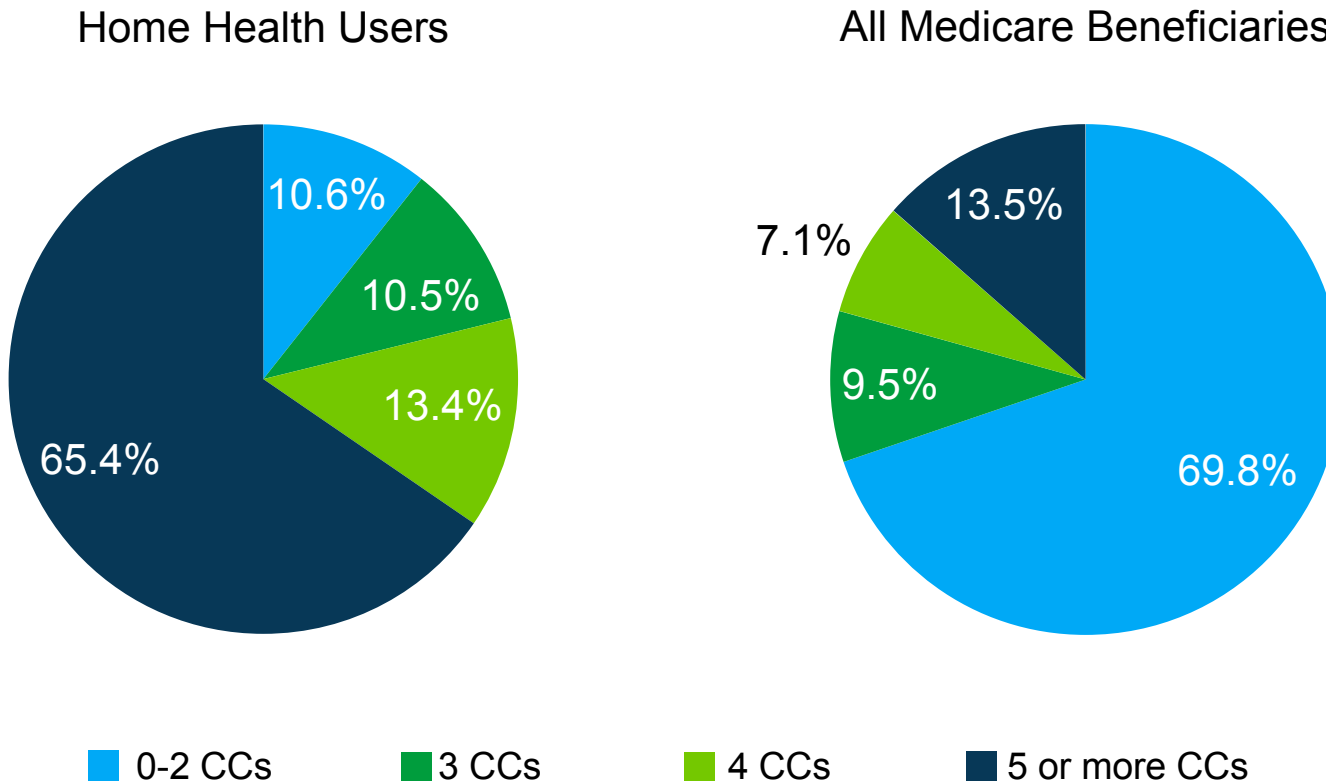


Home Health Care in Massachusetts Facts & Figures 2015 Update



Prevalence of Chronic Conditions Among Home Health Users, Massachusetts

Percentage of Home Health Users by Number of Chronic Conditions (CCs) Compared to all Medicare Beneficiaries, 2012



Source: Avalere Health, LLC analysis of Medicare Standard Analytic Files, 2012

Note: Having a chronic condition is defined as having a Medicare claim with a chronic condition listed in 2012. Medicare beneficiaries without any claims in 2012 are categorized as having no chronic conditions in 2012.

Clinical Profile of Home Health Users

Table 2.3: Percent of Medicare Home Health Users with 3 or More Chronic Conditions Compared to All Medicare Beneficiaries, by State, 2013

State	Percent of HH Users with 3+ CCs	Percent of Medicare Beneficiaries with 3+ CCs	State	Percent of HH Users with 3+ CCs	Percent of Medicare Beneficiaries with 3+ CCs
Alabama	87.72%	26.28%	Montana	88.11%	31.09%
Alaska	84.50%	26.02%	Nebraska	87.41%	29.83%
Arizona	85.29%	14.89%	Nevada	81.99%	15.13%
Arkansas	87.64%	26.09%	New Hampshire	89.82%	38.33%
California	86.04%	16.42%	New Jersey	87.82%	21.69%
Colorado	84.05%	18.47%	New Mexico	86.12%	22.52%
Connecticut	87.35%	24.50%	New York	87.42%	19.13%
Delaware	90.42%	33.12%	North Carolina	87.30%	26.59%
D.C.	85.01%	25.16%	North Dakota	92.28%	42.87%
Florida	84.99%	20.40%	Ohio	90.42%	24.44%
Georgia	86.13%	22.60%	Oklahoma	90.20%	29.08%
Hawaii	85.22%	10.87%	Oregon	85.54%	17.14%
Idaho	85.64%	23.74%	Pennsylvania	88.75%	21.89%
Illinois	91.37%	33.95%	Rhode Island	87.66%	21.99%
Indiana	90.39%	28.27%	South Carolina	86.46%	26.41%
Iowa	89.81%	32.15%	South Dakota	89.43%	37.15%
Kansas	87.49%	29.35%	Tennessee	87.09%	20.51%
Kentucky	88.90%	28.75%	Texas	89.48%	23.41%
Louisiana	89.71%	28.21%	Utah	80.24%	17.22%
Maine	90.82%	36.04%	Vermont	89.05%	39.90%
Maryland	88.49%	25.11%	Virginia	86.84%	26.58%
Massachusetts	89.41%	29.53%	Washington	84.96%	21.11%
Michigan	90.42%	31.66%	West Virginia	90.88%	32.00%
Minnesota	86.45%	25.12%	Wisconsin	89.71%	23.77%
Mississippi	88.39%	30.49%	Wyoming	83.51%	25.56%
Missouri	89.47%	28.62%			

Source: Avalere Health, LLC analysis of Medicare Standard Analytic Files, 2013.

Note: Having a chronic condition is defined as having a Medicare claim with a chronic condition listed in 2013. Medicare beneficiaries without any claims in 2013 are categorized as having no chronic conditions in 2013. Chronic conditions are defined by the Centers for Medicare and Medicaid Services' Chronic Conditions Data Warehouse.

Top 10 MS-DRG Codes for Home Health Episodes, Massachusetts

Top 10 Most Common Diagnoses Related Groups (MS-DRGs) for Beneficiaries Discharged from Hospital to Part A Home Health Episodes, 2012

MS-DRG	Number of Home Health Part A Claims, 2012	Percent of Total Home Health Part A Claims, 2012
Major joint replacement or reattachment of lower extremity w/o mcc	7,311	10.67%
Heart failure & shock w cc	1,776	2.59%
Septicemia or severe sepsis w/o mv 96+ hours w mcc	1,534	2.24%
Heart failure & shock w mcc	1,373	2.00%
Kidney & urinary tract infections w/o mcc	1,304	1.90%
Simple pneumonia & pleurisy w cc	1,301	1.90%
Cellulitis w/o mcc	1,204	1.76%
Chronic obstructive pulmonary disease w mcc	1,096	1.60%
Renal failure w cc	1,059	1.55%
Chronic obstructive pulmonary disease w cc	1,017	1.48%

Source: Avalere Health, LLC analysis of Medicare Standard Analytic Files, 2012

Data for beneficiaries with a Part A home health episode and a prior short-term acute care hospital stay in 2012.

Note: CC is complication or comorbidity. MCC is major complication or comorbidity.

Top 10 ICD-9 Diagnoses for Home Health Episodes, Massachusetts

Top 10 Most Common Primary International Classification of Diseases, Version 9 (ICD-9) Diagnoses for all Home Health Episodes, 2012

ICD-9 Diagnosis	Number of Home Health Claims, 2012	Percent of Total Home Health Claims, 2012
Other orthopedic aftercare	18,615	9.80%
Other and unspecified aftercare	16,857	8.88%
Heart failure	12,427	6.54%
Care involving use of rehabilitation procedures	12,071	6.36%
Diabetes mellitus	10,203	5.37%
Chronic ulcer of skin	6,485	3.41%
Chronic bronchitis	6,358	3.35%
Cardiac dysrhythmias	4,877	2.57%
Essential hypertension	4,788	2.52%
Other deficiency anemias	4,313	2.27%

Source: Avalere analysis of the 100% Medicare Standard Analytic Files, 2012

Average Annual Living Expenses – Massachusetts

Average Annual Living Expenses for Households with Incomes below 200 Percent of the Federal Poverty Level* with at Least One Individual 65 Years or Older, 2013

Living Expense	One-Person Elderly Household	Two-Person Elderly Household	All Elderly Household Sizes
Housing	\$5,143	\$12,497	\$9,971
Food	\$2,433	\$5,212	\$3,984
Transportation	\$1,217	\$3,517	\$2,926
Health Care (out-of-pocket costs)	\$1,676	\$3,074	\$2,161
Total	\$10,470	\$24,300	\$19,040

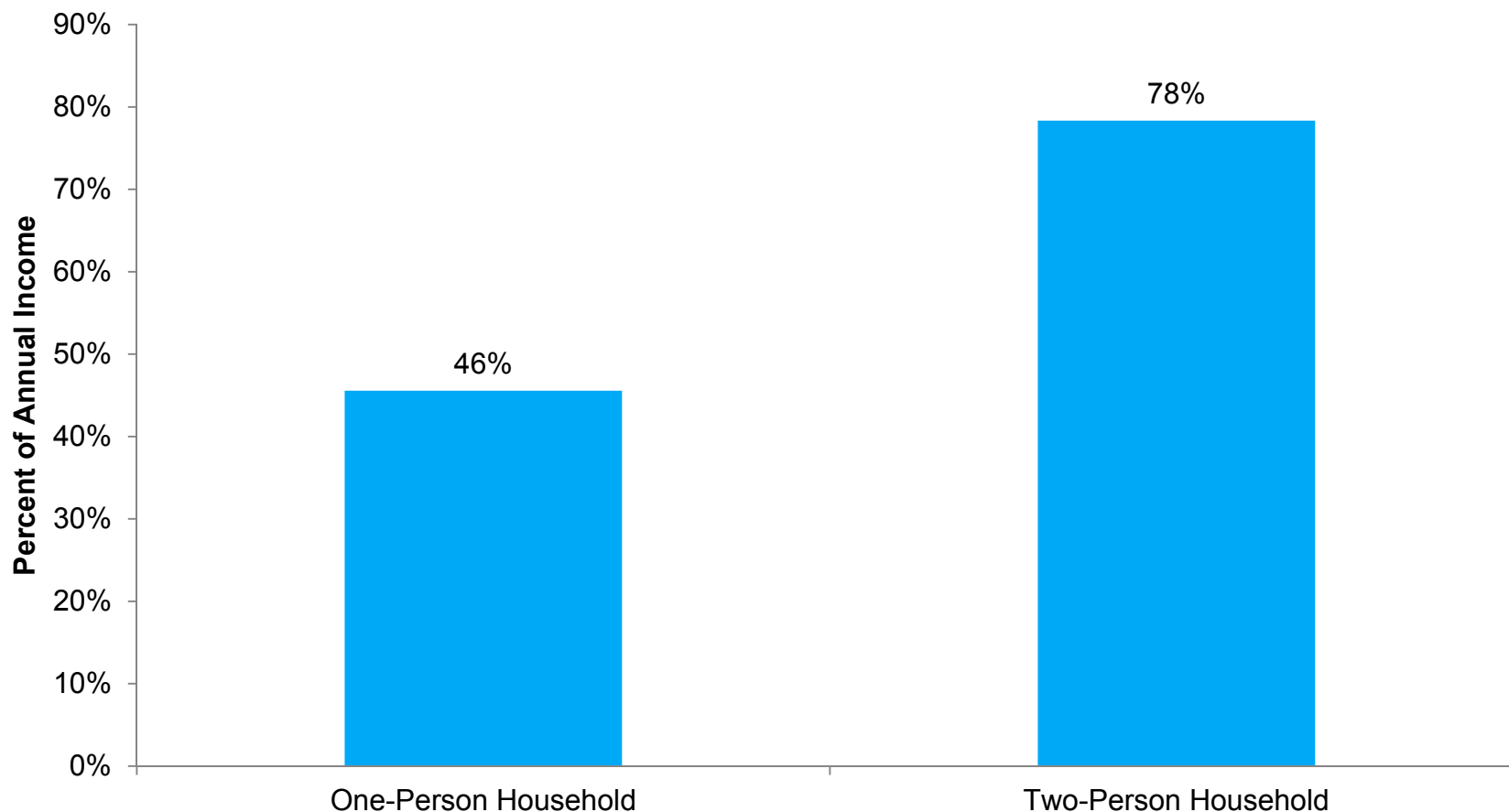
Note: This analysis includes, but is not limited to, home health users.

Source: Avalere analysis of the 2013 Bureau of Labor Statistics Consumer Expenditure Survey. The analysis includes households with one or more individuals age 65 or older and annual incomes below 200% of the Federal Poverty Level.

*In 2013, 200% of the Federal Poverty Level was \$22,980 for a one-person household and \$31,020 for a two-person household.

Average Annual Living Expenses – Massachusetts

Average Annual Living Expenses, as a Percentage of Income, for One- And Two-Person Households at 200 Percent of the Federal Poverty Level* with at Least One Individual 65 Years or Older, 2013



Note: This analysis includes, but is not limited to, home health users.

Source: Avalere analysis of the 2013 Bureau of Labor Statistics Consumer Expenditure Survey. The analysis includes households with one or more individuals age 65 or older and annual incomes below 200% of the Federal Poverty Level.

*In 2013, 200% of the Federal Poverty Level was \$22,980 for a one-person household and \$31,020 for a two-person household.

Medicare FFS Readmissions Among Post-Acute Care Users, Massachusetts

30-day Readmission Rates for Top 20 Most Common MS-DRGs Discharged from Hospital to Selected Post-Acute Care (PAC) Settings, by Setting, 2014

MS-DRG	% of Home Health Users Readmitted Within 30 Days	% of SNF Users Readmitted Within 30 Days
Major joint replacement or reattachment of lower extremity w/o mcc	2.97%	6.06%
Septicemia or severe sepsis w/o mv 96+ hours w mcc	21.43%	22.02%
Heart failure & shock w mcc	26.36%	24.65%
Heart failure & shock w cc	24.76%	21.88%
Hip & femur procedures except major joint w cc	17.39%	9.98%
Kidney & urinary tract infections w/o mcc	18.48%	13.64%
Intracranial hemorrhage or cerebral infarction w cc or tpa in 24 hrs	14.38%	11.89%
Renal failure w cc	25.19%	21.21%
Septicemia or severe sepsis w/o mv 96+ hours w/o mcc	16.44%	19.61%
Simple pneumonia & pleurisy w mcc	18.87%	20.50%
Simple pneumonia & pleurisy w cc	15.99%	14.96%
Cellulitis w/o mcc	15.48%	12.30%
Renal failure w mcc	23.97%	21.34%
Chronic obstructive pulmonary disease w mcc	23.51%	22.67%
Pulmonary edema & respiratory failure	24.57%	19.03%
Kidney & urinary tract infections w mcc	22.53%	15.76%
Misc. disorders of nutrition, metabolism, fluids/electrolytes w/o mcc	22.96%	14.45%
Esophagitis, gastroent & misc. digest disorders w/o mcc	24.42%	13.94%
Intracranial hemorrhage or cerebral infarction w mcc	17.46%	18.73%
G.I. Hemorrhage w cc	14.08%	18.86%

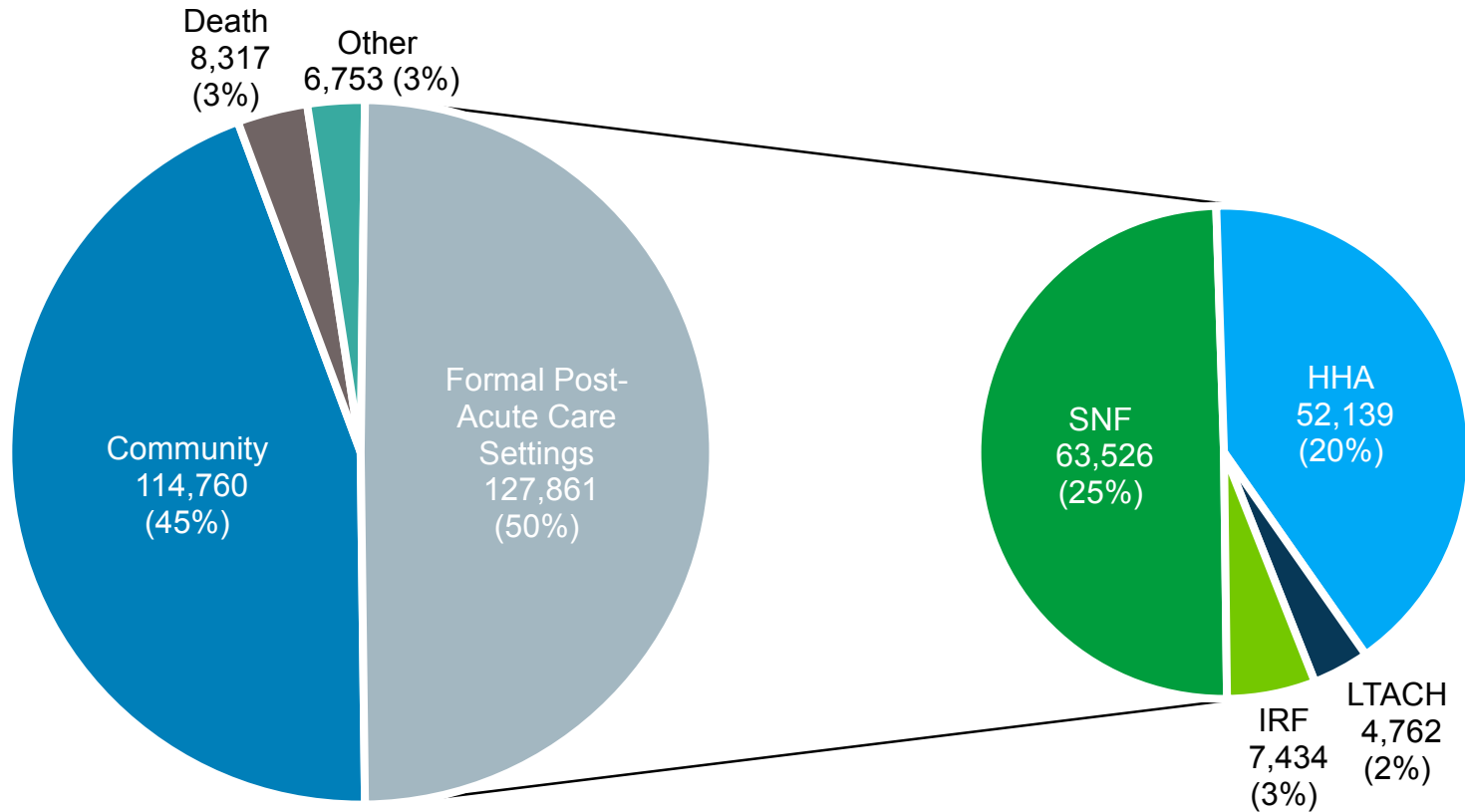
Source: Avalere Health, analysis of Medicare Standard Analytic Files, 2014

*Analysis includes Medicare Part A claims only.

Note: FFS is fee-for-service. CC is complication or comorbidity. MCC is major complication or comorbidity. SNF is Skilled Nursing Facilities.

Discharges Post-Inpatient Stay, Massachusetts

Initial Patient Destinations Following an Inpatient Hospital Stay for Medicare Beneficiaries, 2013



Source: Avalere Health, LLC analysis of Medicare Standard Analytic Files, 2013

Hospital: Short-Term Acute Care Hospital (STACH).

Community: Discharges to the community without skilled home health care; includes individuals living at home, assisted living facilities, and retirement communities.

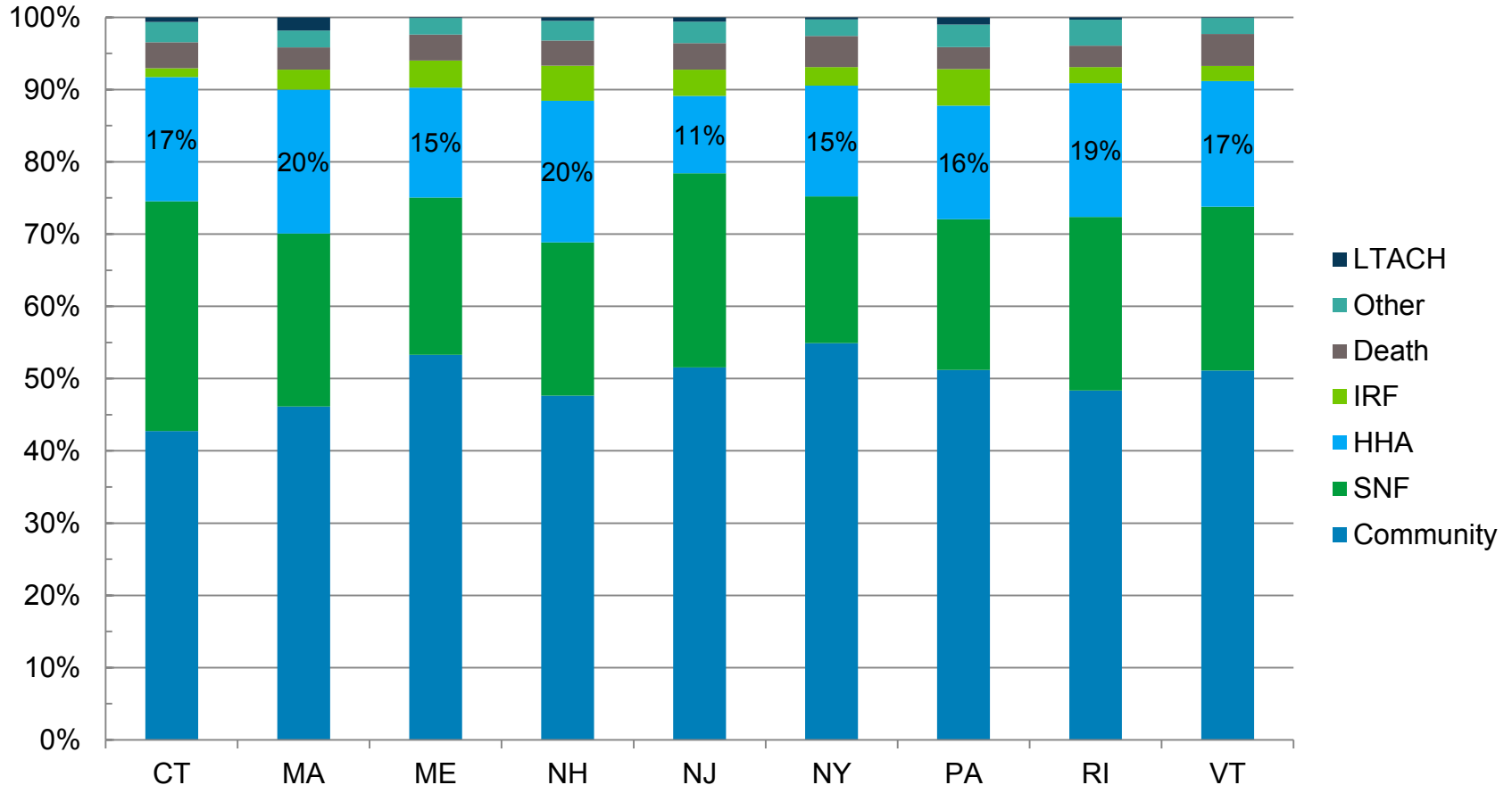
Formal Post-Acute Care Settings: Settings designated as post-acute care by Medicare. Includes skilled nursing facilities (SNF), home health agencies (HHA), inpatient rehabilitation facilities (IRF), and long-term acute care hospitals (LTACH).

Other: Hospice, a different Inpatient Hospital, or other Inpatient Hospitals such as Inpatient Psychiatric Facilities

Percentages may not sum to 100 percent or to total due to rounding

Post-Acute Care Market Overview

Chart 3.3: Initial Patient Destinations Following an Inpatient Hospital Stay for Medicare Beneficiaries in 2012, for States in Northeastern Region



Source: Avalere Health, LLC analysis of Medicare Standard Analytic Files, 2012

Note: U.S. Census Bureau defines which states are in the Northeast Region; includes CT, ME, MA, NH, RI, VT, NJ, NY, PA

Hospital: Short-Term Acute Care Hospital (STACH).

Community: Discharges to the community without skilled home health care; includes individuals living at home, assisted living facilities, and retirement communities.

Formal Post-Acute Care Settings: Settings designated as post-acute care by Medicare. Includes skilled nursing facilities (SNF), home health agencies (HHA), inpatient rehabilitation facilities (IRF), and long-term acute care hospitals (LTACH).

Other: Hospice, a different Inpatient Hospital, or other Inpatient Hospitals such as Inpatient Psychiatric Facilities.

Organizational Trends in Home Health

Table 5.5: Number of Medicare Beneficiaries with a Home Health Episode, by State, 2013

State	Number of Beneficiaries	State	Number of Beneficiaries	State	Number of Beneficiaries
Alabama	71,590	Kentucky	58,092	North Dakota	4,076
Alaska	2,512	Louisiana	73,755	Ohio	118,274
Arizona	39,755	Maine	19,929	Oklahoma	66,198
Arkansas	35,692	Maryland	63,481	Oregon	22,455
California	295,935	Massachusetts	110,318	Pennsylvania	146,015
Colorado	34,765	Michigan	152,784	Rhode Island	13,683
Connecticut	51,477	Minnesota	35,481	South Carolina	53,939
Delaware	13,079	Mississippi	56,294	South Dakota	4,481
District of Columbia	6,316	Missouri	66,515	Tennessee	79,376
Florida	346,434	Montana	6,557	Texas	334,104
Georgia	87,149	Nebraska	15,385	Utah	20,367
Hawaii	2,857	Nevada	25,674	Vermont	9,963
Idaho	13,083	New Hampshire	21,652	Virginia	95,259
Illinois	195,778	New Jersey	98,335	Washington	42,423
Indiana	62,187	New Mexico	17,108	West Virginia	23,181
Iowa	26,934	New York	185,774	Wisconsin	36,909
Kansas	25,423	North Carolina	111,401	Wyoming	3,738
				Total U.S.*	3,518,691

Source: Avalere Health, LLC analysis of Medicare Standard Analytic Files, 2013.

*Total includes 14,749 other or unknown beneficiaries (i.e. beneficiaries from US territories or beneficiaries not attributed to a specific state).

Economic Contribution of Home Health Agencies

Table 6.1: Impact of Home Health on Employment, by State, 2012

State	Estimated Number of HH Employees ¹	Multiplier for Employment ²	Estimated Jobs Created by HH Industry ³	State	Estimated Number of HH Employees	Multiplier for Employment	Estimated Jobs Created by HH Industry
Alabama	11,825	1.5991	18,909	Montana	2,644	1.3420	3,548
Alaska	1,992	1.3092	2,608	Nebraska	3,076	1.3658	4,201
Arizona	21,812	1.4557	31,752	Nevada	5,174	1.5271	7,901
Arkansas	6,507	1.3464	8,761	New Hampshire	4,067	1.4778	6,010
California	69,734	1.5353	107,063	New Jersey	38,042	1.4886	56,629
Colorado	15,163	1.4976	22,708	New Mexico	11,965	1.3573	16,240
Connecticut	13,948	1.4889	20,767	New York	126,344	1.3856	175,062
Delaware	3,094	1.4677	4,541	North Carolina	40,106	1.4688	58,908
D.C.	4,875	1.1420	5,567	North Dakota	559	1.2881	720
Florida	66,308	1.6030	106,292	Ohio	59,974	1.4632	87,754
Georgia	22,200	1.6327	36,246	Oklahoma	19,344	1.4350	27,759
Hawaii	2,900	1.3753	3,988	Oregon	4,329	1.5238	6,597
Idaho	6,547	1.3459	8,812	Pennsylvania	40,566	1.6358	66,358
Illinois	39,174	1.5804	61,911	Rhode Island	5,155	1.4271	7,357
Indiana	19,163	1.5117	28,969	South Carolina	10,618	1.5086	16,018
Iowa	7,210	1.3389	9,653	South Dakota	974	1.2400	1,208
Kansas	10,337	1.3218	13,663	Tennessee	17,029	1.6312	27,778
Kentucky	8,692	1.5957	13,870	Texas	244,853	1.4728	360,619
Louisiana	24,095	1.5316	36,904	Utah	6,826	1.6727	11,418
Maine	4,000	1.4513	5,805	Vermont	2,156	1.3632	2,939
Maryland	14,424	1.5266	22,020	Virginia	25,461	1.4182	36,109
Massachusetts	32,971	1.5262	50,320	Washington	9,680	1.5287	14,798
Michigan	36,902	1.5259	56,309	West Virginia	7,753	1.3639	10,574
Minnesota	19,824	1.4104	27,960	Wisconsin	13,643	1.4272	19,471
Mississippi	7,432	1.5238	11,325	Wyoming	561	1.2931	725
Missouri	18,949	1.5154	28,715	Total U.S.	1,190,977	N/A	1,772,140

1: Quarterly Census of Employment and Wages (QCEW) collected by the U.S. Bureau of Labor Statistics

2. U.S. Bureau of Economic Analysis multipliers

3. Avalere calculation

Note: The QCEW collects employment data monthly. All states report employment figures on privately owned home health agencies, including for-profit and non-profit organizations. Alabama, Arkansas, Iowa, Minnesota, Missouri, North Carolina, Ohio and Virginia submit employment figures for their government-owned facilities, which are included in this analysis. The QWEC does not include jobs for HHA contractors, but the multiplier is intended to account for such jobs.

Economic Contribution of Home Health Agencies

Table 6.1: Impact of Home Health on Employment, by State, 2013

State	Estimated Number of HH Employees ¹	Multiplier for Employment ²	Estimated Jobs Created by HH Industry ³	State	Estimated Number of HH Employees	Multiplier for Employment	Estimated Jobs Created by HH Industry
Alabama	11,735	1.5991	18,765	Montana	2,975	1.3420	3,992
Alaska	1,951	1.3092	2,554	Nebraska	3,063	1.3658	4,183
Arizona	20818	1.4557	30,305	Nevada	5,117	1.5271	7,814
Arkansas	6,376	1.3464	8,585	New Hampshire	4,161	1.4778	6,149
California	74,906	1.5353	115,003	New Jersey	39,822	1.4886	59,279
Colorado	15,352	1.4976	22,991	New Mexico	12,365	1.3573	16,783
Connecticut	14,347	1.4889	21,361	New York	140,913	1.3856	195,249
Delaware	3,177	1.4677	4,663	North Carolina	40,127	1.4688	58,939
D.C.	5,316	1.1420	6,071	North Dakota	594	1.2881	765
Florida	68,025	1.6030	109,044	Ohio	61,008	1.4632	89,267
Georgia	22,826	1.6327	37,268	Oklahoma	16,413	1.4350	23,553
Hawaii	3,284	1.3753	4,516	Oregon	4,854	1.5238	7,397
Idaho	7,032	1.3459	9,464	Pennsylvania	41,086	1.6358	67,208
Illinois	40,776	1.5804	64,442	Rhode Island	5,323	1.4271	7,596
Indiana	20,836	1.5117	31,498	South Carolina	11,566	1.5086	17,448
Iowa	7,588	1.3389	10,160	South Dakota	986	1.2400	1,223
Kansas	7,404	1.3218	9,787	Tennessee	17,296	1.6312	28,213
Kentucky	8,541	1.5957	13,629	Texas	244,956	1.4728	360,771
Louisiana	23,511	1.5316	36,009	Utah	7,339	1.6727	12,276
Maine	4,055	1.4513	5,885	Vermont	2,223	1.3632	3,030
Maryland	15,999	1.5266	24,424	Virginia	25,763	1.4182	36,537
Massachusetts	36,069	1.5262	55,049	Washington	10,038	1.5287	15,345
Michigan	38,614	1.5259	58,921	West Virginia	7,640	1.3639	10,420
Minnesota	21,472	1.4104	30,284	Wisconsin	14,453	1.4272	20,627
Mississippi	7,450	1.5238	11,352	Wyoming	562	1.2931	727
Missouri	19,788	1.5154	29,987	Total U.S.	1,227,891	N/A	1,826,811

1 Quarterly Census of Employment and Wages (QCEW) collected by the U.S. Bureau of Labor Statistics.

2 U.S. Bureau of Economic Analysis multipliers.

3 Avalere calculation.

Note: The QCEW collects employment data monthly. All states report employment figures on privately owned home health agencies, including for-profit and non-profit organizations. Alabama, Arkansas, Iowa, Minnesota, Missouri, North Carolina, Ohio and Virginia submit employment figures for their government-owned facilities, which are included in this analysis. The QWEC does not include jobs for HHA contractors, but the multiplier is intended to account for such jobs.

Economic Contribution of Home Health Agencies

Table 6.2: Impact of Home Health on Labor Income, by State, 2013

State	Estimated Home Health Total Wages ¹	Multiplier for Earnings ²	Estimated Impact of HH Payroll on Labor Income ³	State	Estimated Home Health Total Wages	Multiplier for Earnings	Estimated Impact of HH Payroll on Labor Income
Alabama	\$442,450,942	1.4907	\$659,561,619	Montana	\$64,469,483	1.3740	\$88,581,070
Alaska	\$45,851,624	1.3685	\$62,747,947	Nebraska	\$101,936,518	1.3471	\$137,318,683
Arizona	\$591,778,877	1.5636	\$925,305,452	Nevada	\$219,447,644	1.4621	\$320,854,400
Arkansas	\$164,244,884	1.4149	\$232,390,086	New Hampshire	\$142,403,624	1.5361	\$218,746,207
California	\$2,500,391,530	1.6406	\$4,102,142,344	New Jersey	\$1,052,238,669	1.6215	\$1,706,205,002
Colorado	\$469,089,705	1.6524	\$775,123,829	New Mexico	\$237,044,110	1.4231	\$337,337,473
Connecticut	\$556,749,591	1.5237	\$848,319,352	New York	\$3,884,528,663	1.4943	\$5,804,651,181
Delaware	\$122,583,277	1.4332	\$175,686,353	North Carolina	\$960,789,266	1.6039	\$1,541,009,904
D.C.	\$142,580,412	1.1792	\$168,130,822	North Dakota	\$19,498,496	1.3203	\$25,743,864
Florida	\$2,458,304,259	1.5944	\$3,919,520,311	Ohio	\$1,488,539,713	1.6205	\$2,412,178,605
Georgia	\$758,880,727	1.6417	\$1,245,854,490	Oklahoma	\$434,572,539	1.4980	\$650,989,663
Hawaii	\$87,832,459	1.4868	\$130,589,300	Oregon	\$153,072,200	1.5263	\$233,634,099
Idaho	\$129,238,668	1.3857	\$179,086,022	Pennsylvania	\$1,541,821,705	1.6241	\$2,504,072,631
Illinois	\$1,208,785,122	1.6827	\$2,034,022,725	Rhode Island	\$151,681,720	1.5039	\$228,114,139
Indiana	\$559,078,072	1.5215	\$850,637,287	South Carolina	\$328,149,090	1.5440	\$506,662,195
Iowa	\$241,548,327	1.3544	\$327,153,054	South Dakota	\$23,841,249	1.2979	\$30,943,557
Kansas	\$228,261,679	1.3848	\$316,096,773	Tennessee	\$630,197,472	1.6075	\$1,013,042,436
Kentucky	\$348,828,319	1.5072	\$525,754,042	Texas	\$4,696,275,646	1.6640	\$7,814,602,675
Louisiana	\$690,048,350	1.4835	\$1,023,686,727	Utah	\$228,747,083	1.6235	\$371,370,889
Maine	\$121,634,226	1.4935	\$181,660,717	Vermont	\$70,322,632	1.4040	\$98,732,975
Maryland	\$568,713,780	1.5331	\$871,895,096	Virginia	\$687,126,292	1.5269	\$1,049,173,135
Massachusetts	\$1,322,570,729	1.5822	\$2,092,571,407	Washington	\$345,725,028	1.5315	\$529,477,880
Michigan	\$1,198,048,735	1.5796	\$1,892,437,782	West Virginia	\$196,956,444	1.3902	\$273,808,848
Minnesota	\$544,379,552	1.5593	\$848,851,035	Wisconsin	\$374,869,599	1.5223	\$570,663,991
Mississippi	\$290,746,973	1.4226	\$413,616,644	Wyoming	\$16,619,107	1.2900	\$21,438,648
Missouri	\$565,444,840	1.5758	\$891,027,979	Total U.S.	\$34,408,939,651	N/A	\$54,183,223,346

1 Quarterly Census of Employment and Wages (QCEW) collected by the U.S. Bureau of Labor Statistics.

2 U.S. Bureau of Economic Analysis multipliers.

3 Avalere calculation.

Note: The QCEW collects wage data quarterly. All states report employment figures on privately owned home health agencies, including for-profit and non-profit organizations. Alabama, Arkansas, Iowa, Minnesota, Missouri, North Carolina, Ohio and Virginia submit wage data for their government-owned facilities, which are included in this analysis. The QWEC does not include wage data for HHA contractors, but the multiplier is intended to account for such wages.