<sup>2</sup> This report uses 2010 data for Arizona, Colorado, the District of Columbia, and Idaho because MAX does not include 2011 or 2012 data for these states.

<sup>3</sup> The number of intermediate care facilities for individuals with intellectual disabilities beneficiaries in an available point-in-time benchmark differs from the number of beneficiaries in this MAX analysis by more than 20 percent. See Table A-2 for the benchmark.

<sup>4</sup> The number of beneficiaries using nursing facilities in this MAX analysis is lower than an available point-in-time benchmark. See Table A-1 for the benchmark.

<sup>5</sup> MAX does not include data for 2010 through 2012 for Kansas and Maine.

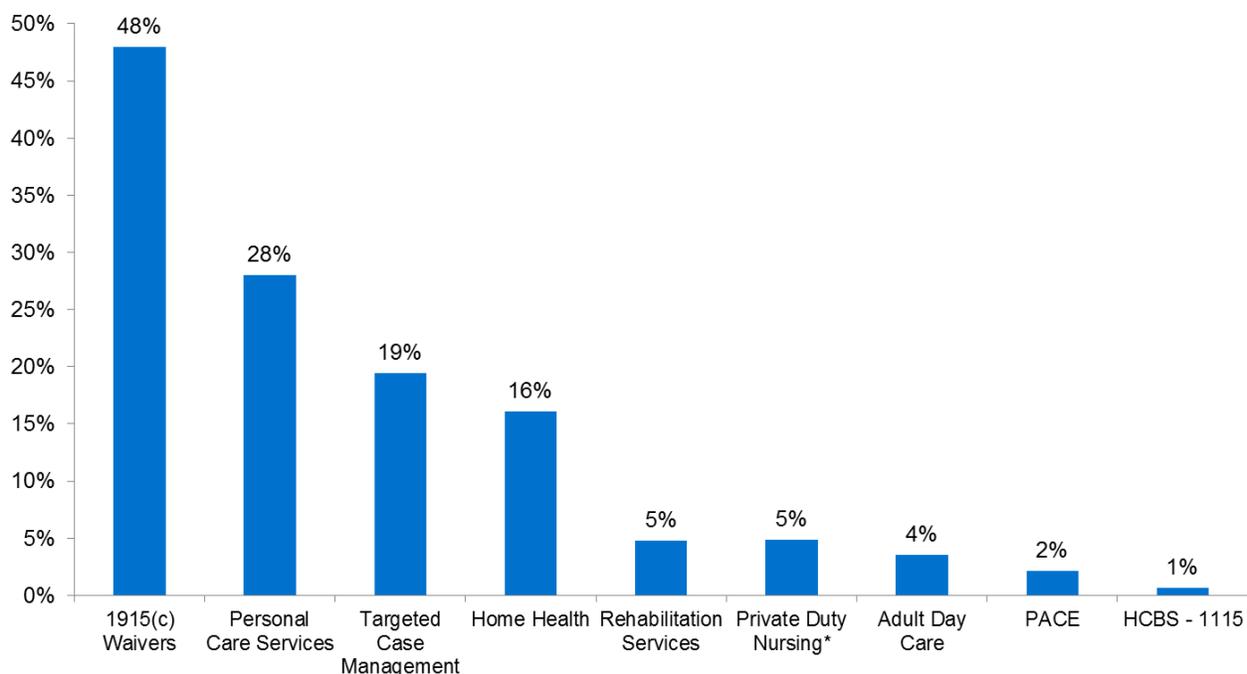
<sup>6</sup> This report uses 2011 data for Rhode Island because MAX does not include 2012 data for that state.

## Beneficiaries by Type of HCBS

Nine types of HCBS benefits were identified in this analysis, including Section 1915(c) waivers, Section 1115 demonstrations that provide similar HCBS, and seven state plan services: personal care, targeted case management, home health, rehabilitation services, adult day care, private duty nursing, and the Program of All-Inclusive Care for the Elderly (PACE). MAX did not identify four state plan HCBS options used by states during 2012—Community First Choice, Health Homes for People with Chronic Conditions, and HCBS authorized under Sections 1915(i) and 1915(j). As a result, these services were not included in this analysis.<sup>9</sup>

The most common type of HCBS was Section 1915(c) waivers, used by 48 percent of all HCBS beneficiaries, including people who also received institutional services, as shown in Figure 4. Other common types of HCBS were personal care (28 percent) and targeted case management (19 percent).

**Figure 4: Percentage of Medicaid HCBS Beneficiaries who Received Each Type of HCBS, 2012**



Source: Medicaid Analytic eXtract (MAX). Data for 2011 are used for Rhode Island because MAX does not include 2012 data for that state. Data for 2010 are used for Arizona, Colorado, the District of Columbia, and Idaho because these states did not have 2011 or 2012 data in MAX. Kansas and Maine are excluded because MAX did not include data for 2010 through 2012.

Data do not include LTSS beneficiaries enrolled in comprehensive managed care plans.

Percentages exceed 100% because some individuals received more than one type of HCBS.

Private duty nursing data include an anomaly in Alabama data, which indicates 100,000 more beneficiaries than any other state.

<sup>9</sup> These types of HCBS are included in data states submit in the Transformed Medicaid Statistical Information System (T-MSIS) and will be available for future analyses based on T-MSIS.

The sum of people who received each type of HCBS was 27 percent more than the unduplicated total of HCBS participants, meaning many people received more than one type of HCBS. This could happen for several reasons, including states' design of their Section 1915(c) waiver programs. For example, some waivers specify that participants also receive state plan targeted case management. Also, a person may receive a limited amount of home health or personal care in the state plan and additional hours covered by a Section 1915(c) waiver as extended state plan services.

As shown in Table 3 on the following pages, Section 1915(c) waivers were the most common type of HCBS in 35 states (73 percent). Other states served more individuals in personal care, targeted case management, home health, and Section 1115 demonstrations that provide HCBS.

**Table 3: Beneficiaries who Received Medicaid HCBS, 2012**

State	Total HCBS <sup>1</sup>	Section 1915(c) Waivers	Personal Care Services	Targeted Case Management	Home Health	Rehabilitation Services	Private Duty Nursing	Adult Day Care	PACE	HCBS - 1115
Alabama <sup>2,3</sup>	185,713	13,783	0	22,275	17,824	3,365	150,163	0	104	0
Alaska <sup>4</sup>	9,511	6,266	5,178	162	302	20	19	0	0	0
Arizona <sup>3,5</sup>	255	0	0	0	255	0	0	0	0	255
Arkansas	30,715	15,236	15,342	9,888	6,297	94	96	0	147	0
California <sup>3</sup>	661,212	124,049	494,940	169,090	17,955	27,079	152	37,633	12,779	0
Colorado <sup>5</sup>	44,834	38,412	0	0	11,736	1,090	239	0	2,213	0
Connecticut <sup>4</sup>	45,309	25,246	959	10,063	30,364	0	0	82	0	0
Delaware <sup>3</sup>	4,071	2,977	0	0	704	736	43	0	0	0
Dist. of Columbia <sup>3,4,5,6</sup>	11,034	5,804	6,430	0	6,907	2,213	0	0	0	0
Florida <sup>3,4</sup>	119,728	85,212	0	21,603	20,201	1,394	0	0	934	0
Georgia <sup>3</sup>	55,754	46,845	0	4,496	7,225	0	684	0	0	0
Hawaii <sup>3,6</sup>	3,976	3,867	0	2,018	114	2	0	0	0	0
Idaho <sup>4,5</sup>	22,648	14,280	4,663	9,922	1,850	2,360	3,160	1,362	0	0
Illinois <sup>4,6</sup>	185,519	143,634	3,060	34,036	11,778	1,219	572	0	0	0
Indiana	33,626	26,847	0	848	12,679	340	0	0	0	0
Iowa <sup>3</sup>	48,252	30,654	0	12,591	24,666	0	0	1,915	210	0
Kansas <sup>7</sup>	-	-	-	-	-	-	-	-	-	-
Kentucky <sup>3</sup>	27,939	24,342	0	4,215	2,188	32	0	0	0	0
Louisiana <sup>3,6</sup>	57,362	31,569	20,548	11,536	6,925	0	0	47	353	0
Maine <sup>7</sup>	-	-	-	-	-	-	-	-	-	-
Maryland <sup>3,4</sup>	35,456	24,698	6,856	2,162	6,742	351	860	7,514	185	0
Massachusetts <sup>4</sup>	105,982	24,924	17,729	27,419	24,336	0	0	8,621	31,561	0
Michigan <sup>6</sup>	97,880	12,085	79,450	60,086	5,059	1,446	1,912	63	879	0
Minnesota <sup>3</sup>	128,772	61,803	27,099	19,893	62,770	226	871	0	0	0
Mississippi <sup>3,4</sup>	30,707	22,527	577	6,584	6,545	0	113	5	0	0
Missouri	86,120	31,756	55,449	19,080	6,653	7,214	647	2,709	230	0
Montana <sup>6</sup>	13,328	7,322	3,693	4,406	405	131	0	312	0	0
Nebraska <sup>4</sup>	15,243	10,567	2,550	0	2,858	0	84	266	0	0
Nevada	18,204	4,663	6,836	7,598	680	4,460	0	777	0	0
New Hampshire <sup>4</sup>	11,558	8,926	196	218	3,008	504	120	146	0	0
New Jersey <sup>3,4</sup>	51,441	26,583	4,866	706	1,761	17,915	51	774	727	0
New Mexico <sup>3,4,6</sup>	7,718	5,318	924	788	239	40	24	0	455	0
New York	281,553	122,845	75,812	23,138	99,087	51,328	2,292	24,458	5,568	0
North Carolina	107,526	24,148	58,349	26,025	33,132	0	0	53	579	0
North Dakota <sup>3,4,6</sup>	8,886	6,652	825	115	479	2,533	0	0	87	0

State	Total HCBS <sup>1</sup>	Section 1915(c) Waivers	Personal Care Services	Targeted Case Management	Home Health	Rehabilitation Services	Private Duty Nursing	Adult Day Care	PACE	HCBS - 1115
Ohio	118,072	94,953	0	38,377	46,467	874	1,408	0	963	0
Oklahoma	35,352	26,854	4,043	6,138	6,602	0	0	0	136	0
Oregon <sup>3, 4</sup>	51,353	45,624	4,874	674	390	3,059	466	0	1,148	0
Pennsylvania <sup>3, 6</sup>	145,300	112,448	0	21,853	11,374	487	25	0	4,357	0
Rhode Island <sup>3, 4, 8, 9</sup>	15,579	3,673	473	5,475	1,959	3,928	0	2,679	247	9,373
South Carolina <sup>3, 4</sup>	39,690	27,827	2,368	16,098	3,845	3,201	216	4,624	498	0
South Dakota <sup>3</sup>	6,251	5,217	527	0	455	412	65	0	0	0
Tennessee <sup>3</sup>	10,181	8,394	0	0	145	1,307	0	6,597	379	0
Texas <sup>3, 4, 6</sup>	218,128	127,996	12,327	45,415	27,122	10,982	15	18,371	1,160	0
Utah <sup>3, 4</sup>	8,933	6,931	719	9	2,221	109	29	39	0	0
Vermont <sup>8</sup>	12,384	6,708	2,672	2,122	3,590	4	0	0	168	11,326
Virginia <sup>3</sup>	46,459	41,345	42	1,643	2,701	1,499	210	18	992	0
Washington <sup>3</sup>	74,922	51,307	24,469	1,342	2,186	1,519	106	627	529	0
West Virginia	24,064	12,869	5,985	664	2,838	3,252	651	0	0	0
Wisconsin <sup>3, 6</sup>	34,033	17,537	0	9,343	118	3,286	69	0	5,756	0
Wyoming	5,674	4,346	0	460	642	1,417	0	0	0	0
United States	3,394,207	1,627,869	950,830	660,574	546,379	161,428	165,362	119,692	73,344	20,954

Data Source: Medicaid Analytic eXtract (MAX). Data do not include LTSS beneficiaries enrolled in comprehensive managed care plans.

<sup>1</sup> Total HCBS is the unduplicated total of beneficiaries who received one or more HCBS benefits.

<sup>2</sup> Alabama data include more than 100,000 more private duty nursing beneficiaries than the next highest state. The reason for this data anomaly is not known.

<sup>3</sup> The number of home health beneficiaries in an available benchmark differed from the number of beneficiaries in this MAX analysis by more than 20 percent. See Table A-3 for the benchmark.

<sup>4</sup> The number of personal care beneficiaries in an available benchmark differed from the number of beneficiaries in this MAX analysis by more than 20 percent. See Table A-4 for the benchmark.

<sup>5</sup> This report uses 2010 data for Arizona, Colorado, the District of Columbia, and Idaho, because MAX does not include 2011 or 2012 data for these states.

<sup>6</sup> The number of Section 1915(c) waiver beneficiaries in two available benchmarks differed from the number of beneficiaries in this MAX analysis by more than 20 percent. See Table A-5 for the benchmarks.

<sup>7</sup> MAX does not include data for 2010 through 2012 for Kansas and Maine.

<sup>8</sup> Rhode Island and Vermont provide services similar to Section 1915(c) waivers in Section 1115 demonstrations. These states categorized these services as Section 1915(c) waiver services in the Medicaid Statistical Information System (MSIS), the source data for MAX.

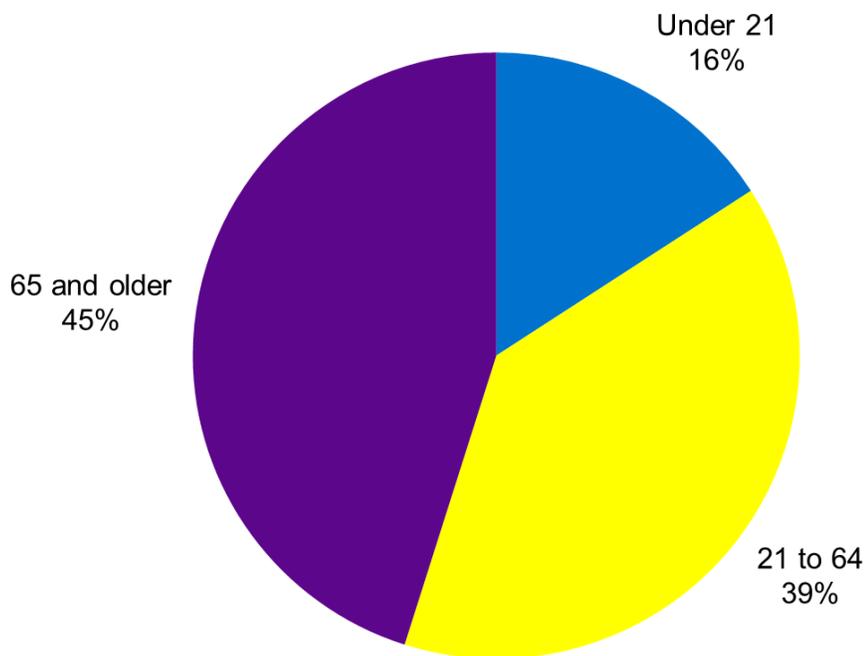
<sup>9</sup> This report uses 2011 data for Rhode Island because MAX does not include 2012 data for that state.

## Beneficiary Data by Age Group

Figure 5 displays the distribution of LTSS beneficiaries by three age groups, people age 65 and older; adults age 21 through 64; and children and youth under age 21. Age group data are only reported for the 45 states with 2011 or 2012 claims data in MAX. We did not obtain age group data for the first year of this report, 2010. We used 2012 data for all states except Rhode Island, for which MAX only has 2011 data.

The largest age group was older adults age 65 or older (45 percent). A majority of beneficiaries were under age 65, however. People age 21 through 64 were 39 percent of beneficiaries and children and youth under age 21 comprised 16 percent of beneficiaries.

**Figure 5. Distribution of Medicaid LTSS Beneficiaries by Age Group, 2012**



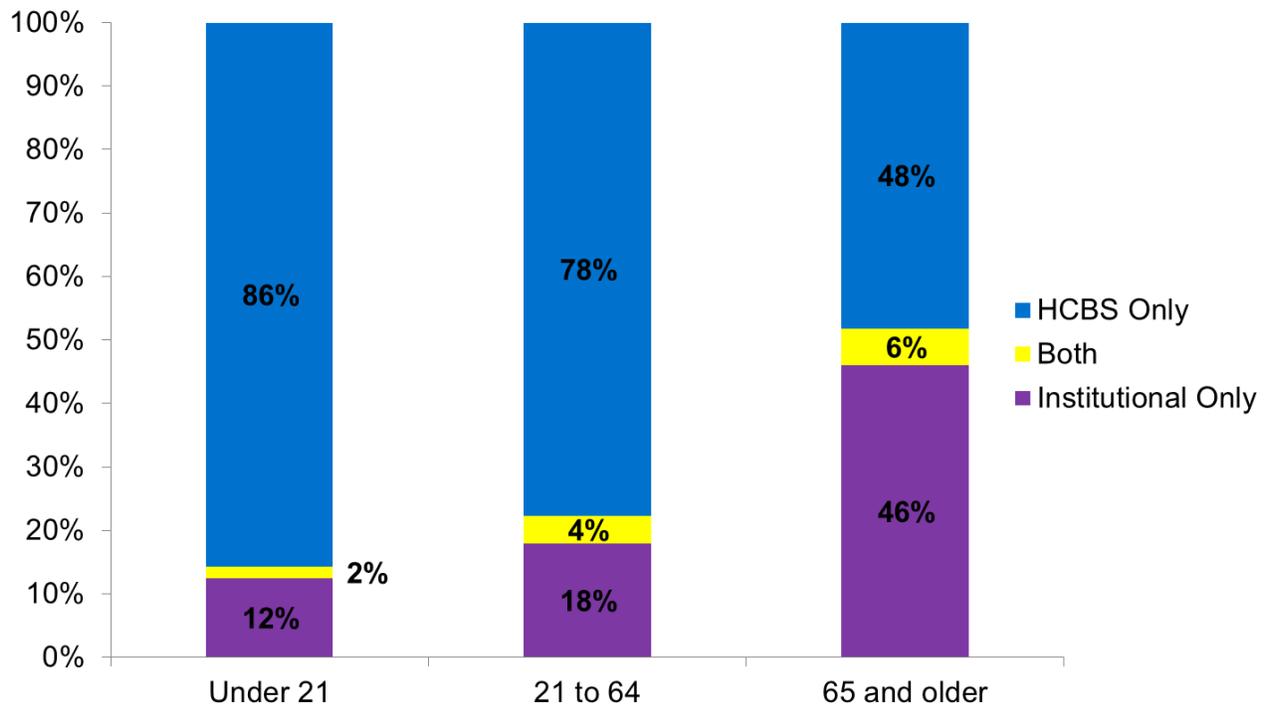
Source: Medicaid Analytic eXtract (MAX). Data for 2011 were used for Rhode Island because MAX does not include 2012 data for that state. Data were not included for Arizona, Colorado, the District of Columbia, Idaho, Kansas, and Maine because these states did not have 2011 or 2012 data in MAX.

Data do not include LTSS beneficiaries enrolled in comprehensive managed care plans.

Age was defined based on the beneficiary's age as of January 1 of the data year. Age data were not available for 29,795 beneficiaries, less than one percent of total beneficiaries.

For each age group, more people used HCBS than received institutional services. Older adults were more likely to have institutional supports. Only 54 percent of older adults received HCBS, when including people who received both institutional services and HCBS, compared to more than 80 percent of people in younger age groups.

**Figure 6: Percentage of Medicaid LTSS Beneficiaries who Received HCBS by Age Group, 2012**



Source: Medicaid Analytic eXtract (MAX). Data for 2011 were used for Rhode Island because MAX does not include 2012 data for that state. Data were not included for Arizona, Colorado, the District of Columbia, Idaho, Kansas, and Maine because these states did not have 2011 or 2012 data in MAX.

Data do not include LTSS beneficiaries enrolled in comprehensive managed care plans.

Age was defined based on the beneficiary's age as of January 1 of the data year. Age data were not available for 29,795 beneficiaries, less than one percent of total beneficiaries.

A series of tables starting on the next page show state-level data by age group in order from younger to older groups.

Table 4 presents summary data for institutional services and HCBS for children and youth under age 21. More than 80 percent of beneficiaries received HCBS in two-thirds of states with data (30 of 45; 67 percent). The five states with the lowest percentage of beneficiaries receiving HCBS were Tennessee, Delaware, Oklahoma, Arkansas, and New Mexico. Delaware, Tennessee, and New Mexico may appear on this list because data for community-based services are missing. These states provided most LTSS through comprehensive managed care programs, which are not included as explained in Appendix A.

**Table 4: Children and Youth under Age 21 who Received Any Type of Medicaid LTSS, 2012**

State	Total Unduplicated	Total Institutional Only <sup>1</sup>	Percent Institutional Only	Total HCBS Only <sup>2</sup>	Percent HCBS Only	Total Both Institutional and HCBS	Percent Both
Alabama	108,996	1,785	1.6	106,115	97.4	1,096	1.0
Alaska	2,821	1,119	39.7	1,643	58.2	59	2.1
Arkansas	10,815	6,135	56.7	4,261	39.4	419	3.9
California	94,860	3,118	3.3	91,027	96.0	715	0.8
Connecticut	4,073	667	16.4	3,323	81.6	83	2.0
Delaware	489	334	68.3	150	30.7	5	1.0
Florida	18,339	327	1.8	17,933	97.8	79	0.4
Georgia	6,180	37	0.6	6,133	99.2	10	0.2
Hawaii	1,733	10	0.6	1,719	99.2	4	0.2
Illinois	37,107	6,386	17.2	29,889	80.5	832	2.2
Indiana	8,453	2,356	27.9	5,926	70.1	171	2.0
Iowa	17,013	840	4.9	15,961	93.8	212	1.2
Kentucky	10,704	3,170	29.6	7,301	68.2	233	2.2
Louisiana	23,421	4,105	17.5	18,366	78.4	950	4.1
Maryland	8,223	2,669	32.5	5,432	66.1	122	1.5
Massachusetts	10,059	1,379	13.7	8,319	82.7	361	3.6
Michigan	15,936	4,605	28.9	11,124	69.8	207	1.3
Minnesota	24,826	401	1.6	24,078	97.0	347	1.4
Mississippi	6,485	3,310	51.0	2,990	46.1	185	2.9
Missouri	6,335	124	2.0	6,176	97.5	35	0.6
Montana	3,135	335	10.7	2,674	85.3	126	4.0
Nebraska	2,327	399	17.1	1,912	82.2	16	0.7
Nevada	6,578	1,233	18.7	5,126	77.9	219	3.3
New Hampshire	2,590	363	14.0	2,177	84.1	50	1.9
New Jersey	19,900	1,418	7.1	17,930	90.1	552	2.8
New Mexico	3,496	1,856	53.1	1,618	46.3	22	0.6
New York	63,931	10,341	16.2	51,066	79.9	2,524	3.9
North Carolina	17,346	3,228	18.6	13,950	80.4	168	1.0
North Dakota	2,780	252	9.1	2,508	90.2	20	0.7
Oklahoma	15,956	2,327	14.6	13,362	83.7	267	1.7

State	Total Unduplicated	Total Institutional Only <sup>1</sup>	Percent Institutional Only	Total HCBS Only <sup>2</sup>	Percent HCBS Only	Total Both Institutional and HCBS	Percent Both
Ohio	7,399	4,631	62.6	2,642	35.7	126	1.7
Oregon	5,521	1,192	21.6	4,139	75.0	190	3.4
Pennsylvania	42,368	1,179	2.8	41,046	96.9	143	0.3
Rhode Island <sup>3</sup>	3,737	147	3.9	3,541	94.8	49	1.3
South Carolina	8,588	726	8.5	7,460	86.9	402	4.7
South Dakota	1,997	789	39.5	1,185	59.3	23	1.2
Tennessee	3,396	2,928	86.2	427	12.6	41	1.2
Texas	70,082	8,982	12.8	59,668	85.1	1,432	2.0
Utah	2,023	248	12.3	1,757	86.9	18	0.9
Vermont	3,867	1	0.0	3,862	99.9	4	0.1
Virginia	9,942	1,146	11.5	8,636	86.9	160	1.6
Washington	6,275	828	13.2	5,385	85.8	62	1.0
West Virginia	5,566	1,819	32.7	3,553	63.8	194	3.5
Wisconsin	10,759	2,510	23.3	7,976	74.1	273	2.5
Wyoming	1,389	241	17.4	1,130	81.4	18	1.3
Total <sup>4</sup>	737,816	91,996	12.5	632,596	85.7	13,224	1.8

Data Source: Medicaid Analytic eXtract (MAX). Data do not include LTSS beneficiaries enrolled in comprehensive managed care plans.

<sup>1</sup> Institutional services include nursing facilities, intermediate care facilities for individuals with intellectual disabilities, inpatient psychiatric facilities for individuals under age 21, and IMD hospital services for people age 65 and older.

<sup>2</sup> HCBS include Section 1915(c) waivers, services similar to Section 1915(c) waiver services provided in a Section 1115 demonstration, targeted case management, personal care services, home health, rehabilitation services, adult day care, private duty nursing, and the Program of All-Inclusive Care for the Elderly.

<sup>3</sup> This report uses 2011 data for Rhode Island because MAX does not include 2012 data for that state.

<sup>4</sup> Data are not included for Arizona, Colorado, the District of Columbia, Idaho, Kansas and Maine because MAX does not include 2011 or 2012 data for these states.

As shown in Table 5, the most common institutional service for children and youth was inpatient psychiatric facilities for people under age 21 (about 90,000 beneficiaries). These facilities were the most common type of institutional service in 39 of the 45 states with data (87 percent). Of the six states where inpatient psychiatric facilities were not the most common institutional service for children and youth, data from four states indicated no people received these services (California, Florida, Georgia, and Hawaii). In a fifth state, Massachusetts, nursing facility services were received by more children and youth than inpatient psychiatric facility services. The remaining state, Delaware, reported a greater number of children and youth received IMD hospital services for people age 65 and older, a benefit unavailable to this age group. Delaware was one of nine states where data indicated children and youth under age 21 received a benefit for people age 65 or older; the reason for this error is not known.

**Table 5: Children and Youth under Age 21 who Received Medicaid Institutional LTSS, 2012**

State	Total Institutional Only <sup>1</sup>	Nursing Facilities	Intermediate Care Facilities for Individuals with Intellectual Disabilities	Inpatient Psychiatric Facilities for People Under Age 21	IMD Hospital Services for People Age 65 and Older
Alabama	2,881	128	0	2,753	0
Alaska	1,178	1	12	1,168	0
Arkansas	6,554	8	308	6,263	0
California	3,833	1,803	2,052	0	0
Connecticut	750	97	5	650	1
Delaware	339	35	2	87	222
Florida	406	286	127	0	0
Georgia	47	19	28	0	0
Hawaii	14	12	4	0	0
Illinois	7,218	87	422	6,718	22
Indiana	2,527	217	274	2,050	0
Iowa	1,052	98	318	649	0
Kentucky	3,403	161	20	3,224	0
Louisiana	5,055	30	485	4,589	1
Maryland	2,791	27	1	2,763	0
Massachusetts	1,740	1,458	0	287	0
Michigan	4,812	257	0	4,555	15
Minnesota	748	19	133	597	0
Mississippi	3,495	14	336	3,156	0
Missouri	159	27	1	131	0
Montana	461	6	9	446	0
Nebraska	415	44	30	342	0
Nevada	1,452	36	25	1,393	0
New Hampshire	413	21	39	356	0
New Jersey	1,970	232	4	1,734	0

State	Total Institutional Only <sup>1</sup>	Nursing Facilities	Intermediate Care Facilities for Individuals with Intellectual Disabilities	Inpatient Psychiatric Facilities for People Under Age 21	IMD Hospital Services for People Age 65 and Older
New Mexico	1,878	5	15	1,874	0
New York	12,865	1,073	812	11,037	0
North Carolina	3,396	18	394	2,992	0
North Dakota	272	7	102	163	0
Oklahoma	2,594	137	496	1,980	0
Ohio	4,757	162	100	4,564	0
Oregon	1,382	80	0	1,302	0
Pennsylvania	1,322	40	146	1,137	0
Rhode Island <sup>2</sup>	196	3	16	151	42
South Carolina	1,128	1	46	1,086	0
South Dakota	812	4	97	715	0
Tennessee	2,969	7	29	2,933	0
Texas	10,414	141	710	9,620	0
Utah	266	70	77	123	0
Vermont	5	4	0	0	1
Virginia	1,306	254	133	940	0
Washington	890	26	1	863	0
Wisconsin	2,013	13	86	1,888	50
West Virginia	2,783	18	103	2,669	1
Wyoming	259	0	1	258	0
Total <sup>3</sup>	105,220	7,186	7,999	90,206	355

Data Source: Medicaid Analytic eXtract (MAX). Data do not include LTSS beneficiaries enrolled in comprehensive managed care plans.

<sup>1</sup> Total Institutional is the unduplicated total of beneficiaries who received one or more institutional services.

<sup>2</sup> This report uses 2011 data for Rhode Island because MAX does not include 2012 data for that state.

<sup>3</sup> Data are not included for Arizona, Colorado, the District of Columbia, Idaho, Kansas and Maine because MAX does not include 2011 or 2012 data for these states.

The most common type of HCBS for children and youth under age 21 was Section 1915(c) waiver services (242,000 individuals), followed by targeted case management (206,000 individuals; see Table 6). For 20 of the 45 states with data, Section 1915(c) waiver services were the most common type of HCBS. Case management beneficiaries were concentrated in fewer states: this service was the most common type of HCBS for only 13 states.

**Table 6: Children and Youth under age 21 who Received Medicaid HCBS, 2012**

State	Total HCBS Only <sup>1</sup>	Section 1915(c) Waivers	Personal Care	Case Management	Home Health	Rehabilitation Services	Private Duty Nursing	Adult Day Care	PACE	HCBS - 1115
Alabama	107,211	755	0	3,575	5,361	3,322	99,459	0	0	0
Alaska	1,702	1,564	136	122	12	20	19	0	0	0
Arkansas	4,680	960	571	2,799	728	63	68	0	0	0
California	91,742	44,987	32,680	69,919	6,088	16,122	147	498	0	0
Connecticut	3,406	983	0	645	2,278	0	0	0	0	0
Delaware	155	45	0	0	55	41	20	0	0	0
Florida	18,012	7,326	0	8,570	3,766	1,322	0	0	0	0
Georgia	6,143	2,859	0	3,401	210	0	631	0	0	0
Hawaii	1,723	1,636	0	418	112	2	0	0	0	0
Illinois	30,721	15,325	3,060	11,253	2,931	1,160	561	0	0	0
Indiana	6,097	5,058	0	720	1,497	160	0	0	0	0
Iowa	16,173	7,218	0	3,975	9,705	0	0	150	0	0
Kentucky	7,534	6,369	0	1,805	65	0	0	0	0	0
Louisiana	19,316	14,392	2,219	3,899	2,381	0	0	1	0	0
Maryland	5,554	1,925	234	251	3,520	27	655	933	0	0
Massachusetts	8,680	206	3,315	4,614	2,517	0	0	6	0	0
Michigan	11,331	596	8,833	1,529	950	464	1,535	0	0	0
Minnesota	24,425	5,846	10,165	5,529	10,280	127	453	0	0	0
Mississippi	3,175	376	131	2,400	424	0	96	0	0	0
Missouri	6,211	2,287	872	3,789	851	258	622	181	2	0
Montana	2,800	1,885	256	845	27	4	0	21	0	0
Nebraska	1,928	1,281	452	0	332	0	24	6	0	0
Nevada	5,345	182	160	3,106	256	3,187	0	16	0	0
New Hampshire	2,227	1,670	4	11	617	251	98	1	0	0
New Jersey	18,482	818	225	271	150	17,717	39	0	0	0
New Mexico	1,640	876	24	706	49	3	24	0	0	0
New York	53,590	31,318	3,105	5,907	9,213	26,515	1,531	309	0	0
North Carolina	14,118	5,386	1,338	9,574	3,448	0	0	0	0	0
North Dakota	2,528	2,310	12	6	49	267	0	0	0	0
Oklahoma	13,629	7,501	0	8,350	6,344	48	914	0	0	0

State	Total HCBS Only <sup>1</sup>	Section 1915(c) Waivers	Personal Care	Case Management	Home Health	Rehabilitation Services	Private Duty Nursing	Adult Day Care	PACE	HCBS - 1115
Ohio	2,768	828	118	1,573	1,240	0	0	0	0	0
Oregon	4,329	3,012	1,057	570	12	201	191	0	0	0
Pennsylvania	41,189	29,523	0	10,361	2,543	479	24	0	0	0
Rhode Island <sup>2, 3</sup>	3,590	10	3	3,108	191	1,855	0	3	0	432
South Carolina	7,862	2,642	1,116	5,414	375	2,843	198	107	0	0
South Dakota	1,208	930	0	0	172	235	59	0	0	0
Tennessee	468	464	0	0	0	4	0	152	0	0
Texas	61,100	13,241	12,067	20,657	22,296	10,729	15	86	0	0
Utah	1,775	1,301	95	8	596	5	24	0	0	0
Vermont <sup>3</sup>	3,866	573	2,412	1,030	847	0	0	0	0	3,352
Virginia	8,796	7,593	27	185	249	1,033	186	1	0	0
Washington	5,447	1,594	3,443	46	91	556	26	48	0	0
West Virginia	3,747	1,978	139	532	117	668	650	0	0	0
Wisconsin	8,249	3,808	0	3,982	4	1,529	59	0	63	0
Wyoming	1,148	920	0	86	124	273	0	0	0	0
<b>Total<sup>4</sup></b>	<b>645,820</b>	<b>242,357</b>	<b>88,269</b>	<b>205,541</b>	<b>103,073</b>	<b>91,490</b>	<b>108,328</b>	<b>2,519</b>	<b>65</b>	<b>3,784</b>

Data Source: Medicaid Analytic eXtract (MAX). Data do not include LTSS beneficiaries enrolled in comprehensive managed care plans.

<sup>1</sup> Total HCBS is the unduplicated total of beneficiaries who received one or more HCBS benefits.

<sup>2</sup> This report uses 2011 data for Rhode Island because MAX does not include 2012 data for that state.

<sup>3</sup> Rhode Island and Vermont provide services similar to Section 1915(c) waivers in Section 1115 demonstrations. These states categorized these services as Section 1915(c) waiver services in the Medicaid Statistical Information System (MSIS), the source data for MAX.

<sup>4</sup> Data are not included for Arizona, Colorado, the District of Columbia, Idaho, Kansas and Maine because MAX does not include 2011 or 2012 data for these states.

Table 7 presents summary data for institutional services and HCBS for adults age 21 through 64. In most states, between 70 and 90 percent of beneficiaries received HCBS (31 of 45; 69 percent). Eight states provided HCBS to at least 90 percent of LTSS beneficiaries in this age group: Minnesota, Alaska, Alabama, Oregon, Montana, Wyoming, New Hampshire, and Vermont.

Five states provided HCBS to less than 70 percent of beneficiaries in this age group: Tennessee, Delaware, Louisiana, New Jersey, and Indiana. Three of these states may serve a higher percentage of beneficiaries using HCBS than the data indicate. Tennessee may on this list because data for community-based services are missing; Tennessee provides most services through a comprehensive managed care program, which is not included as explained in Appendix A. Data in Delaware and Louisiana may reflect an error in categorizing services. As described further in the text introducing Table 8, the data indicate a majority of institutional beneficiaries age 21 through 64 received IMD hospital services for people age 65 and older.

**Table 7: Adults Age 21 through 64 who Received Any Type of Medicaid LTSS, 2012**

State	Total Unduplicated	Total Institutional Only <sup>1</sup>	Percent Institutional Only	Total HCBS Only <sup>2</sup>	Percent HCBS Only	Total Both Institutional and HCBS	Percent Both
Alabama	60,974	3,314	5.4	55,709	91.4	1,951	3.2
Alaska	4,279	192	4.5	4,011	93.7	76	1.8
Arkansas	17,795	4,630	26.0	12,591	70.8	574	3.2
California	292,006	30,942	10.6	249,873	85.6	11,191	3.8
Connecticut	29,572	5,282	17.9	22,065	74.6	2,225	7.5
Delaware	6,723	3,961	58.9	2,640	39.3	122	1.8
Florida	63,468	13,862	21.8	48,694	76.7	912	1.4
Georgia	38,058	6,671	17.5	30,315	79.7	1,072	2.8
Hawaii	2,340	314	13.4	1,944	83.1	82	3.5
Illinois	102,223	21,495	21.0	71,083	69.5	9,645	9.4
Indiana	29,360	9,227	31.4	18,885	64.3	1,248	4.3
Iowa	21,051	3,782	18.0	16,528	78.5	741	3.5
Kentucky	20,659	5,924	28.7	13,891	67.2	844	4.1
Louisiana	42,315	16,141	38.1	24,500	57.9	1,674	4.0
Maryland	24,214	5,392	22.3	17,933	74.1	889	3.7
Massachusetts	54,765	10,038	18.3	40,964	74.8	3,763	6.9
Michigan	63,970	7,491	11.7	53,914	84.3	2,565	4.0
Minnesota	74,276	2,286	3.1	66,889	90.1	5,101	6.9
Mississippi	20,788	5,424	26.1	14,785	71.1	579	2.8
Missouri	62,508	8,163	13.1	52,548	84.1	1,797	2.9
Montana	8,637	659	7.6	7,693	89.1	285	3.3
Nebraska	9,371	2,124	22.7	6,889	73.5	358	3.8

State	Total Unduplicated	Total Institutional Only <sup>1</sup>	Percent Institutional Only	Total HCBS Only <sup>2</sup>	Percent HCBS Only	Total Both Institutional and HCBS	Percent Both
Nevada	9,021	1,194	13.2	7,495	83.1	332	3.7
New Hampshire	6,704	615	9.2	5,775	86.1	314	4.7
New Jersey	25,267	8,436	33.4	16,070	63.6	761	3.0
New Mexico	6,684	1,681	25.1	4,903	73.4	100	1.5
New York	152,560	28,235	18.5	117,865	77.3	6,460	4.2
North Carolina	62,032	8,642	13.9	51,561	83.1	1,829	2.9
North Dakota	5,039	802	15.9	3,982	79.0	255	5.1
Oklahoma	82,455	24,816	30.1	52,292	63.4	5,347	6.5
Ohio	22,460	5,212	23.2	16,561	73.7	687	3.1
Oregon	27,461	1,791	6.5	24,506	89.2	1,164	4.2
Pennsylvania	80,049	14,503	18.1	62,091	77.6	3,455	4.3
Rhode Island <sup>3</sup>	7,926	1,009	12.7	6,422	81.0	495	6.2
South Carolina	22,947	2,830	12.3	19,513	85.0	604	2.6
South Dakota	4,179	804	19.2	3,197	76.5	178	4.3
Tennessee	14,491	6,307	43.5	8,069	55.7	115	0.8
Texas	115,690	30,077	26.0	81,830	70.7	3,783	3.3
Utah	7,379	2,188	29.7	4,756	64.5	435	5.9
Vermont	5,622	560	10.0	4,792	85.2	270	4.8
Virginia	26,553	6,335	23.9	18,881	71.1	1,337	5.0
Washington	41,596	5,435	13.1	34,511	83.0	1,650	4.0
West Virginia	16,850	2,791	16.6	13,176	78.2	883	5.2
Wisconsin	21,151	3,907	18.5	16,362	77.4	882	4.2
Wyoming	3,523	271	7.7	3,123	88.6	129	3.7
Total <sup>4</sup>	1,816,991	325,755	17.9	1,412,077	77.7	79,159	4.4

Data Source: Medicaid Analytic eXtract (MAX). Data do not include LTSS beneficiaries enrolled in comprehensive managed care plans.

<sup>1</sup> Institutional services include nursing facilities, intermediate care facilities for individuals with intellectual disabilities, inpatient psychiatric facilities for individuals under age 21, and IMD hospital services for people age 65 and older.

<sup>2</sup> HCBS include Section 1915(c) waivers, services similar to Section 1915(c) waiver services provided in a Section 1115 demonstration, targeted case management, personal care services, home health, rehabilitation services, adult day care, private duty nursing, and the Program of All-Inclusive Care for the Elderly.

<sup>3</sup> This report uses 2011 data for Rhode Island because MAX does not include 2012 data for that state.

<sup>4</sup> Data are not included for Arizona, Colorado, the District of Columbia, Idaho, Kansas and Maine because MAX does not include 2011 or 2012 data for these states.

Nursing facility services were the most common institutional service for people age 21 through 64 (307,000 people; see Table 8). This type of service was the most common institutional service in 43 of the 45 states with data (96 percent). Two states, Delaware and Louisiana, reported more individuals received IMD hospital services for people age 65 and older, a benefit unavailable for this age group. These states were among 37 states where data indicated individuals under age 65 received a benefit for people age 65 or older. Age is counted as of the first day of the calendar year, so Table 8 includes people who turned 65 during 2012. However, the number of IMD hospital beneficiaries who turned 65 in 2012 is likely to be smaller than the thousands of individuals indicated in data from Delaware, Louisiana, and a few other states. The reason for the data error is not known.

**Table 8: Adults Age 21 through 64 who Received Medicaid Institutional LTSS, 2012**

State	Total Institutional Only <sup>1</sup>	Nursing Facilities	Intermediate Care Facilities for Individuals with Intellectual Disabilities	Inpatient Psychiatric Facilities for People Under Age 21	IMD Hospital Services for People Age 65 and Older
Alabama	5,265	5,227	35	1	6
Alaska	268	257	7	2	2
Arkansas	5,204	3,401	1,246	616	0
California	42,133	34,040	8,649	0	0
Connecticut	7,507	6,601	834	11	71
Delaware	4,083	953	106	0	3,041
Florida	14,774	12,340	2,446	0	5
Georgia	7,743	7,331	418	0	0
Hawaii	396	271	149	0	0
Illinois	31,140	22,767	7,321	14	2,111
Indiana	10,475	7,111	3,415	1	9
Iowa	4,523	2,834	1,691	23	5
Kentucky	6,768	6,292	446	24	16
Louisiana	17,815	6,831	4,160	87	7,597
Maryland	6,281	6,144	118	19	2
Massachusetts	13,801	12,125	466	8	1,298
Michigan	10,056	9,750	1	255	57
Minnesota	7,387	4,940	2,441	30	8
Mississippi	6,003	3,770	2,249	1	4
Missouri	9,960	9,413	550	2	0
Montana	944	892	50	0	2
Nebraska	2,482	1,850	337	301	0
Nevada	1,526	1,439	87	0	0
New Hampshire	929	915	0	15	0
New Jersey	9,197	7,050	2,140	9	6
New Mexico	1,781	1,535	230	26	5

State	Total Institutional Only <sup>1</sup>	Nursing Facilities	Intermediate Care Facilities for Individuals with Intellectual Disabilities	Inpatient Psychiatric Facilities for People Under Age 21	IMD Hospital Services for People Age 65 and Older
New York	34,695	27,554	6,369	478	523
North Carolina	10,471	7,532	2,963	1	1
North Dakota	1,057	651	415	0	1
Oklahoma	30,163	23,639	5,928	6	859
Ohio	5,899	4,460	1,459	5	5
Oregon	2,955	2,907	0	47	2
Pennsylvania	17,958	12,996	2,930	51	2,167
Rhode Island <sup>2</sup>	1,504	1,433	23	1	48
South Carolina	3,434	2,256	1,191	3	3
South Dakota	982	805	122	0	59
Tennessee	6,422	5,527	895	0	7
Texas	33,860	21,261	8,674	4,138	13
Utah	2,623	1,961	689	0	4
Vermont	830	567	7	0	259
Virginia	7,672	5,964	1,157	0	588
Washington	7,085	4,520	45	26	2,562
Wisconsin	3,674	2,358	423	284	670
West Virginia	4,789	4,022	634	30	112
Wyoming	400	332	62	2	4
Total <sup>3</sup>	404,914	306,824	73,578	6,517	22,132

Data Source: Medicaid Analytic eXtract (MAX). Data do not include LTSS beneficiaries enrolled in comprehensive managed care plans.

<sup>1</sup> Total Institutional is the unduplicated total of beneficiaries who received one or more institutional services.

<sup>2</sup> This report uses 2011 data for Rhode Island because MAX does not include 2012 data for that state.

<sup>3</sup> Data are not included for Arizona, Colorado, the District of Columbia, Idaho, Kansas and Maine because MAX does not include 2011 or 2012 data for these states.

Section 1915(c) waiver services were the most common type of HCBS among people age 21 through 64 (736,000), as shown on Table 9. These waivers were the most common type of HCBS for 33 of the 45 states with data (73%).

**Table 9: Adults Age 21 through 64 who Received Medicaid HCBS, 2012**

State	Total HCBS Only <sup>1</sup>	Section 1915(c) Waivers	Personal Care	Case Management	Home Health	Rehabilitation Services	Private Duty Nursing	Adult Day Care	PACE	HCBS - 1115
Alabama	57,660	8,087	0	17,373	8,007	0	37,919	0	35	0
Alaska	4,087	2,628	2,383	24	259	0	0	0	0	0
Arkansas	13,165	5,948	6,131	336	3,551	30	26	0	19	0
California	261,064	62,396	180,421	93,442	9,468	5,070	1	6,895	665	0
Connecticut	24,290	10,036	28	8,706	15,827	0	0	4	0	0
Delaware	2,762	1,939	0	0	368	682	21	0	0	0
Florida	49,606	34,546	0	8,330	9,843	0	0	0	200	0
Georgia	31,387	26,234	0	844	6,463	0	0	0	0	0
Hawaii	2,026	2,005	0	1,483	1	0	0	0	0	0
Illinois	80,728	55,969	0	21,237	7,488	58	0	0	0	0
Indiana	20,133	15,515	0	84	7,890	157	0	0	0	0
Iowa	17,269	11,656	0	8,137	6,794	0	0	1,714	92	0
Kentucky	14,735	12,427	0	2,278	1,423	21	0	0	0	0
Louisiana	26,174	13,246	10,987	7,147	3,734	0	0	24	57	0
Maryland	18,822	15,523	2,666	1,585	1,581	321	192	2,452	26	0
Massachusetts	44,727	12,093	8,433	20,701	16,602	0	0	3,298	1,178	0
Michigan	56,479	3,989	49,190	40,881	2,902	807	93	11	109	0
Minnesota	71,990	29,514	15,969	13,697	44,120	96	363	0	0	0
Mississippi	15,364	10,362	437	3,799	3,427	0	3	3	0	0
Missouri	54,345	11,442	33,144	14,555	4,972	6,420	1	1,981	53	0
Montana	7,978	3,479	2,342	3,406	364	123	0	279	0	0
Nebraska	7,247	5,326	1,357	0	833	0	17	226	0	0
Nevada	7,827	2,100	2,989	4,313	376	1,176	0	232	0	0
New Hampshire	6,089	4,709	168	196	1,507	244	22	70	0	0
New Jersey	16,831	13,100	2,343	427	1,262	46	0	193	174	0
New Mexico	5,003	3,969	874	4	118	20	0	0	43	0
New York	124,325	63,950	16,733	15,795	31,166	17,041	608	13,562	537	0
North Carolina	53,390	10,619	28,671	13,709	17,320	0	0	28	98	0
North Dakota	4,237	2,576	486	102	300	1,956	0	0	9	0
Oklahoma	57,639	44,904	0	28,318	22,099	718	463	0	290	0
Ohio	17,248	13,394	2,227	4,352	3,783	0	0	0	38	0
Oregon	25,670	22,433	2,982	73	353	2,648	164	0	146	0

State	Total HCBS Only <sup>1</sup>	Section 1915(c) Waivers	Personal Care	Case Management	Home Health	Rehabilitation Services	Private Duty Nursing	Adult Day Care	PACE	HCBS - 1115
Pennsylvania	65,546	49,402	0	10,566	7,660	5	0	0	579	0
Rhode Island <sup>2, 3</sup>	6,917	1,444	178	523	588	1,804	0	2,049	44	4,958
South Carolina	20,117	15,296	489	9,764	2,887	195	1	4,098	70	0
South Dakota	3,375	3,024	217	0	157	162	0	0	0	0
Tennessee	8,184	7,273	0	0	61	839	0	5,895	47	0
Texas	85,613	55,530	199	23,182	3,898	206	0	7,455	115	0
Utah	5,191	3,941	416	1	1,227	101	4	37	0	0
Vermont <sup>3</sup>	5,062	3,264	150	911	1,818	4	0	0	28	4,677
Virginia	20,218	17,654	4	579	2,207	365	0	2	156	0
Washington	36,161	24,935	10,780	1,274	1,973	899	74	502	67	0
West Virginia	14,059	6,377	3,857	90	2,669	2,520	0	0	0	0
Wisconsin	17,244	9,387	0	4,629	106	1,109	5	0	2,615	0
Wyoming	3,252	2,427	0	272	351	943	0	0	0	0
Total <sup>4</sup>	1,491,236	736,068	387,251	387,125	259,803	46,786	39,977	51,010	7,490	9,635

Data Source: Medicaid Analytic eXtract (MAX). Data do not include LTSS beneficiaries enrolled in comprehensive managed care plans.

<sup>1</sup> Total HCBS is the unduplicated total of beneficiaries who received one or more HCBS benefits.

<sup>2</sup> This report uses 2011 data for Rhode Island because MAX does not include 2012 data for that state.

<sup>3</sup> Rhode Island and Vermont provide services similar to Section 1915(c) waivers in Section 1115 demonstrations. These states categorized these services as Section 1915(c) waiver services in the Medicaid Statistical Information System (MSIS), the source data for MAX.

<sup>4</sup> Data are not included for Arizona, Colorado, the District of Columbia, Idaho, Kansas and Maine because MAX does not include 2011 or 2012 data for these states.

Table 10 presents summary institutional and HCBS data for adults age 65 or older. Although a majority of older adults nationwide received HCBS, the same was true in only 13 of 45 states (29 percent). Four states—Alaska, Oregon, California, and Washington—served more than 70 percent of older LTSS beneficiaries in the community. A little more than half of states (24 of 45; 53 percent) provided HCBS to between 30 and 50 percent of LTSS beneficiaries in this age group. In eight states, less than 30 percent of beneficiaries received HCBS: Tennessee, Hawaii, New Mexico, Indiana, Kentucky, Delaware, South Dakota, and Wisconsin. Five of these states – Delaware, Hawaii, New Mexico, Tennessee, and Wisconsin – likely appear on this list because they have large managed care programs and this report does not include managed care data as described in Appendix A.

**Table 10: Older Adults who Received Any Type of Medicaid LTSS, 2012**

State	Total Unduplicated	Total Institutional Only <sup>1</sup>	Percent Institutional Only	Total HCBS Only <sup>2</sup>	Percent HCBS Only	Total Both Institutional and HCBS	Percent Both
Alabama	29,335	15,849	54.0	10,402	35.5	3,084	10.5
Alaska	4,149	474	11.4	3,545	85.4	130	3.1
Arkansas	25,777	13,543	52.5	10,729	41.6	1,505	5.8
California	388,194	82,084	21.1	285,048	73.4	21,062	5.4
Connecticut	37,278	20,912	56.1	12,617	33.8	3,749	10.1
Delaware	4,137	3,059	73.9	818	19.8	260	6.3
Florida	103,644	52,626	50.8	47,865	46.2	3,153	3.0
Georgia	43,958	26,100	59.4	16,540	37.6	1,318	3.0
Hawaii	1,321	1,167	88.3	148	11.2	6	0.5
Illinois	107,509	35,314	32.8	60,031	55.8	12,164	11.3
Indiana	36,428	29,141	80.0	6,334	17.4	953	2.6
Iowa	25,279	13,085	51.8	10,634	42.1	1,560	6.2
Kentucky	23,907	18,273	76.4	4,851	20.3	783	3.3
Louisiana	31,162	20,184	64.8	10,324	33.1	654	2.1
Maryland	26,075	16,262	62.4	8,850	33.9	963	3.7
Massachusetts	80,936	30,883	38.2	42,958	53.1	7,095	8.8
Michigan	60,233	31,455	52.2	25,655	42.6	3,123	5.2
Minnesota	46,449	16,418	35.3	23,823	51.3	6,208	13.4
Mississippi	26,001	14,029	54.0	11,127	42.8	845	3.2
Missouri	48,154	23,133	48.0	22,200	46.1	2,821	5.9
Montana	5,483	3,365	61.4	1,793	32.7	325	5.9
Nebraska	11,695	6,860	58.7	3,855	33.0	980	8.4
Nevada	7,686	2,710	35.3	4,730	61.5	246	3.2
New Hampshire	8,099	5,420	66.9	2,108	26.0	571	7.1
New Jersey	45,192	29,480	65.2	13,616	30.1	2,096	4.6
New Mexico	5,872	4,940	84.1	855	14.6	77	1.3

State	Total Unduplicated	Total Institutional Only <sup>1</sup>	Percent Institutional Only	Total HCBS Only <sup>2</sup>	Percent HCBS Only	Total Both Institutional and HCBS	Percent Both
New York	202,095	101,607	50.3	87,603	43.3	12,885	6.4
North Carolina	67,147	28,692	42.7	34,886	52.0	3,569	5.3
North Dakota	5,430	3,547	65.3	1,497	27.6	386	7.1
Oklahoma	97,209	51,159	52.6	38,956	40.1	7,094	7.3
Ohio	27,932	13,730	49.2	12,788	45.8	1,414	5.1
Oregon	26,173	4,845	18.5	18,842	72.0	2,486	9.5
Pennsylvania	96,382	62,096	64.4	30,255	31.4	4,031	4.2
Rhode Island <sup>3</sup>	10,519	5,935	56.4	3,743	35.6	841	8.0
South Carolina	23,513	12,151	51.7	10,187	43.3	1,175	5.0
South Dakota	5,670	4,128	72.8	1,267	22.3	275	4.9
Tennessee	26,328	24,799	94.2	1,379	5.2	150	0.6
Texas	138,651	68,297	49.3	64,978	46.9	5,376	3.9
Utah	4,918	3,029	61.6	1,436	29.2	453	9.2
Vermont	5,454	2,278	41.8	2,588	47.5	588	10.8
Virginia	36,710	19,501	53.1	15,602	42.5	1,607	4.4
Washington	44,480	11,250	25.3	30,681	69.0	2,549	5.7
West Virginia	14,525	8,323	57.3	5,545	38.2	657	4.5
Wisconsin	29,895	21,537	72.0	7,183	24.0	1,175	3.9
Wyoming	2,937	1,762	60.0	957	32.6	218	7.4
Total <sup>4</sup>	2,099,921	965,432	46.0	1,011,829	48.2	122,660	5.8

Data Source: Medicaid Analytic eXtract (MAX). Data do not include LTSS beneficiaries enrolled in comprehensive managed care plans.

<sup>1</sup> Institutional services include nursing facilities, intermediate care facilities for individuals with intellectual disabilities, inpatient psychiatric facilities for individuals under age 21, and IMD hospital services for people age 65 and older.

<sup>2</sup> HCBS include Section 1915(c) waivers, services similar to Section 1915(c) waiver services provided in a Section 1115 demonstration, targeted case management, personal care services, home health, rehabilitation services, adult day care, private duty nursing, and the Program of All-Inclusive Care for the Elderly.

<sup>3</sup> This report uses 2011 data for Rhode Island because MAX does not include 2012 data for that state.

<sup>4</sup> Data are not included for Arizona, Colorado, the District of Columbia, Idaho, Kansas and Maine because MAX does not include 2011 or 2012 data for these states.

As was true for adults age 21 through 64, nursing facility services were the most common institutional service for older adults (1,074,000 people; see Table 11). This type of service was the most common institutional service for this age group in all states.

**Table 11: Older Adults who Received Medicaid Institutional LTSS, 2012**

State	Total Institutional Only <sup>1</sup>	Nursing Facilities	Intermediate Care Facilities for Individuals with Intellectual Disabilities	Inpatient Psychiatric Facilities for People Under Age 21	IMD Hospital Services for People Age 65 and Older
Alabama	18,933	18,848	7	0	163
Alaska	604	586	0	0	21
Arkansas	15,048	14,981	57	107	0
California	103,146	102,028	1,582	0	0
Connecticut	24,661	24,411	203	0	57
Delaware	3,319	3,272	24	0	42
Florida	55,779	55,483	235	0	79
Georgia	27,418	27,350	70	0	0
Hawaii	1,173	742	590	0	0
Illinois	47,478	46,464	959	0	291
Indiana	30,094	29,564	440	0	195
Iowa	14,645	14,473	120	0	96
Kentucky	19,056	18,910	35	0	294
Louisiana	20,838	20,013	384	0	1,214
Maryland	17,225	17,188	15	0	31
Massachusetts	37,978	37,762	195	0	30
Michigan	34,578	34,422	0	5	238
Minnesota	22,626	22,296	292	0	72
Mississippi	14,874	14,580	282	0	70
Missouri	25,954	25,893	57	0	6
Montana	3,690	3,658	0	0	42
Nebraska	7,840	7,788	53	2	0
Nevada	2,956	2,942	1	0	16
New Hampshire	5,991	5,984	0	9	0
New Jersey	31,576	31,098	354	0	222
New Mexico	5,017	4,964	27	1	60
New York	114,492	111,884	998	0	2,712
North Carolina	32,261	31,937	295	0	53
North Dakota	3,933	3,864	70	0	4
Oklahoma	58,253	57,386	874	0	59
Ohio	15,144	14,949	169	0	156
Oregon	7,331	7,320	0	0	15
Pennsylvania	66,127	65,424	490	0	335

State	Total Institutional Only <sup>1</sup>	Nursing Facilities	Intermediate Care Facilities for Individuals with Intellectual Disabilities	Inpatient Psychiatric Facilities for People Under Age 21	IMD Hospital Services for People Age 65 and Older
Rhode Island <sup>2</sup>	6,776	6,739	1	0	65
South Carolina	13,326	12,990	177	34	157
South Dakota	4,403	4,379	4	0	37
Tennessee	24,949	24,720	135	0	170
Texas	73,673	72,839	820	1	80
Utah	3,482	3,414	70	0	10
Vermont	2,866	2,858	0	0	11
Virginia	21,108	20,737	237	0	247
Washington	13,799	13,713	12	0	124
Wisconsin	8,980	8,908	51	11	46
West Virginia	22,712	22,521	112	0	88
Wyoming	1,980	1,959	21	0	0
Total <sup>3</sup>	1,088,092	1,074,241	10,518	170	7,608

Data Source: Medicaid Analytic eXtract (MAX). Data do not include LTSS beneficiaries enrolled in comprehensive managed care plans.

<sup>1</sup> Total Institutional is the unduplicated total of beneficiaries who received one or more institutional services.

<sup>2</sup> This report uses 2011 data for Rhode Island because MAX does not include 2012 data for that state.

<sup>3</sup> Data are not included for Arizona, Colorado, the District of Columbia, Idaho, Kansas and Maine because MAX does not include 2011 or 2012 data for these states.

Section 1915(c) waiver services was the most common type of HCBS for older adults (583,000 individuals; see Table 12), followed by state plan personal care (466,000 individuals). For 31 of the 45 states with data (69 percent), Section 1915(c) waiver services were the most common type of HCBS. Personal care beneficiaries were concentrated in a smaller number of states and the most common type of HCBS for only 10 states. More than half of the personal care beneficiaries (282,000 people) were in California.

**Table 12: Older Adults who Received Medicaid HCBS, 2012**

State	Total HCBS Only <sup>1</sup>	Section 1915(c) Waivers	Personal Care	Case Management	Home Health	Rehabilitation Services	Private Duty Nursing	Adult Day Care	PACE	HCBS - 1115
Alabama	13,486	4,938	0	1,276	4,291	0	0	0	69	5,597
Alaska	3,675	2,033	2,641	9	30	0	0	0	0	0
Arkansas	12,234	8,328	8,639	6,738	1,394	1	0	0	128	0
California	306,110	16,650	281,784	5,376	503	5,814	30,234	0	12,114	0
Connecticut	16,366	14,227	931	712	11,012	0	78	0	0	0
Delaware	1,078	993	0	0	205	13	0	0	0	2
Florida	51,018	43,328	0	3,727	6,423	0	0	0	734	0
Georgia	17,858	17,595	0	61	487	0	0	0	0	0
Hawaii	154	154	0	117	0	0	0	0	0	0
Illinois	72,195	71,122	0	1,501	514	1	0	0	0	0
Indiana	7,287	6,271	0	9	3,212	23	0	0	0	0
Iowa	12,194	11,777	0	479	5,553	0	51	0	118	0
Kentucky	5,634	5,521	0	132	689	11	0	0	0	0
Louisiana	10,978	3,867	7,335	286	149	0	22	0	296	0
Maryland	9,813	7,249	3,956	326	378	3	4,128	0	159	0
Massachusetts	50,053	12,625	5,980	2,104	2,697	0	5,316	0	30,381	0
Michigan	28,778	7,500	21,426	17,676	73	1	52	0	770	247
Minnesota	30,031	26,441	957	662	6,051	3	0	0	0	44
Mississippi	11,972	11,788	9	256	2,619	0	2	0	0	8
Missouri	25,021	18,027	21,430	736	310	536	547	0	175	0
Montana	2,118	1,529	1,095	155	11	4	12	0	0	0
Nebraska	4,835	3,939	741	0	478	0	34	0	0	43
Nevada	4,976	2,381	3,687	146	20	97	529	0	0	0
New Hampshire	2,679	2,546	24	11	321	9	75	0	0	0
New Jersey	15,712	12,659	2,291	8	91	4	581	0	553	0
New Mexico	932	473	26	0	6	17	0	0	412	0
New York	100,488	27,538	55,973	1,164	55,868	7,385	10,587	0	5,031	130
North Carolina	38,455	8,128	28,337	2,199	11,219	0	25	0	481	0
North Dakota	1,883	1,563	327	7	81	310	0	0	78	0
Oklahoma	46,050	42,522	0	1,708	17,284	108	0	0	673	26

State	Total HCBS Only <sup>1</sup>	Section 1915(c) Waivers	Personal Care	Case Management	Home Health	Rehabilitation Services	Private Duty Nursing	Adult Day Care	PACE	HCBS - 1115
Ohio	14,202	12,631	1,697	190	462	0	0	0	98	0
Oregon	21,328	20,175	835	10	22	210	0	0	1,002	107
Pennsylvania	34,286	29,871	0	916	277	3	0	0	3,778	0
Rhode Island <sup>2, 3</sup>	4,584	292	1,844	2,204	722	251	0	622	203	3,512
South Carolina	11,362	9,864	761	721	425	0	419	0	428	0
South Dakota	1,542	1,263	310	0	4	15	0	0	0	0
Tennessee	1,529	657	0	0	84	464	550	0	332	0
Texas	70,354	59,211	52	1,034	312	23	10,830	0	1,045	0
Utah	1,889	1,688	208	0	322	3	2	0	0	0
Vermont <sup>3</sup>	3,176	2,871	20	181	728	0	0	3,017	140	0
Virginia	17,209	16,055	11	878	119	43	15	0	836	0
Washington	33,230	24,763	10,245	21	55	64	77	0	462	6
West Virginia	6,202	4,513	1,989	0	36	64	0	0	0	0
Wisconsin	8,358	4,341	0	560	8	580	0	0	3,078	0
Wyoming	1,175	999	0	102	69	200	0	0	0	0
<b>Total<sup>4</sup></b>	<b>1,134,489</b>	<b>582,906</b>	<b>465,561</b>	<b>54,398</b>	<b>135,614</b>	<b>16,260</b>	<b>64,166</b>	<b>3,639</b>	<b>63,574</b>	<b>9,722</b>

Data Source: Medicaid Analytic eXtract (MAX). Data do not include LTSS beneficiaries enrolled in comprehensive managed care plans.

<sup>1</sup> Total HCBS is the unduplicated total of beneficiaries who received one or more HCBS benefits.

<sup>2</sup> This report uses 2011 data for Rhode Island because MAX does not include 2012 data for that state.

<sup>3</sup> Rhode Island and Vermont provide services similar to Section 1915(c) waivers in Section 1115 demonstrations. These states categorized these services as Section 1915(c) waiver services in the Medicaid Statistical Information System (MSIS), the source data for MAX.

<sup>4</sup> Data are not included for Arizona, Colorado, the District of Columbia, Idaho, Kansas and Maine because MAX does not include 2011 or 2012 data for these states.

## Conclusion

Over 4.8 million individuals received Medicaid-funded LTSS during calendar year 2012. Data should be considered underestimates because data from two states (Kansas and Maine) were missing and the data do not include people enrolled in a comprehensive managed care plan. In addition, this estimate includes data from earlier years (2010 and 2011) from four states and the District of Columbia that did not have 2012 data in MAX, the source used for this report.

About two-thirds of beneficiaries only received HCBS and a majority of LTSS beneficiaries received only HCBS in most states. The type of HCBS used varied among states. Section 1915(c) waivers were the most common type of HCBS in 73 percent of states with data (35). These waivers accounted for 48 percent of all HCBS beneficiaries. In a smaller number of states, personal care, targeted case management, home health, or HCBS in a Section 1115 demonstration were the most common type of HCBS. Nursing facility residents were 87 percent of all institutional beneficiaries and a majority of institutional beneficiaries in all states except Alaska.

For the 45 states with age group data, older adults were the largest group of LTSS beneficiaries, comprising 45 percent of beneficiaries. A majority of people who received LTSS were under age 65, including adults age 21 through 64 (39 percent) and children and youth under age 21 (16 percent). Older adults were more likely to receive institutional services than younger LTSS beneficiaries. For each age group, a majority of beneficiaries received HCBS, including people who received both institutional services and HCBS.

As described in Appendix A, we compared this report's data to previously published data for particular types of LTSS. Beneficiary data were similar for a majority of states. However, we identified notable differences between this report and available benchmarks. We recommend additional research regarding LTSS beneficiaries and the type of supports they receive, including comparison to state sources, to identify the cause of discrepancies.

## Appendix A: Data Source, Methods and Limitations

### Source

Medicaid LTSS beneficiary data rely on information from the 2010 through 2012 Medicaid Analytical eXtract (MAX) eligibility and claims files. We used 2012 MAX data for 44 states. For the four states and the District of Columbia that had MAX data for earlier years but not for 2012, we used the most recent data available: 2011 for Rhode Island and 2010 for Arizona, Colorado, the District of Columbia, and Idaho. Two states – Kansas and Maine – did not have MAX data for any of the three years.

For each year and state, MAX includes a single eligibility data file and four files of claims and encounter data: one each for institutional LTSS, inpatient admissions, prescription drugs, and all other services including physician services and HCBS. The MAX eligibility file for each state includes a single record for each person ever enrolled in Medicaid during the calendar year. Each record in the state eligibility files includes a small amount of demographic information, a series of monthly enrollment indicators, and summary expenditure information. The expenditure information includes total overall Medicaid expenditures for the calendar year and expenditures for specific categories of services, including institutional LTSS and HCBS types of service. Each category of HCBS expenditures was further delineated by whether the expenditures were for Section 1915(c) waiver services or state plan services.

### Methods

To identify people who received institutional LTSS, Mathematica Policy Research selected all Medicaid enrollees who had positive expenditures for the types of institutional services shown in Table 2 of the report. Mathematica first developed counts of users by type of institutional service and then the total overall count of unique institutional LTSS beneficiaries.

To identify HCBS users, Mathematica used monthly indicators of enrollment in Section 1915(c) waivers and the HCBS expenditure information in the MAX eligibility records. MAX includes three Section 1915(c) waiver indicators for each month to capture enrollment in multiple Section 1915(c) waivers. Mathematica used all three monthly waiver indicators to identify everyone who was reported to be enrolled in at least one Section 1915(c) waiver during the year. Some states underreport enrollment in Section 1915(c) waivers. Therefore, Mathematica also identified everyone who had positive expenditures for all types of Section 1915(c) waiver services, including personal care, home health, rehabilitative services, adult day care, private duty nursing, and targeted case management.

To identify enrollees who received state plan HCBS, Mathematica identified all enrollees who had positive expenditures for any type of state plan HCBS. To prevent counting people who received post-acute home health services, Mathematica only included home health beneficiaries if they had positive expenditures for three or more consecutive months. Lastly, Mathematica used monthly indicators of enrollment in managed care plans to identify PACE enrollees. Similar to the approach for institutional LTSS, Mathematica first developed counts of users for each category of HCBS and then the total overall count of the unique number of HCBS users.

It was not possible to directly identify enrollees who received HCBS through 1115 demonstration waivers. Mathematica assumed that all HCBS users in the three states with global 1115 waivers during 2010 (Arizona, Rhode Island, and Vermont) received HCBS through an 1115 waiver.

For the 44 states with MAX 2012 data, and for Rhode Island's MAX 2011 data, Mathematica identified the age of a beneficiary as of January 1 of the data year. Age was based on the person's date of birth in the MAX eligibility file. Age data was not available for less than one percent of these beneficiaries. We did not obtain age data for MAX 2010, so age group data is not included for Arizona, Colorado, the District of Columbia, and Idaho.

### Limitations

Because our approach relies heavily on expenditure information, Mathematica restricted the counts to enrollees who were not in a comprehensive managed care plan during the calendar year. As a result, the counts should be considered underestimates, particularly in those states that provided LTSS through a managed care program in 2012. These states were Arizona, California, Delaware, Florida, Hawaii, Massachusetts, Michigan, Minnesota, New Mexico, New York, North Carolina, Pennsylvania, Tennessee, Texas, Wisconsin, and Washington.<sup>10</sup>

No MAX claims files exist for Kansas or Maine because of data quality issues with the states' Medicaid Statistical Informational System (MSIS) data files, the source data for MAX. As a result, LTSS beneficiaries could not be identified in these states.

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<sup>10</sup> Saucier P, Kasten J, Burwell B, Gold L. *The Growth of Managed Long-Term Services and Supports (MLTSS) Programs: A 2012 Update* CMS, July 2012. Available on-line at <http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Delivery-Systems/Medicaid-Managed-Long-Term-Services-and-Supports-MLTSS.html>.

## Comparison to Other Sources

We benchmarked 2012 MAX data to four sources that have previously published data for particular services

- A report based on the Online Survey, Certification, and Reporting (OSCAR) system data for nursing facilities from the Kaiser Family Foundation<sup>11</sup>
- ICF/IID data based on a survey of states from the National Residential Information Systems Project at the University of Minnesota<sup>12</sup>
- An annual data update on home health, personal care, and Section 1915(c) waiver services based on a survey of states from the Kaiser Family Foundation and the University of California-San Francisco<sup>13</sup>
- A report on Section 1915(c) waivers based on CMS 372 data by Truven Health Analytics<sup>14</sup>

National comparison data for other types of Medicaid LTSS were unavailable. Tables A-1 through A-5 in Appendix A show the data for these sources. For each type of service, data in this analysis were similar to the comparison sources for a majority of states. However, we found notable differences in several states, especially for home health, personal care, and Section 1915(c) waiver services.

For most services, we defined a notable difference as one of at least 20 percent. For nursing facilities, the comparison was imperfect because OSCAR data reflect the number of nursing facility residents at a particular point in time while MAX data identified the number of beneficiaries over an entire year. Many nursing facility residents experience transitions to hospitals and private homes during a year,<sup>15</sup> so the number of people served over a year is greater than the number of residents on a given day. For nursing facility data, we considered a difference notable only if the number of beneficiaries in OSCAR data was greater than the number of people identified in MAX data for a full year.

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<sup>11</sup> Harrington C, Carrillo H, Garfield, R. Nursing Facilities, Staffing, Residents, and Facility Deficiencies, 2009 Through 2014 Kaiser Family Foundation, August 2015. Available on-line at <http://kff.org/medicaid/report/nursing-facilities-staffing-residents-and-facility-deficiencies-2009-through-2014/>.

<sup>12</sup> Larson S, Hallas-Muchow L, Aiken F, Taylor B, Pettingell S, Hewitt A, Sowers M, and Fay ML. *In-Home and Residential Long-Term Supports and Services for Persons with Intellectual or Developmental Disabilities: Status and Trends Through 2013* University of Minnesota, 2016 Available on-line at <https://risp.umn.edu/>.

<sup>13</sup> Ng T, Harrington C, Musumeci M, and Reeves E. Medicaid Home and Community-Based Services Programs: 2012 Data Update Kaiser Family Foundation, November 2015. Available on-line at <http://kff.org/medicaid/report/medicaid-home-and-community-based-services-programs-2012-data-update/>.

<sup>14</sup> Eiken S. *Medicaid 1915(c) Waiver Data Based on the CMS 372 Report, 2011-2012* CMS, September 2015. Available on-line at <http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Long-Term-Services-and-Supports/Long-Term-Services-and-Supports.html>.

<sup>15</sup> Reinhard S, Kassner E, Houser A, Ujvari K, Mollica R, and Hendrickson L. *Raising Expectations: A State Scorecard on Long-Term Services and Supports for Older Adults, People with Physical Disabilities, and Family Caregivers* Second Edition. AARP Public Policy Institute, 2014. Available on-line at <http://www.longtermscorecard.org>.

Footnotes in Tables 1 through 3 indicate states with these differences. Without further research, we do not know which source is more accurate. The better source may vary by state and type of service.

### Exclusion of States from State-Level Analysis

Ten states were excluded from the state-level analysis presented in Figure 2 of the report and accompanying text:

- Alabama was excluded because MAX reported an unrealistically high number of private duty nursing beneficiaries. The data indicate Alabama has 100,000 more beneficiaries than any other state. This data anomaly at least doubles the number of total reported HCBS beneficiaries in the state.
- Kansas and Maine were excluded because MAX claims data were unavailable for both 2010 and 2011.
- Arizona, New Jersey, New Mexico, Tennessee, Texas, and Wisconsin were excluded because the sum of the number of beneficiaries in benchmarks for three types of HCBS with benchmarks—Section 1915(c) waivers, personal care, and home health—was more than 50 percent greater than the sum of beneficiaries for these services identified in MAX.

Tables A-1 through A-5 on the following pages display the benchmark data for 2012.

**Table A-1: Comparison of Data Sources for Beneficiaries who Received Medicaid Nursing Facility Services: 2012**

State	OSCAR: beneficiaries on a single day	MAX: beneficiaries during a calendar year	OSCAR as a Percentage of MAX
Alabama	15,518	24,589	63%
Alaska	494	847	58%
Arizona <sup>1</sup>	6,829	0	n/a
Arkansas	12,467	18,947	66%
California	68,725	138,531	50%
Colorado <sup>1</sup>	9,352	0	n/a
Connecticut	17,014	31,114	55%
Delaware	2,226	4,265	52%
Dist. of Columbia <sup>1</sup>	2,056	0	n/a
Florida	42,608	68,175	62%
Georgia	22,398	34,704	65%
Hawaii	1,956	1,075	182%
Idaho <sup>1</sup>	2,654	0	n/a
Illinois	46,641	69,381	67%
Indiana	24,566	36,943	66%
Iowa	11,704	17,432	67%
Kansas <sup>1</sup>	10,336	0	n/a
Kentucky	15,134	25,770	59%
Louisiana	18,918	26,884	70%
Maine <sup>1</sup>	4,227	0	n/a
Maryland	14,811	23,362	63%
Massachusetts	26,509	51,462	52%
Michigan	24,635	44,798	55%
Minnesota	15,248	27,257	56%
Mississippi	11,739	18,604	63%
Missouri	23,604	35,341	67%
Montana	2,679	4,626	58%
Nebraska	6,241	9,700	64%
Nevada	2,670	4,491	59%
New Hampshire	4,457	7,000	64%
New Jersey	28,469	38,475	74%
New Mexico	3,517	6,556	54%
New York	76,088	142,116	54%
North Carolina	24,699	39,488	63%
North Dakota	3,013	4,525	67%
Ohio	46,777	81,184	58%
Oklahoma	12,964	19,583	66%
Oregon	4,285	10,309	42%
Pennsylvania	50,144	79,950	63%
Rhode Island <sup>1</sup>	5,340	0	n/a

State	OSCAR: beneficiaries on a single day	MAX: beneficiaries during a calendar year	OSCAR as a Percentage of MAX
South Carolina	10,535	15,249	69%
South Dakota	3,533	5,188	68%
Tennessee	18,456	30,394	61%
Texas	59,422	94,281	63%
Utah	2,020	5,489	37%
Vermont	1,800	3,454	52%
Virginia	16,920	27,036	63%
Washington	10,412	18,327	57%
West Virginia	4,790	11,286	42%
Wisconsin	17,242	26,578	65%
Wyoming	1,421	2,330	61%
United States	870,263	1,387,096	63%
States with 2012 MAX data	829,469	1,387,096	60%

Data Sources:

Medicaid Analytic eXtract (MAX). Data do not include LTSS beneficiaries enrolled in comprehensive managed care plans.

Harrington C, Carrillo H, Garfield, R. *Nursing Facilities, Staffing, Residents, and Facility Deficiencies, 2009 Through 2014* Kaiser Family Foundation, August 2015. Available on-line at <http://kff.org/medicaid/report/nursing-facilities-staffing-residents-and-facility-deficiencies-2009-through-2014/>.

“n/a” - not applicable because MAX data indicated zero beneficiaries.

<sup>1</sup> MAX does not include 2012 data for Arizona, Colorado, the District of Columbia, Idaho, Kansas, Maine, and Rhode Island.

**Table A-2: Comparison of Data Sources for Beneficiaries who Received Medicaid Intermediate Care Facilities for Individuals with Intellectual Disabilities (ICF/IID) Services: 2012**

State	RISP: beneficiaries on a single day	MAX: beneficiaries during a calendar year	RISP as a Percentage of MAX
Alabama	41	42	98%
Alaska	0	19	0%
Arizona <sup>1</sup>	148	0	n/a
Arkansas	1,467	1,612	91%
California	8,726	12,393	70%
Colorado <sup>1</sup>	343	0	n/a
Connecticut	984	1,042	94%
Delaware	66	132	50%
Dist. of Columbia <sup>1</sup>	363	0	n/a
Florida	2,786	2,808	99%
Georgia	300	516	58%
Hawaii	79	754	10%
Idaho <sup>1</sup>	485	0	n/a
Illinois	8,344	8,706	96%
Indiana	3,839	4,129	93%
Iowa	2,002	2,131	94%
Kansas <sup>1</sup>	509	0	n/a
Kentucky	285	502	57%
Louisiana	4,604	5,030	92%
Maine <sup>1</sup>	189	0	n/a
Maryland	54	134	40%
Massachusetts	594	661	90%
Michigan	0	1	0%
Minnesota	1,719	2,870	60%
Mississippi	2,765	2,872	96%
Missouri	590	608	97%
Montana	55	59	93%
Nebraska	433	420	103%
Nevada	104	113	92%
New Hampshire	25	39	64%
New Jersey	3,153	2,514	125%
New Mexico	234	272	86%
New York	7,288	8,179	89%
North Carolina	3,930	3,655	108%
North Dakota	559	587	95%
Ohio	6,926	7,302	95%
Oklahoma	1,549	1,729	90%
Oregon	0	0	n/a
Pennsylvania	3,419	3,566	96%

State	RISP: beneficiaries on a single day	MAX: beneficiaries during a calendar year	RISP as a Percentage of MAX
Rhode Island <sup>1</sup>	42	0	n/a
South Carolina	1,313	1,414	93%
South Dakota	199	224	89%
Tennessee	1,108	1,059	105%
Texas	9,467	10,206	93%
Utah	801	837	96%
Vermont	6	7	86%
Virginia	1,326	1,527	87%
Washington	629	58	1084%
West Virginia	562	560	100%
Wisconsin	895	849	105%
Wyoming	79	84	94%
United States	85,384	92,222	93%
States with 2012 MAX data	83,305	92,222	90%

Data Sources:

Medicaid Analytic eXtract (MAX). Data do not include LTSS beneficiaries enrolled in comprehensive managed care plans.

National Residential Information Systems Project (RISP) data from Larson S, Hallas-Muchow L, Aiken F, Taylor B, Pettingell S, Hewitt A, Sowers M, and Fay ML. *In-Home and Residential Long-Term Supports and Services for Persons with Intellectual or Developmental Disabilities: Status and Trends Through 2013* University of Minnesota, 2016 Available on-line at <https://rispumnedu/>.

"n/a" - not applicable because MAX data indicated zero beneficiaries.

<sup>1</sup> MAX does not include 2012 data for Arizona, Colorado, the District of Columbia, Idaho, Kansas, Maine, and Rhode Island.

**Table A-3: Comparison of Data Sources for Beneficiaries who Received Medicaid Home Health Services: 2012**

State	Kaiser Family Foundation (KFF)	MAX <sup>1</sup>	KFF as a Percentage of MAX
Alabama	5,527	17,824	31%
Alaska	281	302	93%
Arizona <sup>2</sup>	39,275	0	n/a
Arkansas	6,352	6,297	101%
California	23,832	17,955	133%
Colorado <sup>2</sup>	12,201	0	n/a
Connecticut	31,484	30,364	104%
Delaware	1,105	704	157%
Dist. of Columbia <sup>2</sup>	5,549	0	n/a
Florida	11,042	20,201	55%
Georgia	4,521	7,225	63%
Hawaii	1,992	114	1747%
Idaho <sup>2</sup>	2,111	0	n/a
Illinois	12,667	11,778	108%
Indiana	14,237	12,679	112%
Iowa	13,016	24,666	53%
Kansas <sup>2</sup>	3,736	0	n/a
Kentucky	14,986	2,188	685%
Louisiana	10,978	6,925	159%
Maine <sup>2</sup>	11,606	0	n/a
Maryland	4,233	6,742	63%
Massachusetts	23,001	24,336	95%
Michigan	5,253	5,059	104%
Minnesota	12,822	62,770	20%
Mississippi	7,923	6,545	121%
Missouri	6,880	6,653	103%
Montana	387	405	96%
Nebraska	3,123	2,858	109%
Nevada	698	680	103%
New Hampshire	3,572	3,008	119%
New Jersey	18,392	1,761	1044%
New Mexico	523	239	219%
New York	105,302	99,087	106%
North Carolina	33,507	33,132	101%
North Dakota	954	479	199%
Ohio	44,576	46,467	96%
Oklahoma	5,528	6,602	84%
Oregon	3,191	390	818%
Pennsylvania	13,777	11,374	121%
Rhode Island <sup>2</sup>	1,310	0	n/a

State	Kaiser Family Foundation (KFF)	MAX <sup>1</sup>	KFF as a Percentage of MAX
South Carolina	7,557	3,845	197%
South Dakota	1,841	455	405%
Tennessee	10,934	145	7541%
Texas	199,567	27,122	736%
Utah	4,392	2,221	198%
Vermont	3,145	3,590	88%
Virginia	4,510	2,701	167%
Washington	2,750	2,186	126%
West Virginia	2,689	2,838	95%
Wisconsin	5,040	118	4271%
Wyoming	611	642	95%
United States	764,487	523,672	146%
States with 2012 MAX data	688,699	523,672	132%

Data Sources:

Medicaid Analytic eXtract (MAX). Data do not include LTSS beneficiaries enrolled in comprehensive managed care plans.

Ng T, Harrington C, Musumeci M, and Reeves E. *Medicaid Home and Community-Based Services Programs: 2012 Data Update* Kaiser Family Foundation, November 2015. Available on-line at <http://kff.org/medicaid/report/medicaid-home-and-community-based-services-programs-2012-data-update/>.

“n/a” - not applicable because MAX data indicated zero beneficiaries.

<sup>1</sup> People were included in this analysis only if they had positive expenditures for three or more consecutive months.

<sup>2</sup> MAX does not include 2012 data for Arizona, Colorado, the District of Columbia, Idaho, Kansas, Maine, and Rhode Island.

**Table A-4: Comparison of Data Sources for Beneficiaries who Received Medicaid Personal Care Services: 2012**

State	Kaiser Family Foundation (KFF)	MAX	KFF as a Percentage of MAX
Alabama	0	0	n/a
Alaska	3,598	5,178	69%
Arizona <sup>1</sup>	0	0	n/a
Arkansas	15,206	15,342	99%
California	419,385	494,940	85%
Colorado <sup>1</sup>	0	0	n/a
Connecticut	0	959	0%
Delaware	0	0	n/a
Dist. of Columbia <sup>1</sup>	2,112	0	n/a
Florida	11,115	0	n/a
Georgia	0	0	n/a
Hawaii	0	0	n/a
Idaho <sup>1</sup>	5,918	0	n/a
Illinois	0	3,060	0%
Indiana	0	0	n/a
Iowa	0	0	n/a
Kansas <sup>1</sup>	336	0	n/a
Kentucky	0	0	n/a
Louisiana	18,393	20,548	90%
Maine <sup>1</sup>	3,016	0	n/a
Maryland	5,323	6,856	78%
Massachusetts	22,853	17,729	129%
Michigan	69,090	79,450	87%
Minnesota	23,589	27,099	87%
Mississippi	0	577	0%
Missouri	55,665	55,449	100%
Montana	3,592	3,693	97%
Nebraska	1,991	2,550	78%
Nevada	6,470	6,836	95%
New Hampshire	28	196	14%
New Jersey	20,543	4,866	422%
New Mexico	15,872	924	1718%
New York	66,198	75,812	87%
North Carolina	57,098	58,349	98%
North Dakota	1,165	825	141%
Ohio	0	0	n/a
Oklahoma	3,998	4,043	99%
Oregon	3,226	4,874	66%
Pennsylvania	0	0	n/a
Rhode Island <sup>1</sup>	0	0	n/a

State	Kaiser Family Foundation (KFF)	MAX	KFF as a Percentage of MAX
South Carolina	0	2,368	0%
South Dakota	572	527	109%
Tennessee	0	0	n/a
Texas	56,161	12,327	456%
Utah	393	719	55%
Vermont	2,410	2,672	90%
Virginia	0	42	0%
Washington	26,979	24,469	110%
West Virginia	6,664	5,985	111%
Wisconsin	15,548	0	n/a
Wyoming	0	0	n/a
United States	944,507	939,264	101%
States with 2012 MAX data	933,125	939,264	99%

Data Sources:

Medicaid Analytic eXtract (MAX). Data do not include LTSS beneficiaries enrolled in comprehensive managed care plans.

Ng T, Harrington C, Musumeci M, and Reeves E. *Medicaid Home and Community-Based Services Programs: 2012 Data Update* Kaiser Family Foundation, November 2015. Available on-line at <http://kff.org/medicaid/report/medicaid-home-and-community-based-services-programs-2012-data-update/>.

“n/a” - not applicable because MAX data indicated zero beneficiaries.

<sup>1</sup> MAX does not include 2012 data for Arizona, Colorado, the District of Columbia, Idaho, Kansas, Maine, and Rhode Island.

**Table A-5: Comparison of Data Sources for Beneficiaries who Received Medicaid Section 1915(c) Waiver Services: 2012**

State	Kaiser Family Foundation (KFF)	CMS 372	MAX	KFF as a Percentage of MAX	CMS 372 as a Percentage of MAX
Alabama	14,778	13,809	13,783	107%	100%
Alaska	5,104	5,422	6,266	81%	87%
Arizona <sup>1</sup>	0	0	0	n/a	n/a
Arkansas	14,961	14,961	15,236	98%	98%
California	111,350	107,563	124,049	90%	87%
Colorado <sup>1</sup>	35,562	35,562	0	n/a	n/a
Connecticut	23,577	23,577	25,246	93%	93%
Delaware	3,222	3,740	2,977	108%	126%
Dist. of Columbia <sup>1</sup>	4,607	5,893	0	n/a	n/a
Florida	85,253	81,180	85,212	100%	95%
Georgia	50,898	46,121	46,845	109%	98%
Hawaii	2,591	2,591	3,867	67%	67%
Idaho <sup>1</sup>	13,335	13,335	0	n/a	n/a
Illinois	105,315	105,315	143,634	73%	73%
Indiana	23,907	23,888	26,847	89%	89%
Iowa	29,030	29,030	30,654	95%	95%
Kansas <sup>1</sup>	28,179	28,179	0	n/a	n/a
Kentucky	21,700	22,148	24,342	89%	91%
Louisiana	12,506	17,486	31,569	40%	55%
Maine <sup>1</sup>	5,836	5,836	0	n/a	n/a
Maryland	22,776	23,497	24,698	92%	95%
Massachusetts	25,037	25,641	24,924	100%	103%
Michigan	19,743	19,655	12,085	163%	163%
Minnesota	66,714	65,140	61,803	108%	105%
Mississippi	22,506	21,829	22,527	100%	97%
Missouri	29,101	29,049	31,756	92%	91%
Montana	5,526	5,437	7,322	75%	74%
Nebraska	10,870	10,651	10,567	103%	101%
Nevada	4,590	4,529	4,663	98%	97%
New Hampshire	8,038	8,249	8,926	90%	92%
New Jersey	25,060	25,603	26,583	94%	96%
New Mexico	6,993	6,993	5,318	131%	131%
New York	105,069	95,924	122,845	86%	78%
North Carolina	25,549	27,032	24,148	106%	112%
North Dakota	4,167	4,447	6,652	63%	67%
Ohio	88,194	88,194	94,953	93%	93%
Oklahoma	27,434	26,343	26,854	102%	98%
Oregon	47,180	45,654	45,624	103%	100%

State	Kaiser Family Foundation (KFF)	CMS 372	MAX	KFF as a Percentage of MAX	CMS 372 as a Percentage of MAX
Pennsylvania	78,001	77,666	112,448	69%	69%
Rhode Island <sup>1,2</sup>	0	0	0	n/a	n/a
South Carolina	22,764	26,029	27,827	82%	94%
South Dakota	4,852	5,062	5,217	93%	97%
Tennessee	7,945	7,931	8,394	95%	94%
Texas	61,934	62,089	127,996	48%	49%
Utah	6,597	6,633	6,931	95%	96%
Vermont <sup>2</sup>	0	0	6,708	0%	0%
Virginia	37,906	38,027	41,345	92%	92%
Washington	58,799	51,285	51,307	115%	100%
West Virginia	10,639	12,649	12,869	83%	98%
Wisconsin	67,631	66,408	17,537	386%	379%
Wyoming	4,202	4,302	4,346	97%	99%
United States	1,497,528	1,477,584	1,565,700	96%	94%
States with 2012 MAX data	1,410,009	1,388,779	1,565,700	90%	89%

Data Sources:

Medicaid Analytic eXtract (MAX). Data do not include LTSS beneficiaries enrolled in comprehensive managed care plans.

Ng T, Harrington C, Musumeci M, and Reeves E. *Medicaid Home and Community-Based Services Programs: 2012 Data Update* Kaiser Family Foundation, November 2015. Available on-line at <http://kff.org/medicaid/report/medicaid-home-and-community-based-services-programs-2012-data-update/>.

Eiken S. *Medicaid 1915(c) Waiver Data Based on the CMS 372 Report, 2011-2012 CMS*, September 2015. Available on-line at <http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Long-Term-Services-and-Supports/Long-Term-Services-and-Supports.html>. CMS 372 data for California, Georgia, and New Hampshire also include more recent data from the CMS Waiver Management System downloaded July 3, 2016.

"n/a" - not applicable because MAX data indicated zero beneficiaries.

<sup>1</sup> MAX does not include 2012 data for Arizona, Colorado, the District of Columbia, Idaho, Kansas, Maine, and Rhode Island.

<sup>2</sup> Rhode Island and Vermont provide services similar to Section 1915(c) waivers in 1115 demonstrations, but categorized these services as Section 1915(c) waiver services in the Medicaid Statistical Information System (MSIS), the source data for MAX.