

# ***AHHQI Home Health Chartbook 2020***

**Avalere Health** | An Inovalon Company  
September 2020



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## 2020 Chartbook

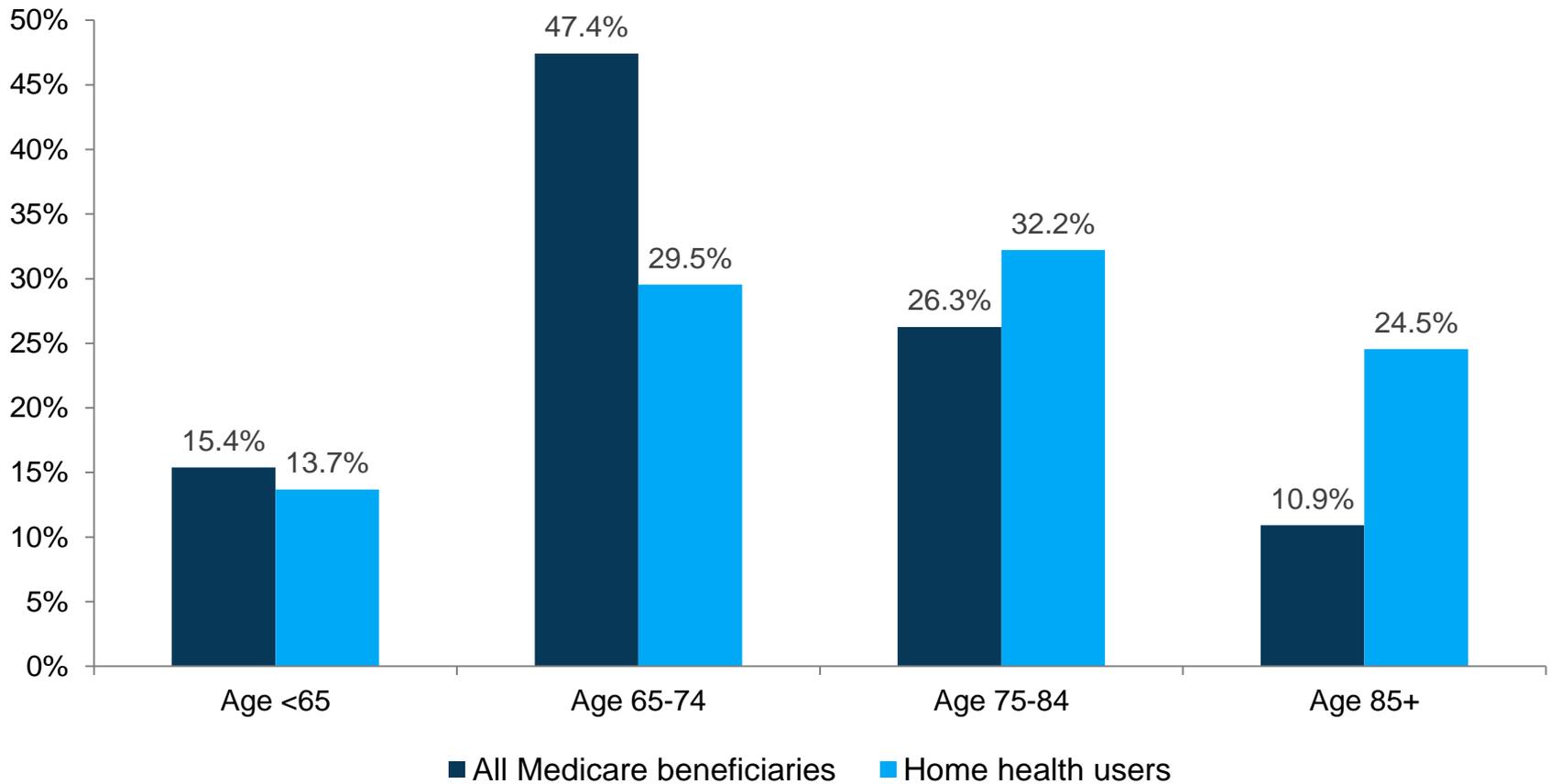
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## Section 1: Demographics of Home Health Users

# Demographics of Home Health Users

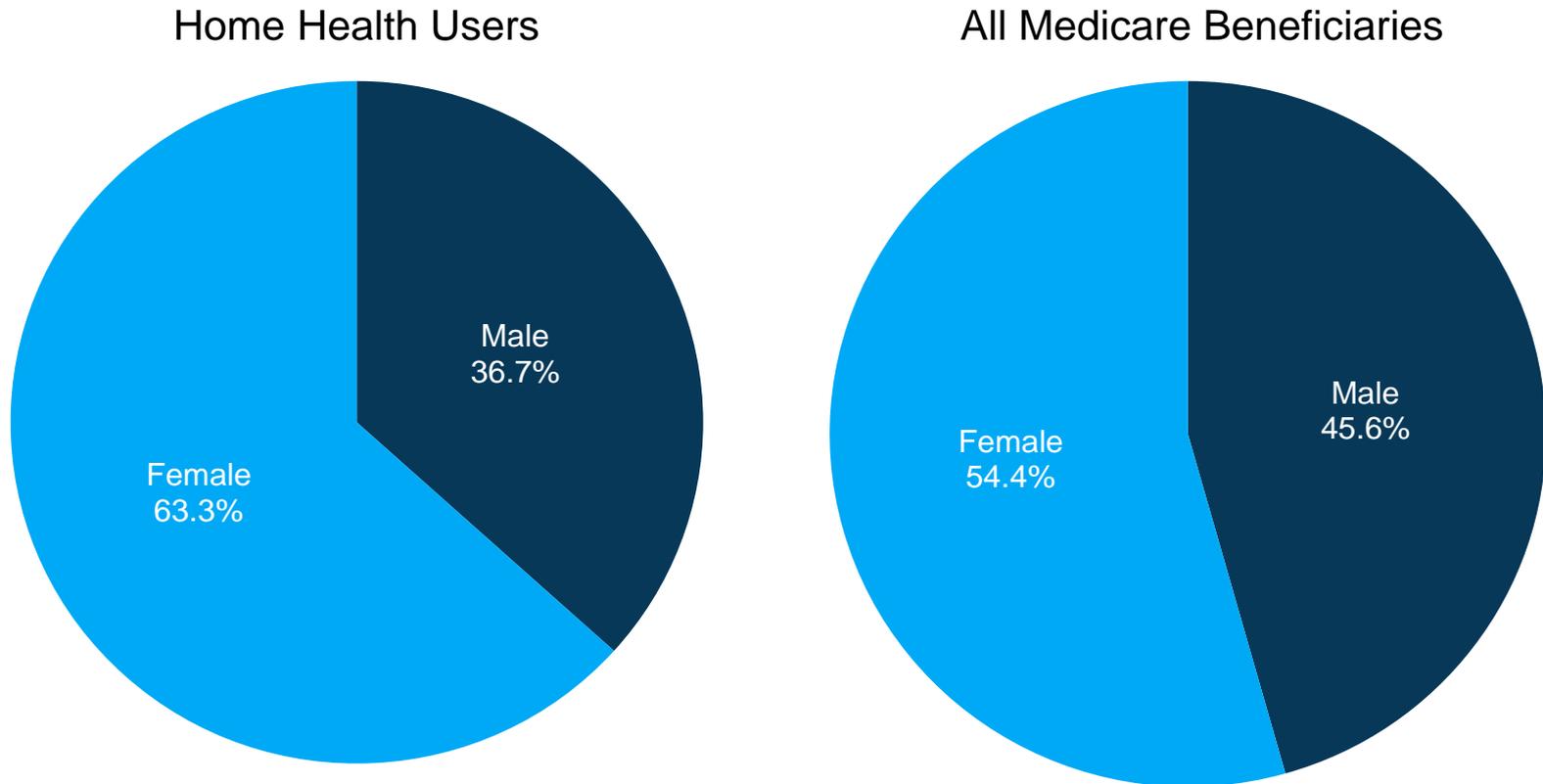
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Source: Avalere analysis of the Medicare Current Beneficiary Survey, Access to Care file, 2017.

# Demographics of Home Health Users

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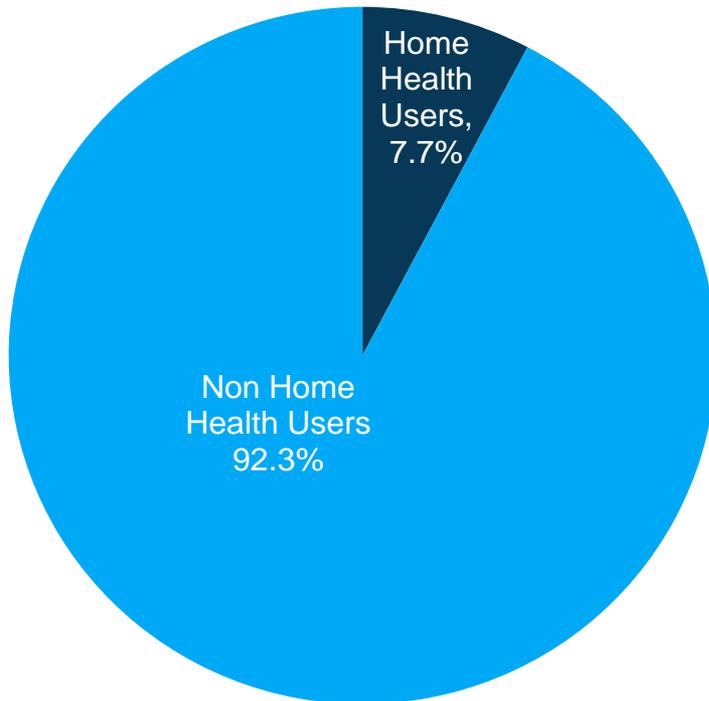


Source: Avalere analysis of the Medicare Current Beneficiary Survey, Access to Care file, 2017.

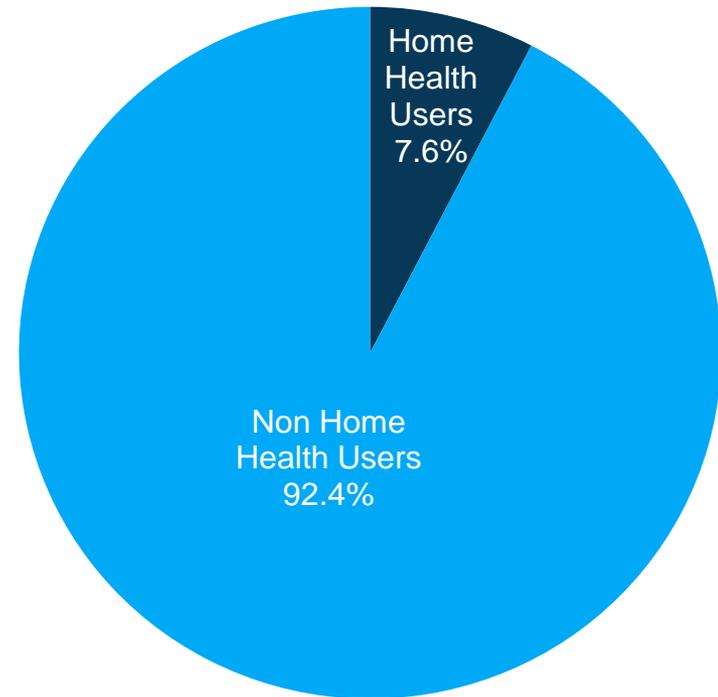
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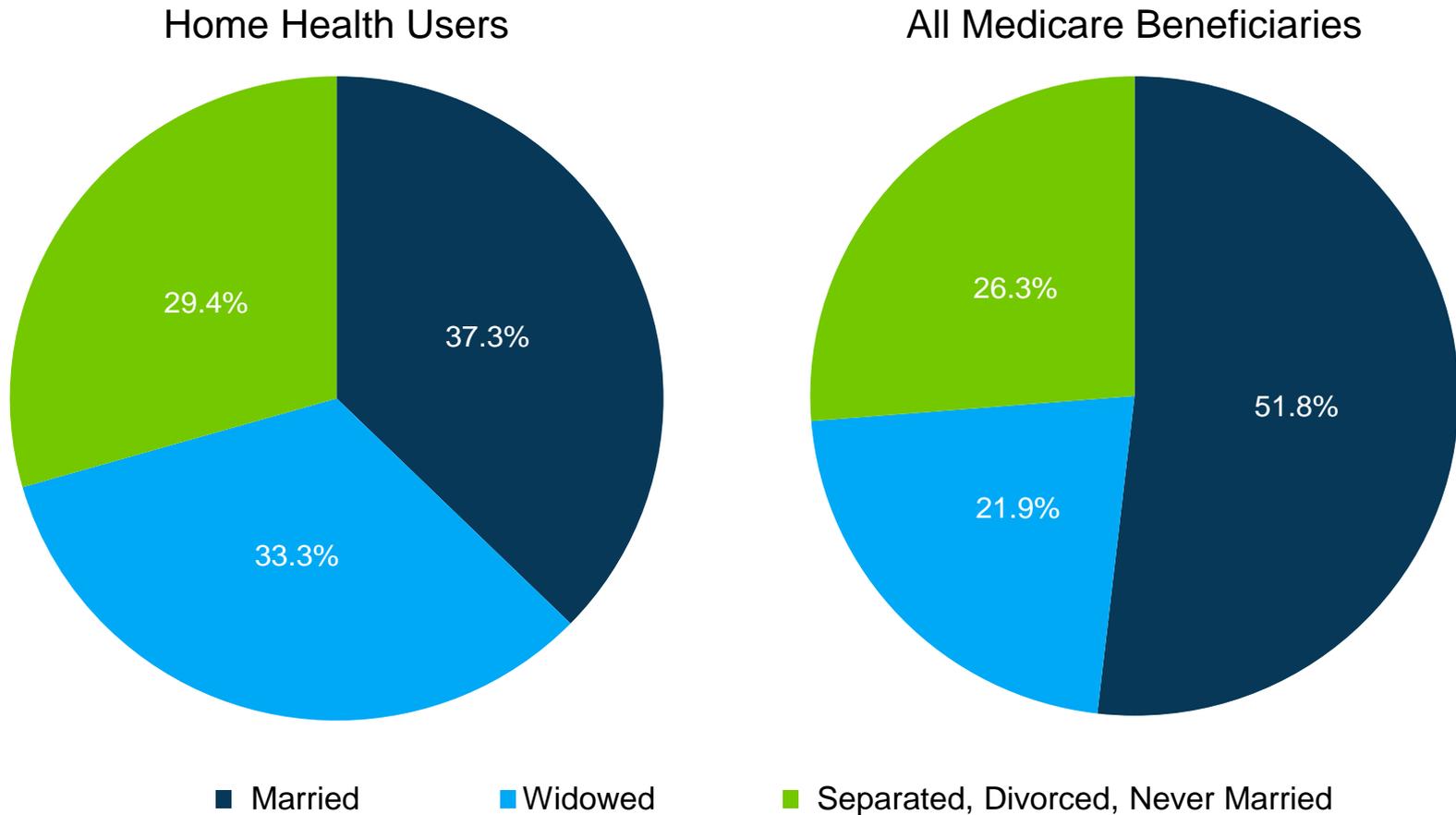
Medicare Advantage Beneficiaries



Source: Avalere analysis of the Medicare Current Beneficiary Survey, Access to Care file, 2017.

# Demographics of Home Health Users

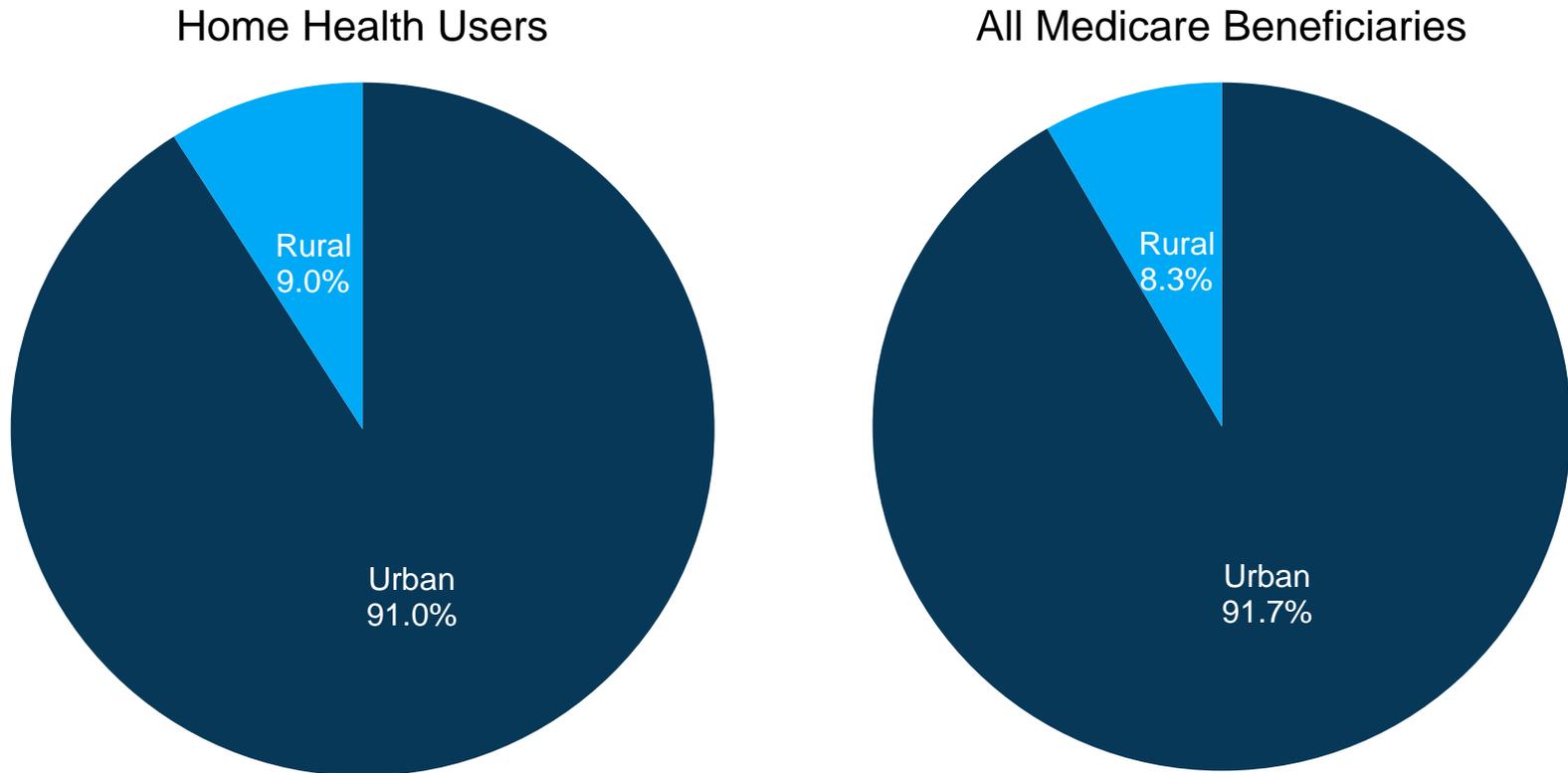
Chart 1.4: Marital Status of Home Health Users and All Medicare Beneficiaries, 2017



Source: Avalere analysis of the Medicare Current Beneficiary Survey, Access to Care file, 2017.

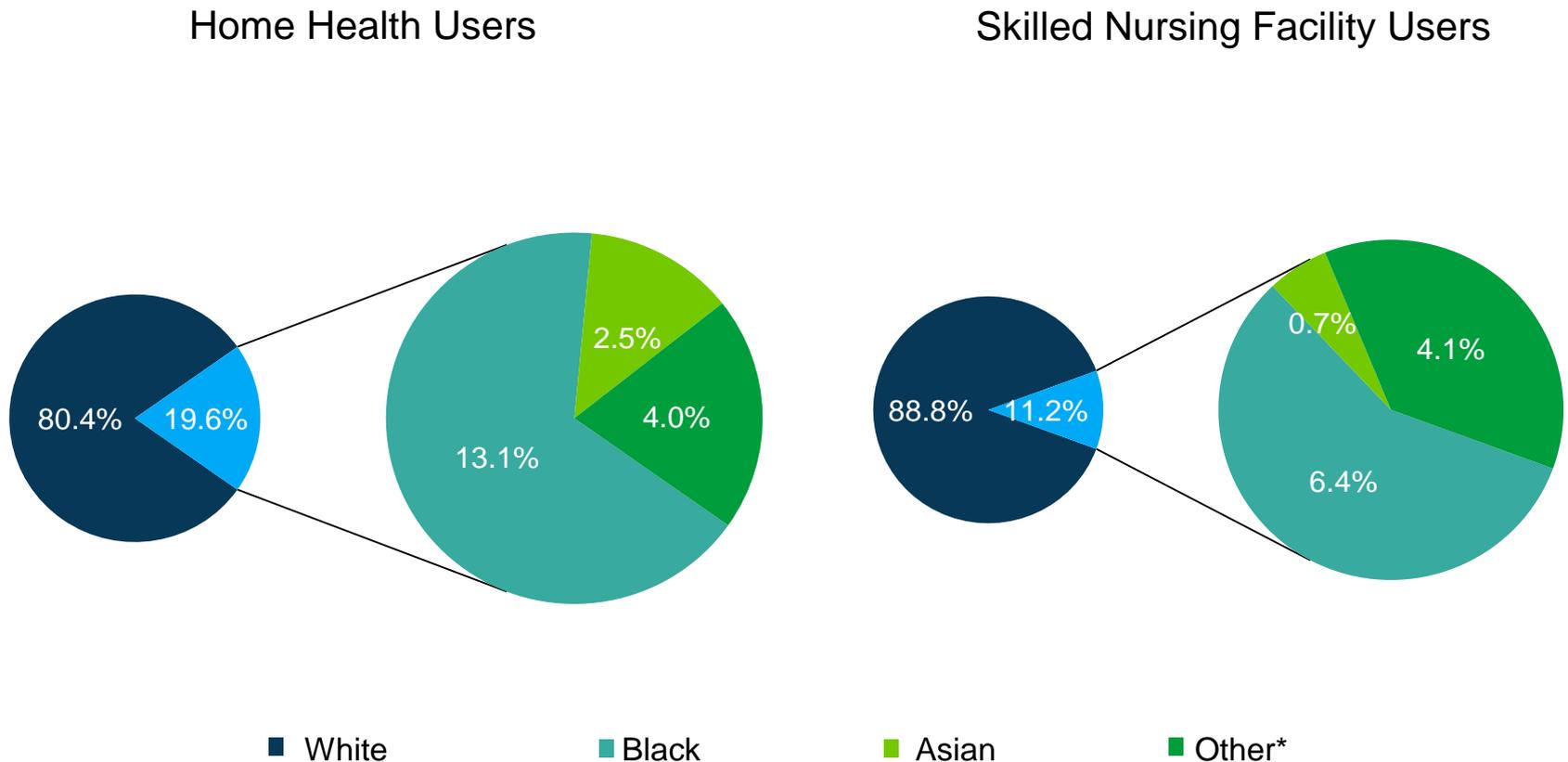
# Demographics of Home Health Users

Chart 1.5: Geographic Distribution of Home Health Users and All Medicare Beneficiaries, 2019



# Demographics of Home Health Users

Chart 1.6: Race of Medicare Home Health Users and Skilled Nursing Facility Users, 2017

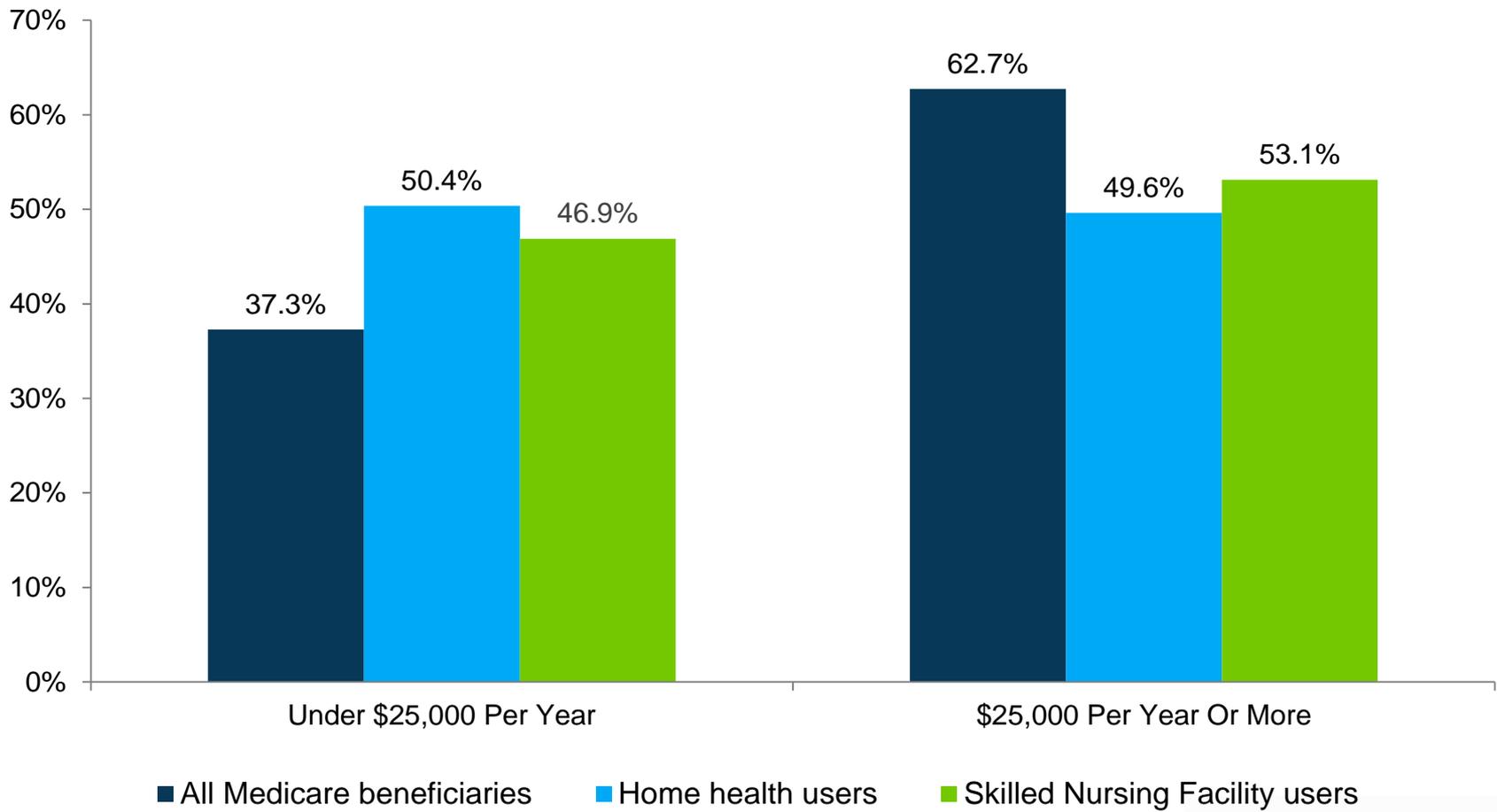


Source: Avalere analysis of the Medicare Current Beneficiary Survey, Access to Care file, 2017.

\*Other includes American Indian, Alaska Native, Native Hawaiian, Pacific Islander, Other race, and More than one race.

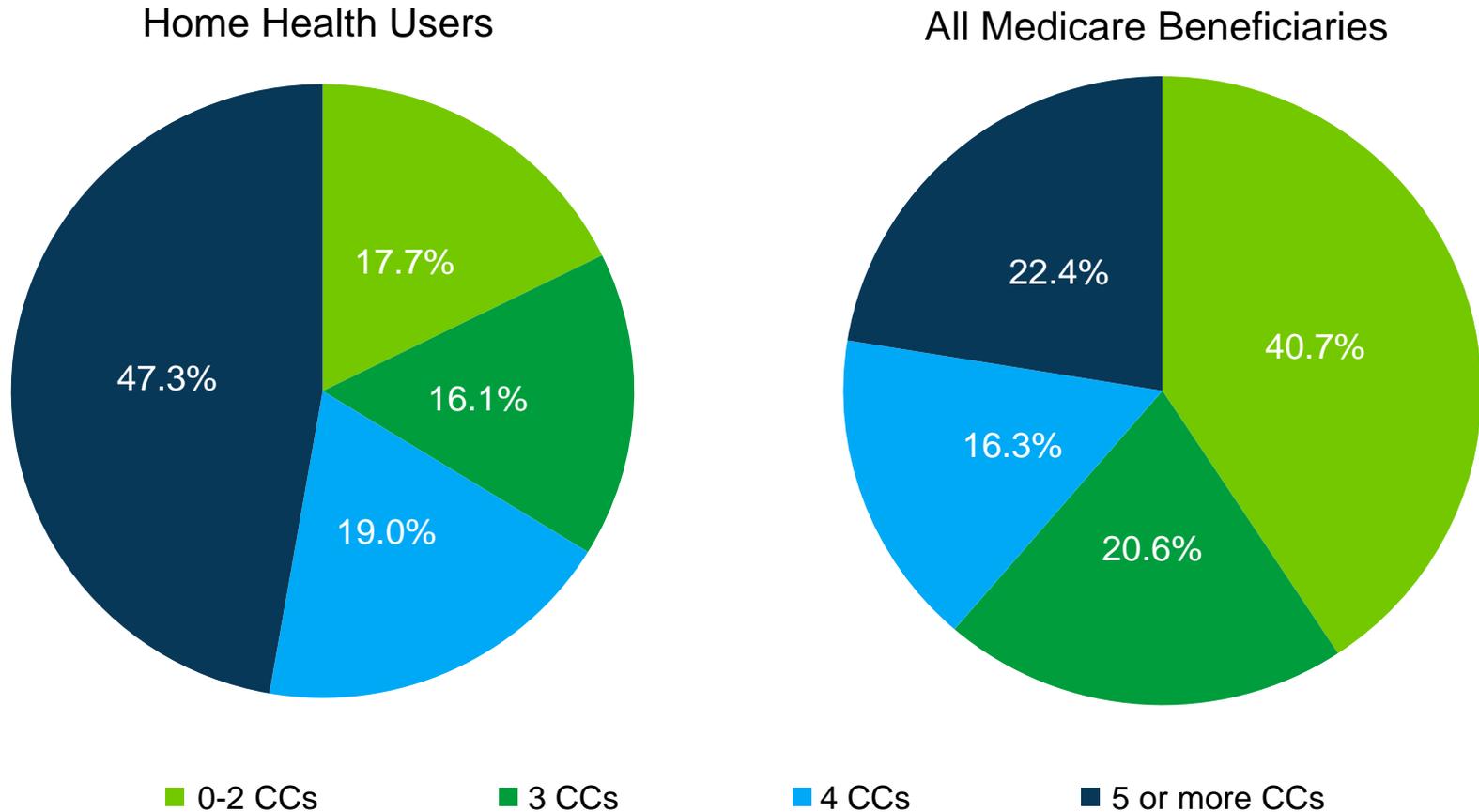
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Chart 1.7: Income Distribution of Home Health Users, Skilled Nursing Facility Users, and All Medicare Beneficiaries, 2017



# Demographics of Home Health Users

Chart 1.8: Percentage of All Medicare Beneficiaries and Home Health Users by Number of Chronic Conditions (CCs), 2017



Source: Avalere analysis of the Medicare Current Beneficiary Survey, Access to Care file, 2017. Totals may not sum to 100 percent due to rounding.

# Demographics of Home Health Users

Table 1.9: Selected Characteristics of Medicare Home Health Users and All Medicare Beneficiaries, 2017

	All Medicare Home Health Users	All Medicare Beneficiaries
Age 85+	24.5%	10.9%
Live alone	37.3%	28.1%
Have 3 or more chronic conditions	82.3%	59.3%
Have 2 or more ADL limitations*	27.8%	10.0%
Report fair or poor health	42.2%	23.2%
Are in somewhat or much worse health than last year	37.9%	19.5%
Have incomes at or under 200% of the Federal Poverty Level (FPL)**	57.1%	43.6%
Have incomes under 100% of the Federal Poverty Level (FPL)**	26.5%	18.1%

Source: Avalere analysis of the Medicare Current Beneficiary Survey, Access to Care file, 2017.

\*ADL = Activities of daily living, such as eating, dressing, and bathing. Limitations with at least 2 ADLs is considered a measure of moderate to severe disability and is often the eligibility threshold for a nursing home level of care.

\*\*In 2017, 100 percent of FPL for a household of 1 was \$12,060, a household of 2 was \$16,240, a household of 3 was \$20,420, and household of 4 was \$24,600. 200 percent of FPL was double each amount.

# Demographics of Home Health Users\*

Table 1.10: Average Annual Living Expenses for Households with Incomes under 200 Percent of the Federal Poverty Level (FPL)\*\* with at Least One Individual 65 Years or Older, 2018

Living Expense	2017			2018		
	One-Person Elderly Household	Two-Person Elderly Household	All Elderly Household Sizes	One-Person Elderly Household	Two-Person Elderly Household	All Elderly Household Sizes
Housing	\$6,787	\$9,178	\$8,209	\$6,895	\$9,133	\$8,360
Food	\$2,546	\$4,665	\$3,806	\$2,549	\$4,658	\$3,903
Transportation	\$2,169	\$4,489	\$3,400	\$1,972	\$4,590	\$3,386
Health Care (out-of-pocket costs)	\$2,336	\$4,375	\$3,277	\$2,510	\$4,467	\$3,470
<b>Total</b>	<b>\$13,838</b>	<b>\$22,707</b>	<b>\$18,692</b>	<b>\$13,927</b>	<b>\$22,848</b>	<b>\$19,119</b>

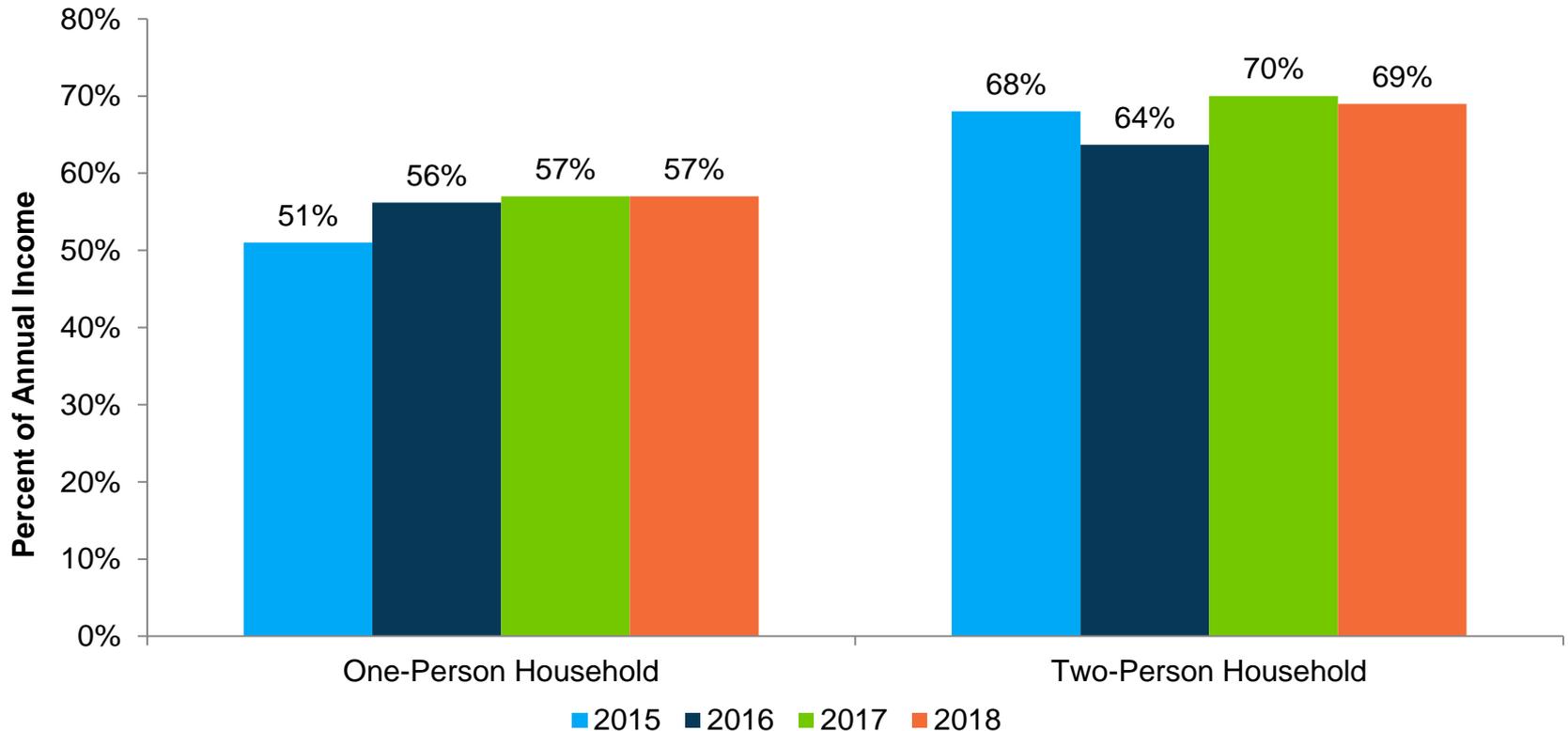
Source: Avalere analysis of the 2018 Bureau of Labor Statistics Consumer Expenditure Survey. The analysis includes households with one or more individuals age 65 or older and annual incomes below 200 percent of the Federal Poverty Level.

\*This analysis includes, but is not limited to, home health users.

\*\*In 2018, 200 percent of the Federal Poverty Level was \$24,280 for a one-person household and \$32,920 for a two-person household.

# Demographics of Home Health Users\*

Chart 1.11: Average Annual Living Expenses, as a Percentage of Income, for One- And Two-Person Households at 200 percent of the Federal Poverty Level (FPL)\*\* with at Least One Individual 65 Years or Older, 2018



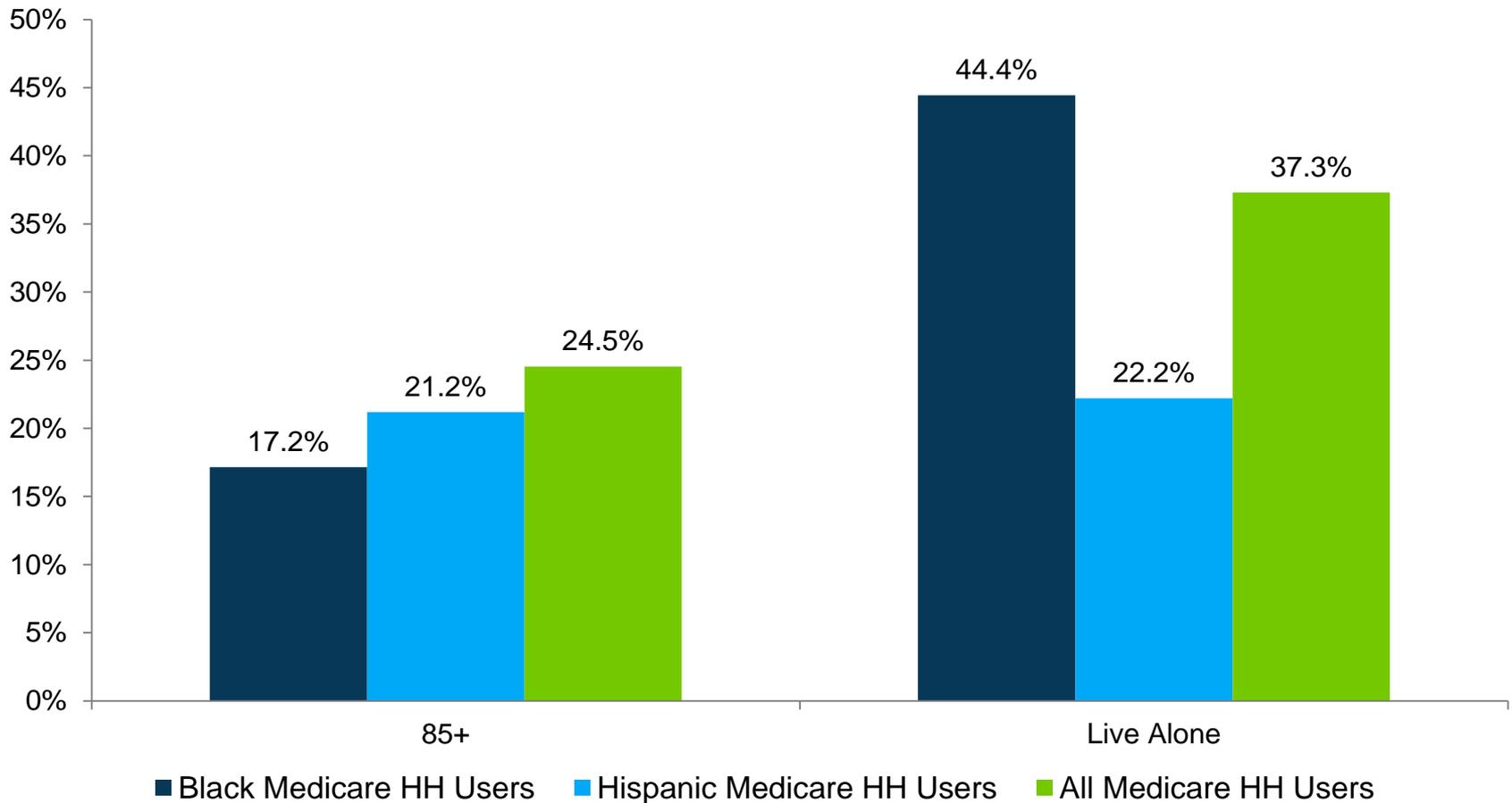
Source: Avalere analysis of the 2018 Bureau of Labor Statistics Consumer Expenditure Survey. The 2018 average annual living expenses are for one-person or two-person households, respectively, under 200 percent of the Federal Poverty Level with at least one individual 65 years or older.

\*This analysis includes, but is not limited to, home health users.

\*\*In 2018, 200 percent of the Federal Poverty Level was \$24,280 for a one-person household and \$32,920 for a two-person household.

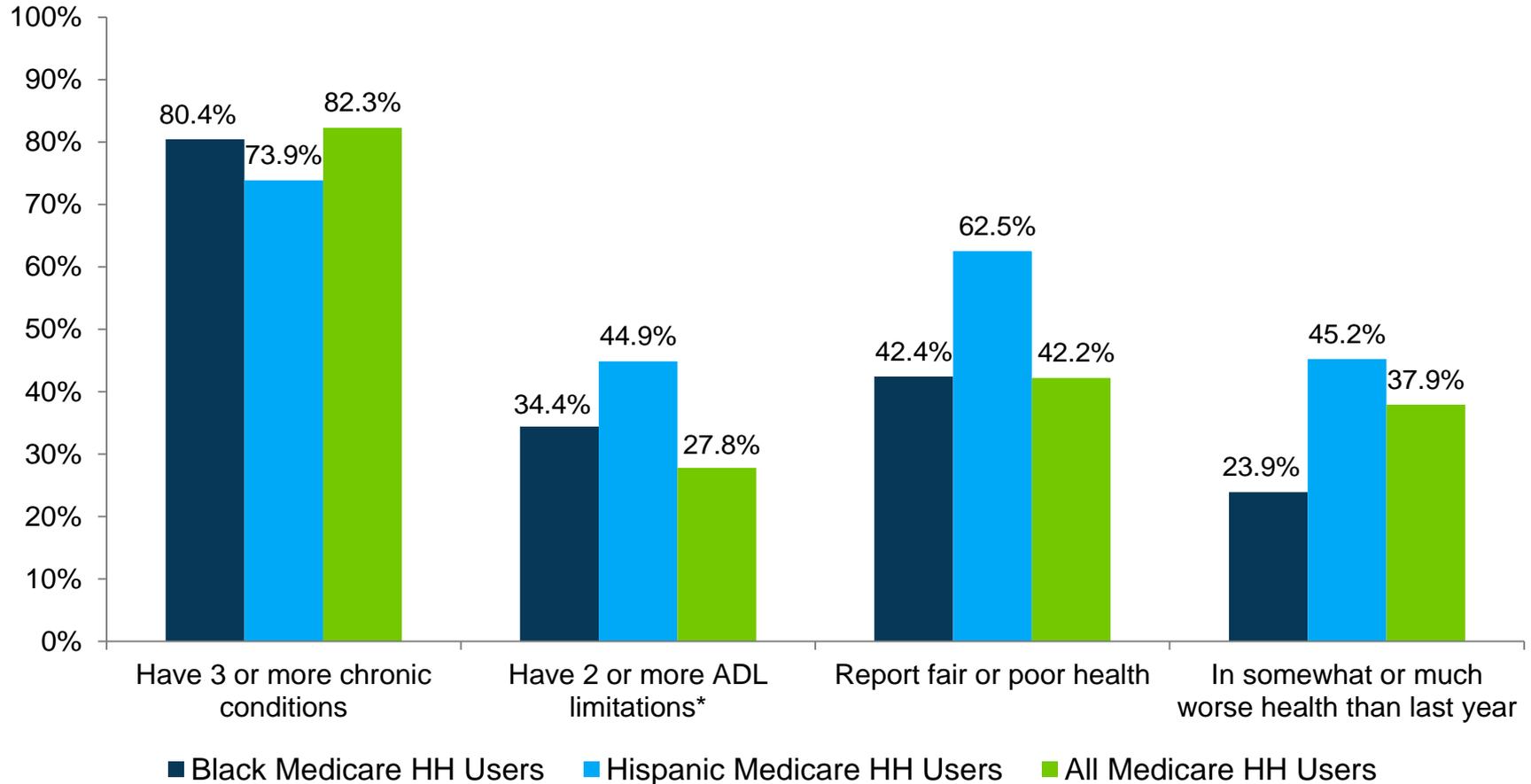
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Chart 1.12: Selected Characteristics of All Medicare Home Health Users by Race and Ethnicity, 2017



# Demographics of Home Health Users by Race and Ethnicity

Chart 1.13: Health Status of Home Health Users by Race and Ethnicity, 2017

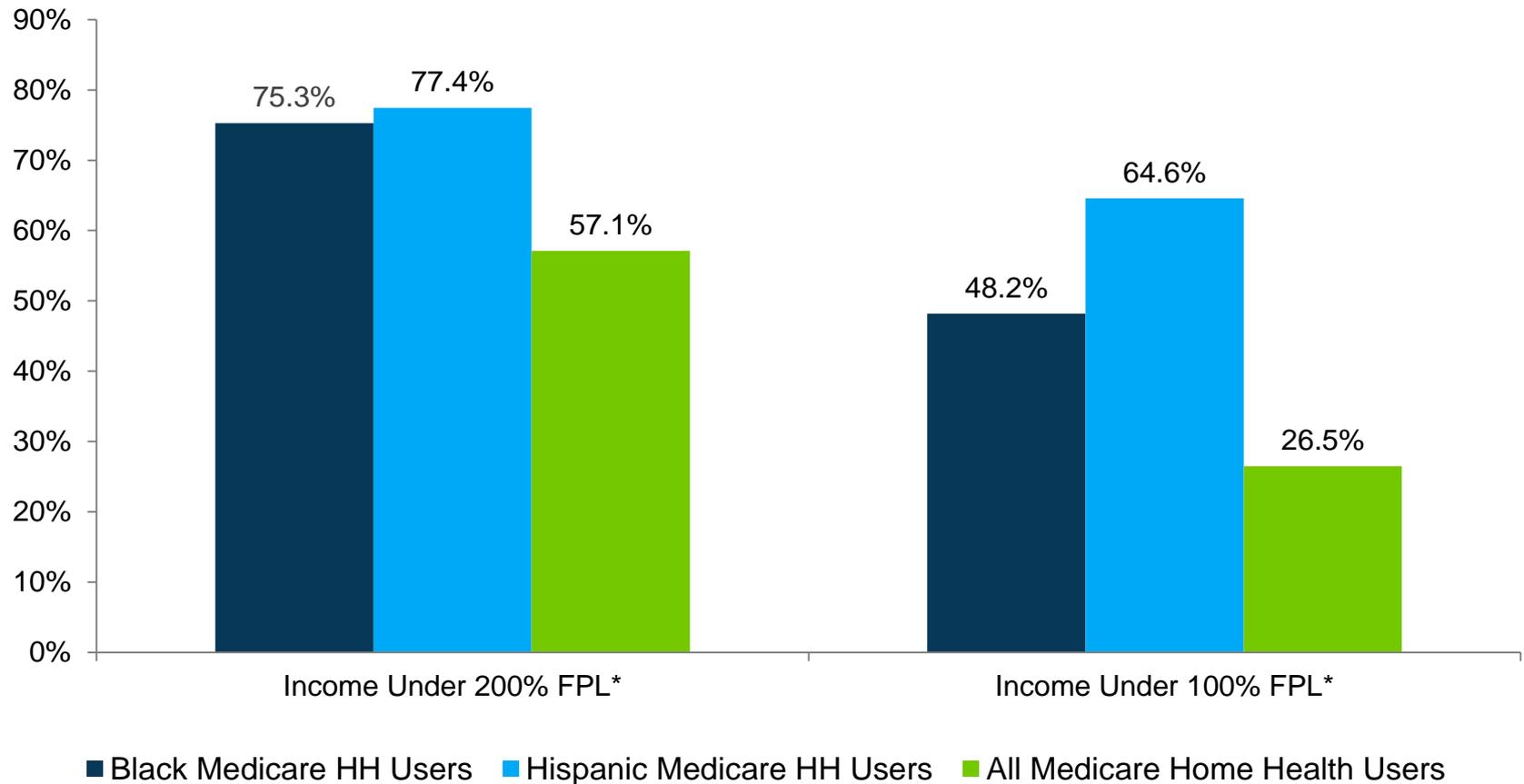


Source: Avalere analysis of the Medicare Current Beneficiary Survey, Access to Care file, 2017.

\*ADL = Activities of daily living, such as eating, dressing, and bathing. Limitations with at least 2 ADLs is considered a measure of moderate to severe disability and is often the eligibility threshold for a nursing home level of care.

# Demographics of Home Health Users by Race and Ethnicity

Chart 1.14: Income by Federal Poverty Level (FPL) of Home Health Users by Race and Ethnicity, 2017

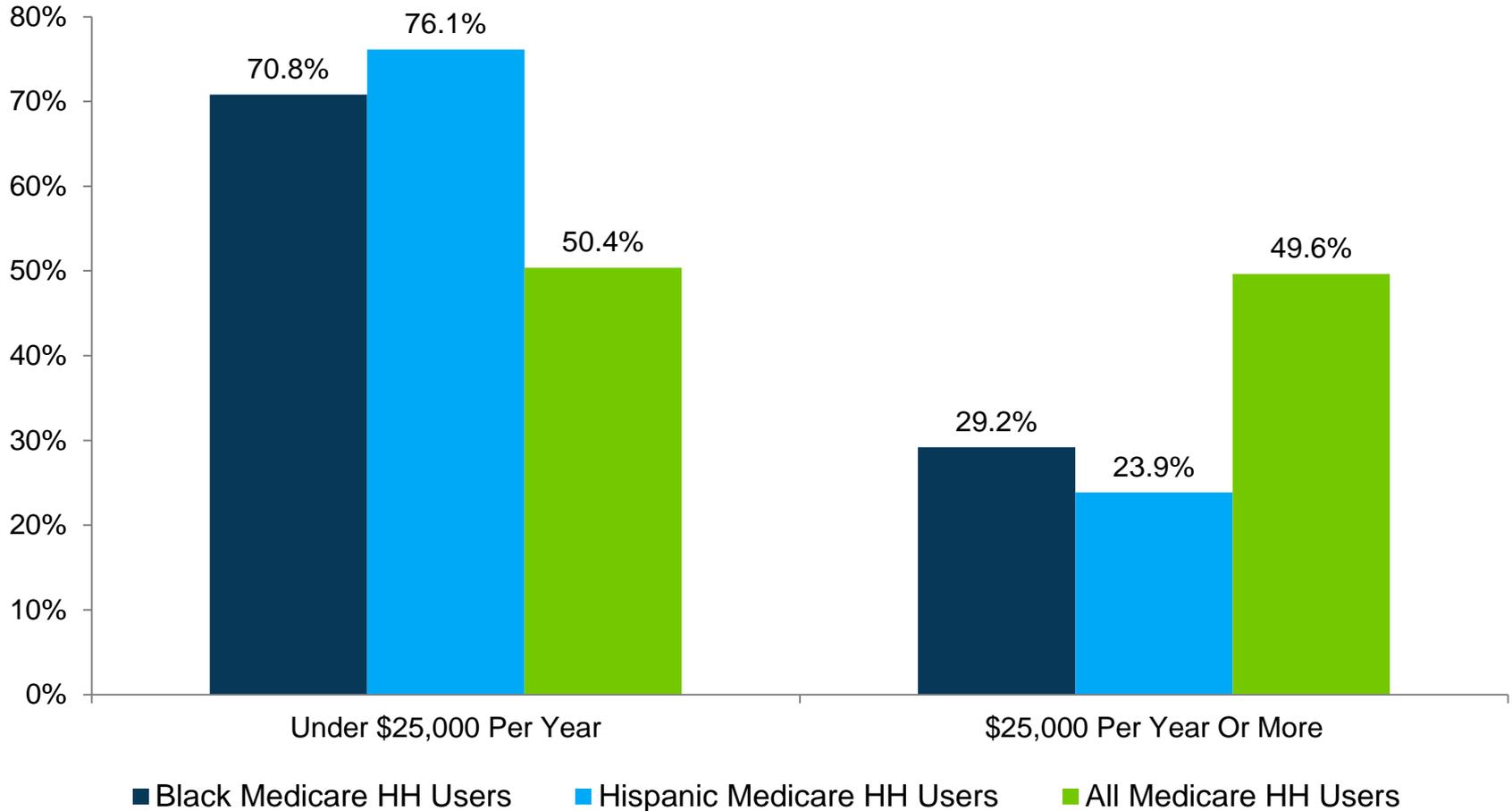


Source: Avalere analysis of the Medicare Current Beneficiary Survey, Access to Care file, 2017.

\*\*In 2017, 100 percent of FPL for a household of 1 was \$12,060, a household of 2 was \$16,240, a household of 3 was \$20,420, and household of 4 was \$24,600. 200 percent of FPL was double each amount.

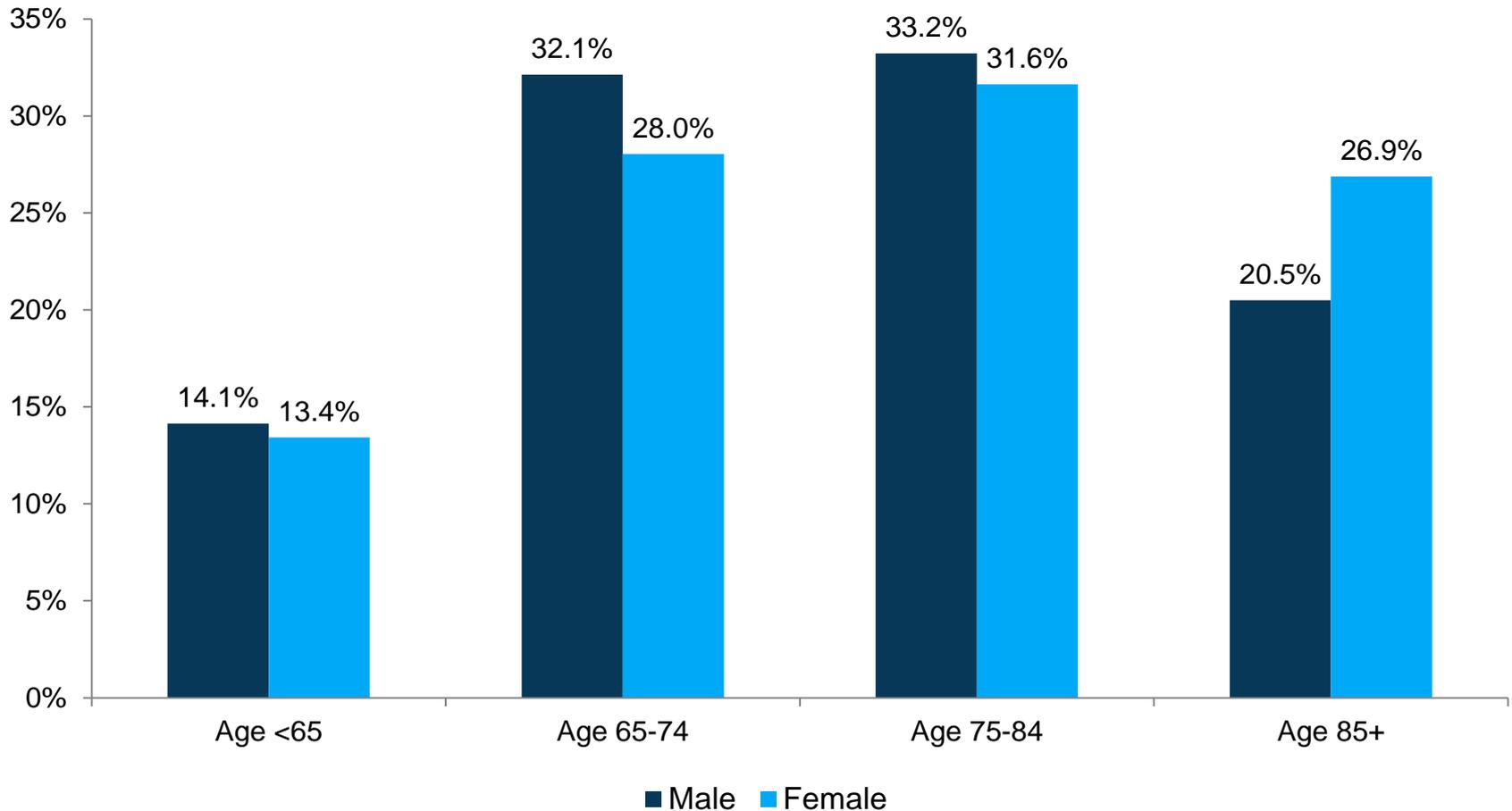
# Demographics of Home Health Users by Race and Ethnicity

Chart 1.15: Income Distribution of Home Health Users by Race and Ethnicity, 2017



# Demographics of Home Health Users by Sex

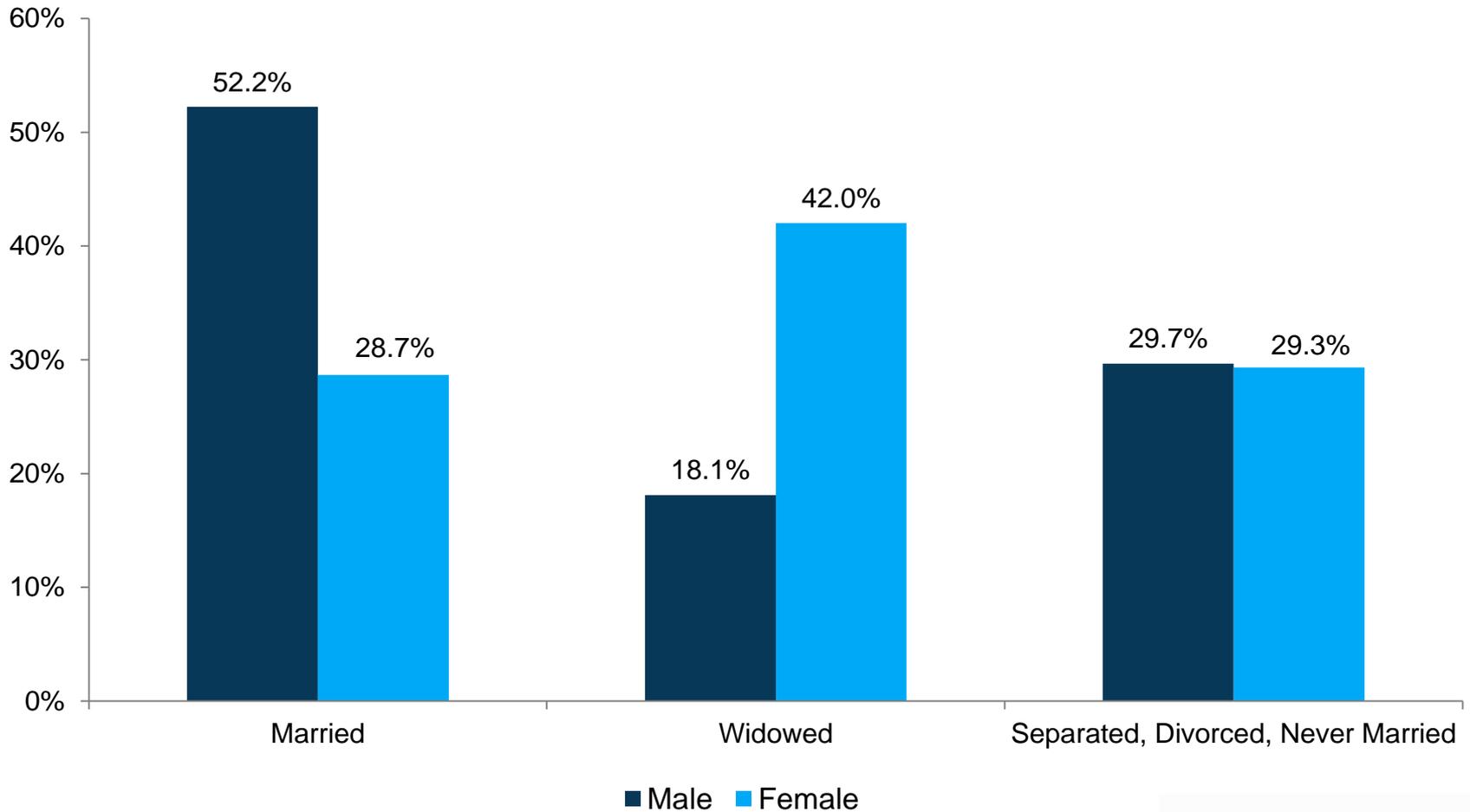
Chart 1.16: Age Distribution of Home Health Users by Sex, 2017



Source: Avalere analysis of the Medicare Current Beneficiary Survey, Access to Care file, 2017.

# Demographics of Home Health Users by Sex

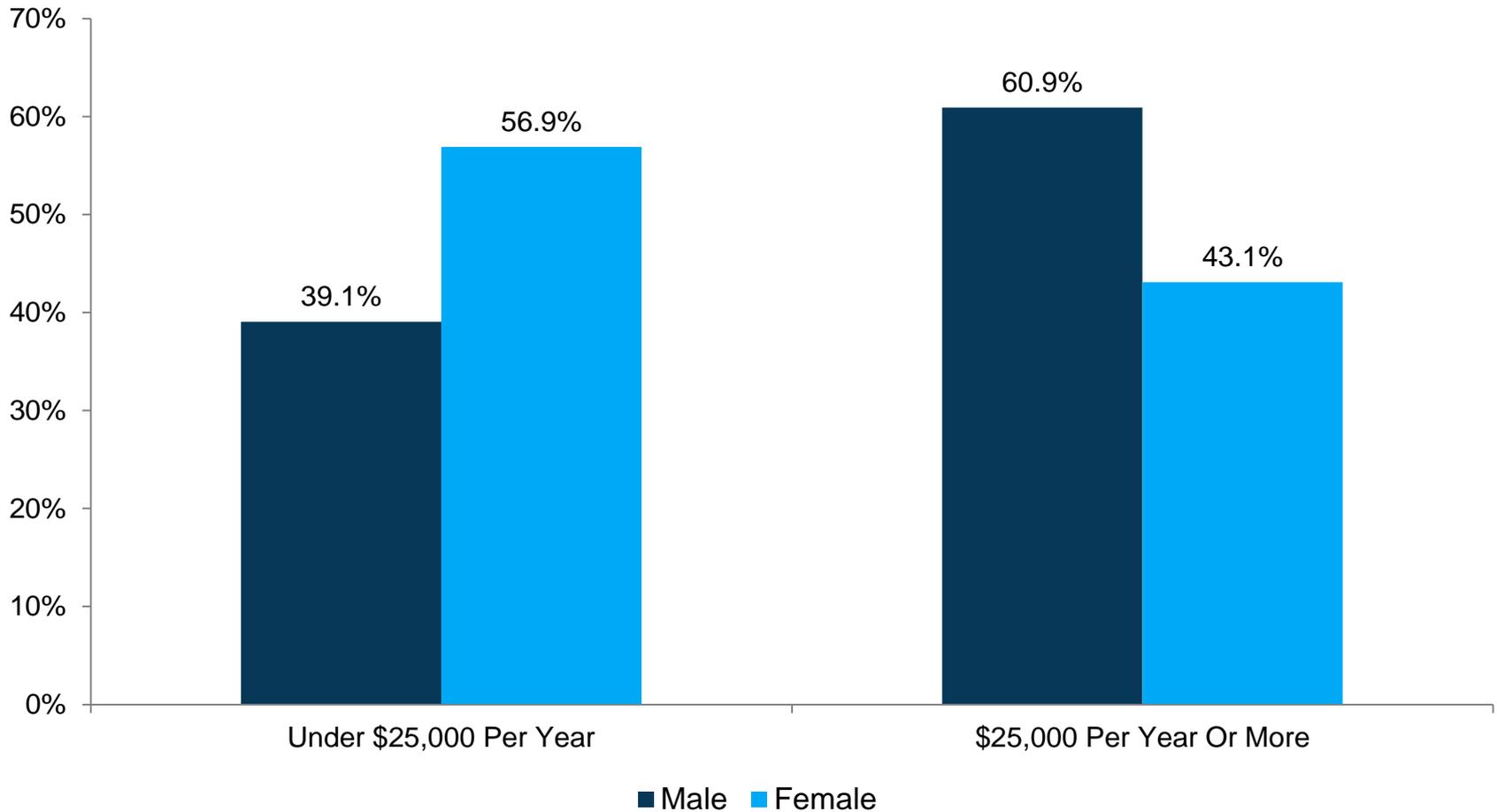
Chart 1.17: Marital Status of Home Health Users by Sex, 2017



Source: Avalere analysis of the Medicare Current Beneficiary Survey, Access to Care file, 2017.

# Demographics of Home Health Users by Sex

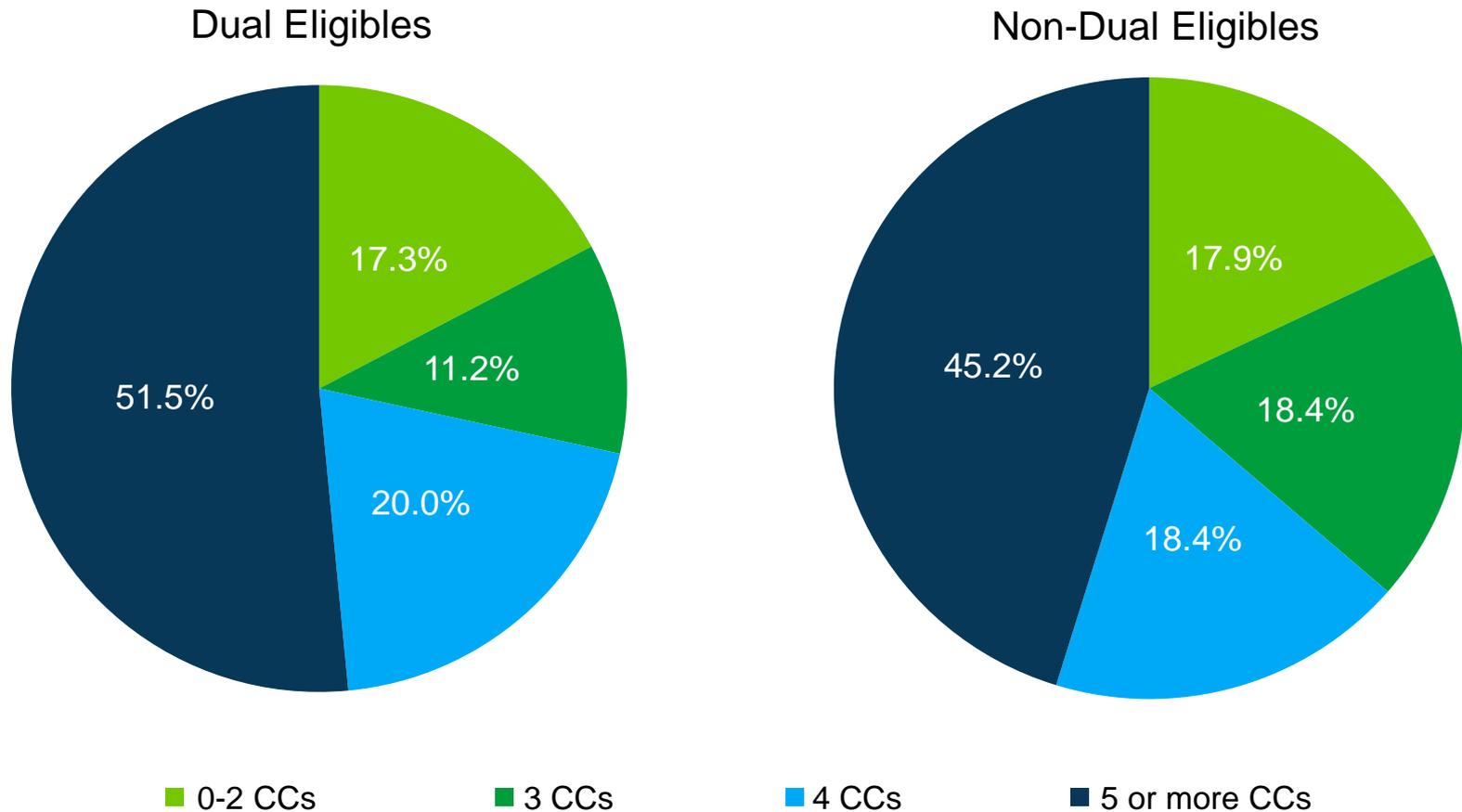
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Source: Avalere analysis of the Medicare Current Beneficiary Survey, Access to Care file, 2017.

# Demographics of Home Health Users by Dual Eligible Status

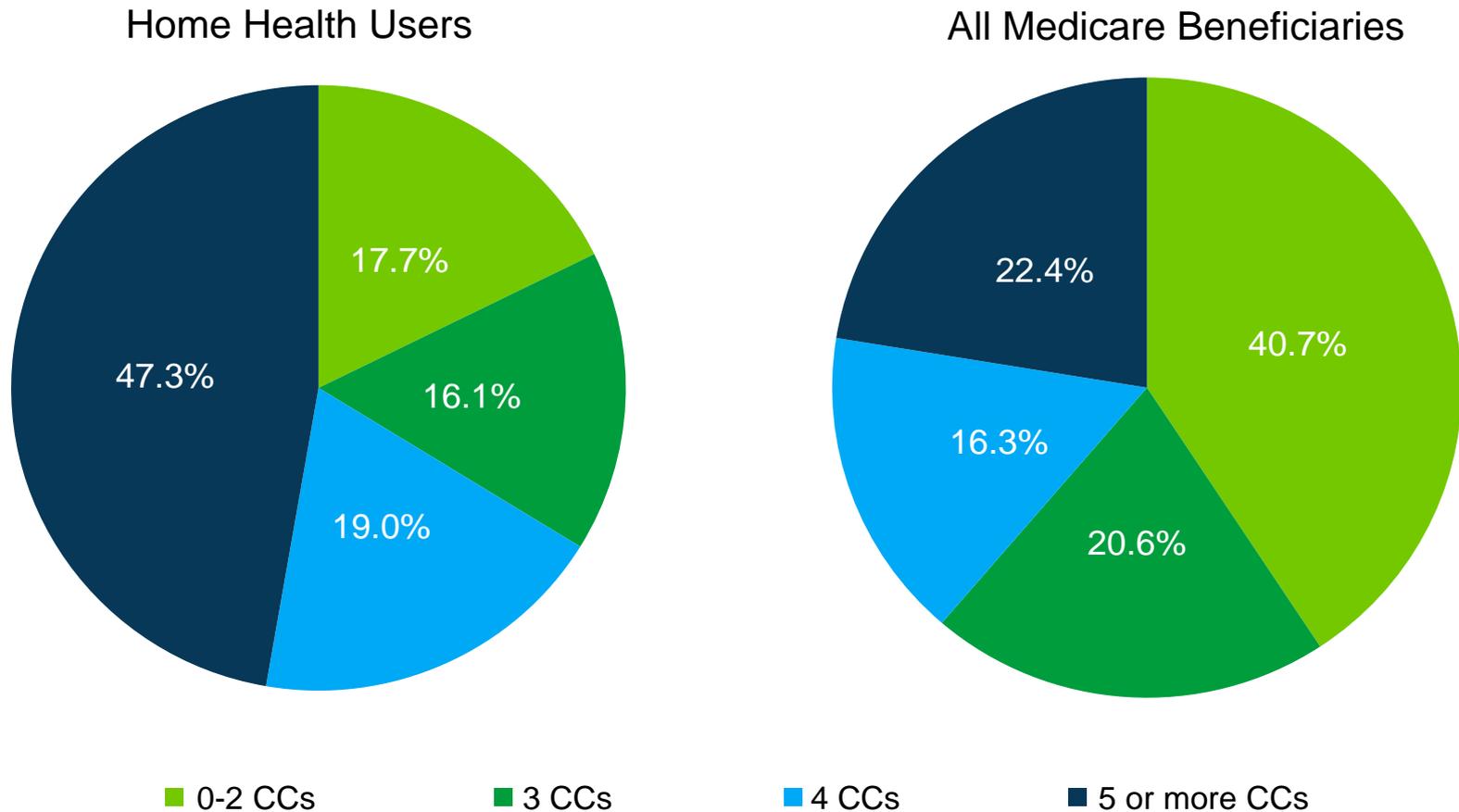
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Source: Avalere analysis of the Medicare Current Beneficiary Survey, Access to Care file, 2017.  
Note: Dual eligibles are defined as individuals with any state buy-in at any point during the year.  
Totals may not sum to 100 percent due to rounding.

# Demographics of Home Health Users Compared to All Medicare Beneficiaries

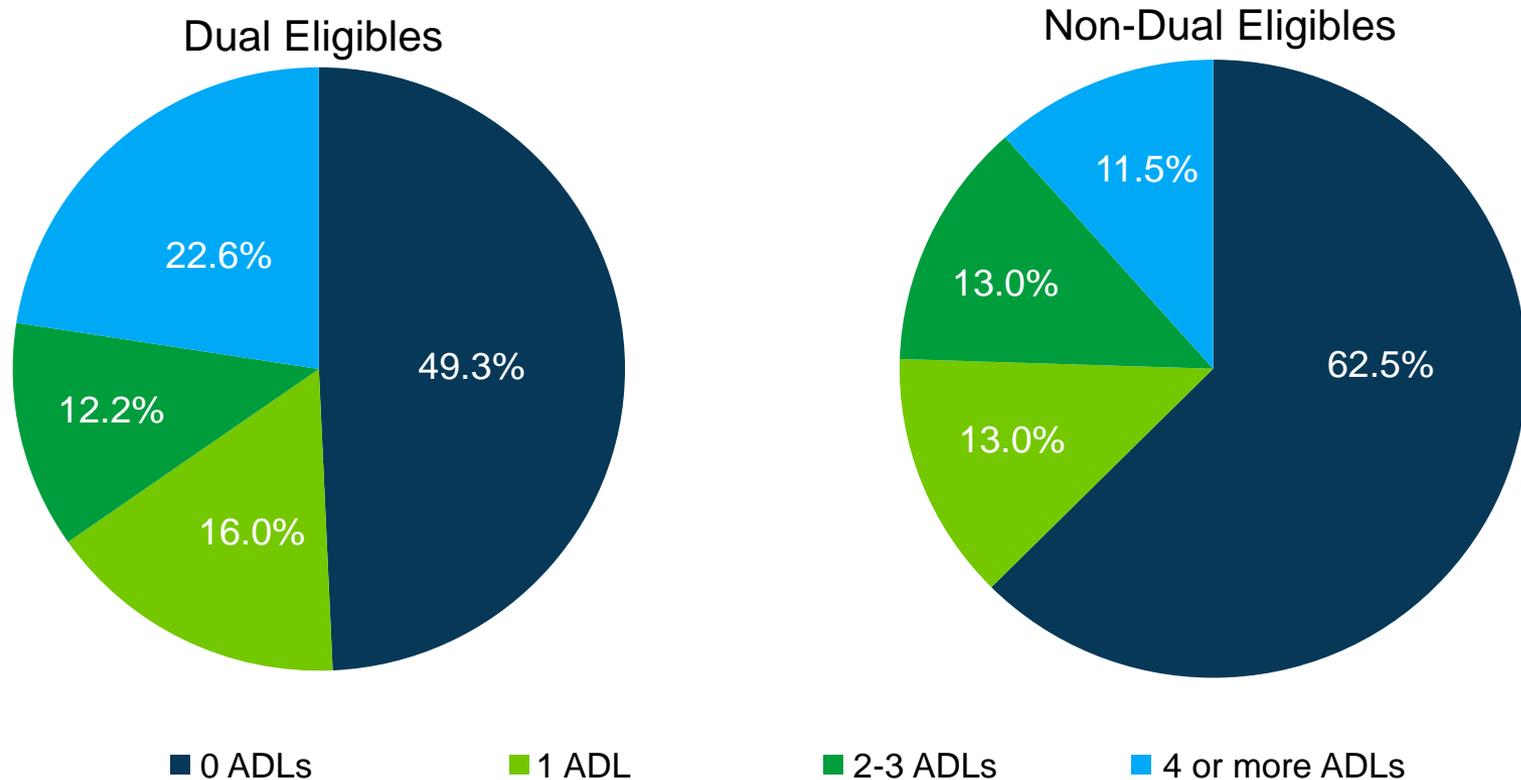
Chart 1.20: Percentage of Home Health Users to All Medicare Beneficiaries by Number of Chronic Conditions (CCs), 2017



Source: Avalere analysis of the Medicare Current Beneficiary Survey, Access to Care file, 2017.  
Totals may not sum to 100 percent due to rounding.

# Demographics of Home Health Users by Dual Eligible Status

Chart 1.21: Percentage of Home Health Users by Dual Eligible Status and Number of Activities of Daily Living (ADLs) with Which They Require Assistance, 2017



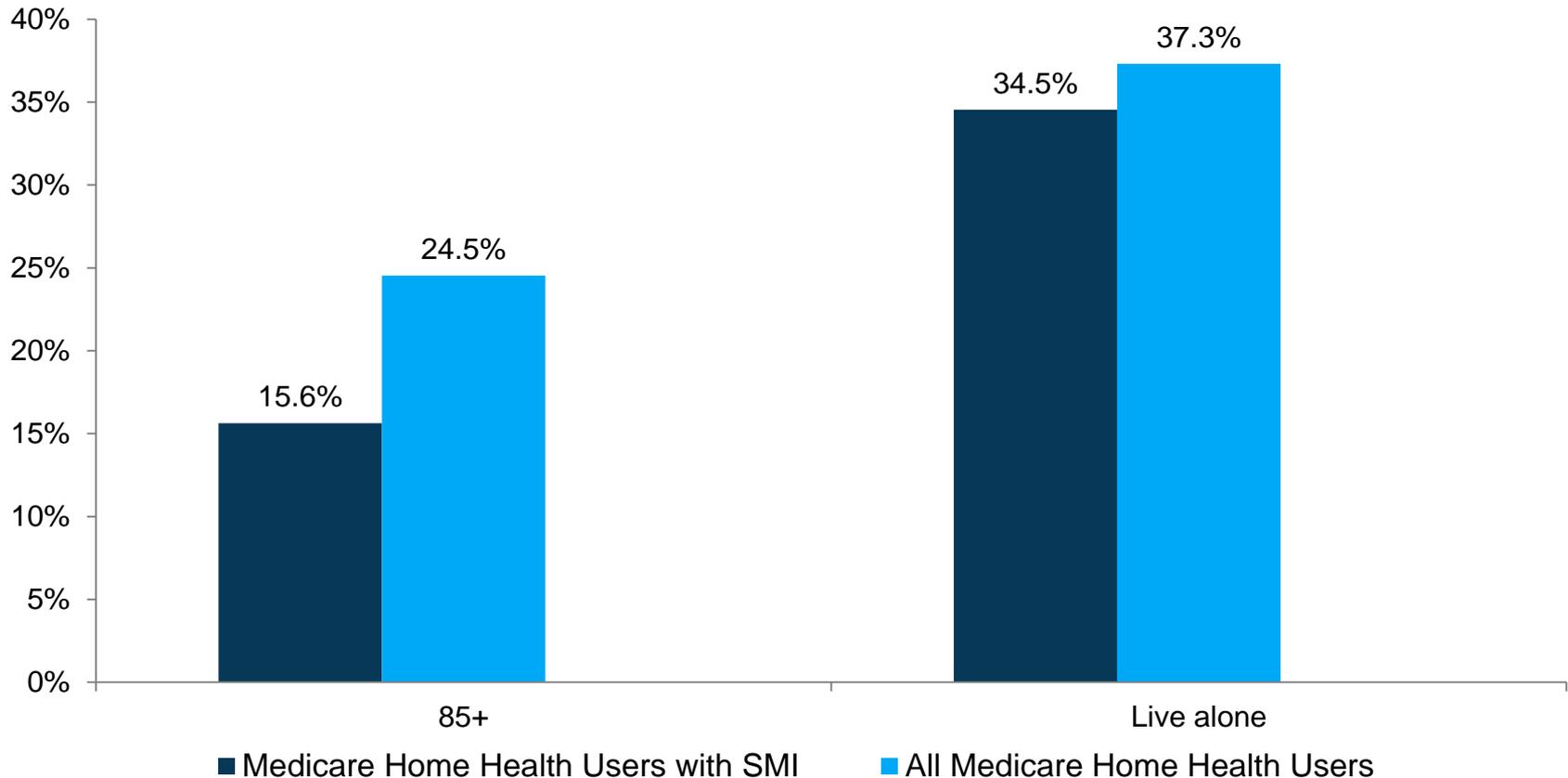
Source: Avalere analysis of the Medicare Current Beneficiary Survey, Access to Care file, 2017.

Note: Dual eligibles are defined as individuals with any state buy-in at any point during the year. Beneficiaries were classified as requiring assistance with an ADL (bathing, walking, transferring, dressing, toileting, and eating) if they reported needing at least stand-by assistance with that ADL.

Totals may not sum to 100 percent due to rounding.

# Demographics of Home Health Users by Severe Mental Illness (SMI)\*

Chart 1.22: Selected Characteristics of All Medicare Home Health Users and Medicare Home Health Users with SMI, 2017

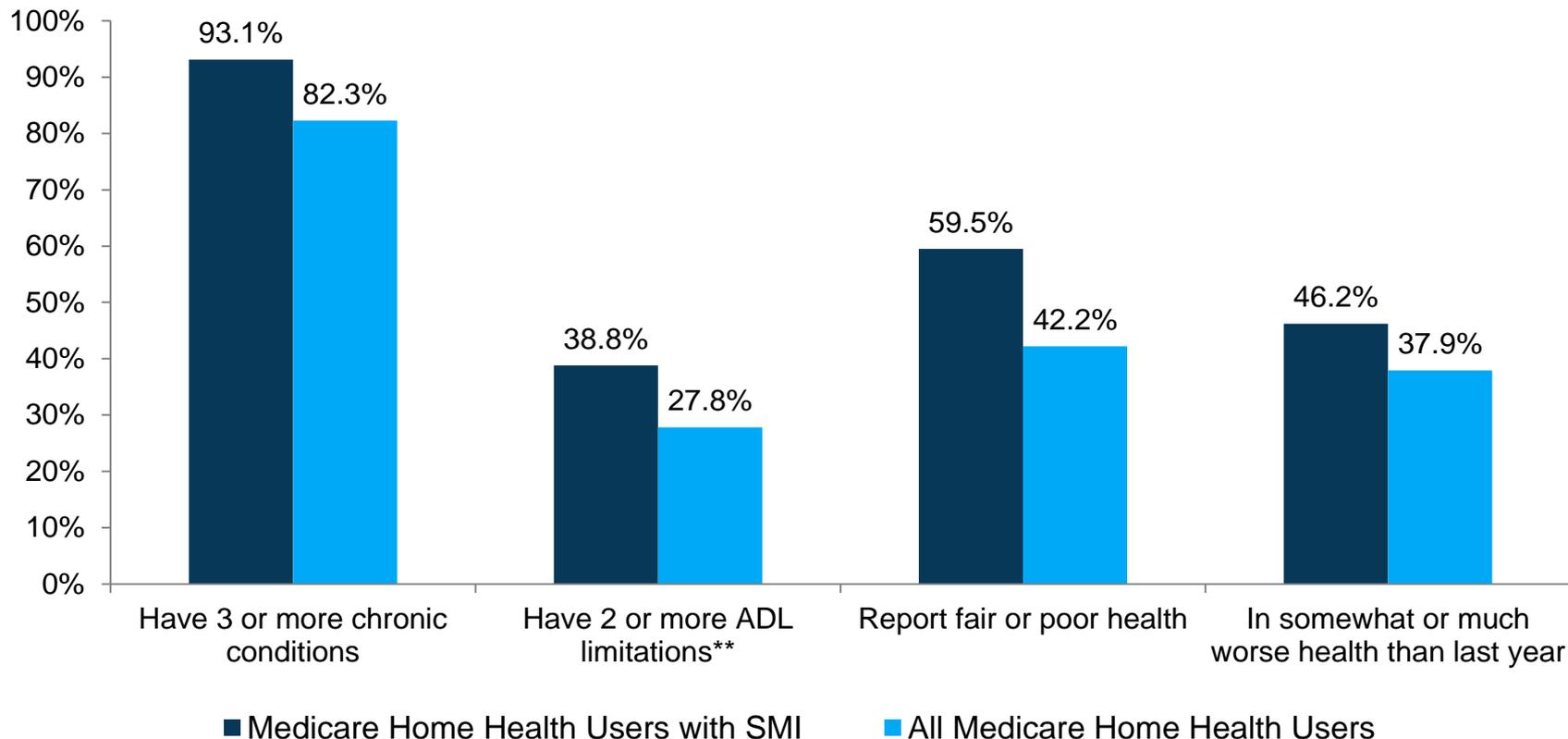


Source: Avalere analysis of the Medicare Current Beneficiary Survey, Access to Care file, 2017.

\*Severe mental illness (SMI) is defined as having major depression or another mental illness, including bipolar disorder, schizophrenia, and other psychoses.

# Demographics of Home Health Users by Severe Mental Illness (SMI)\*

Chart 1.23: Selected Characteristics of All Medicare Home Health Users and Medicare Home Health Users with SMI, 2017



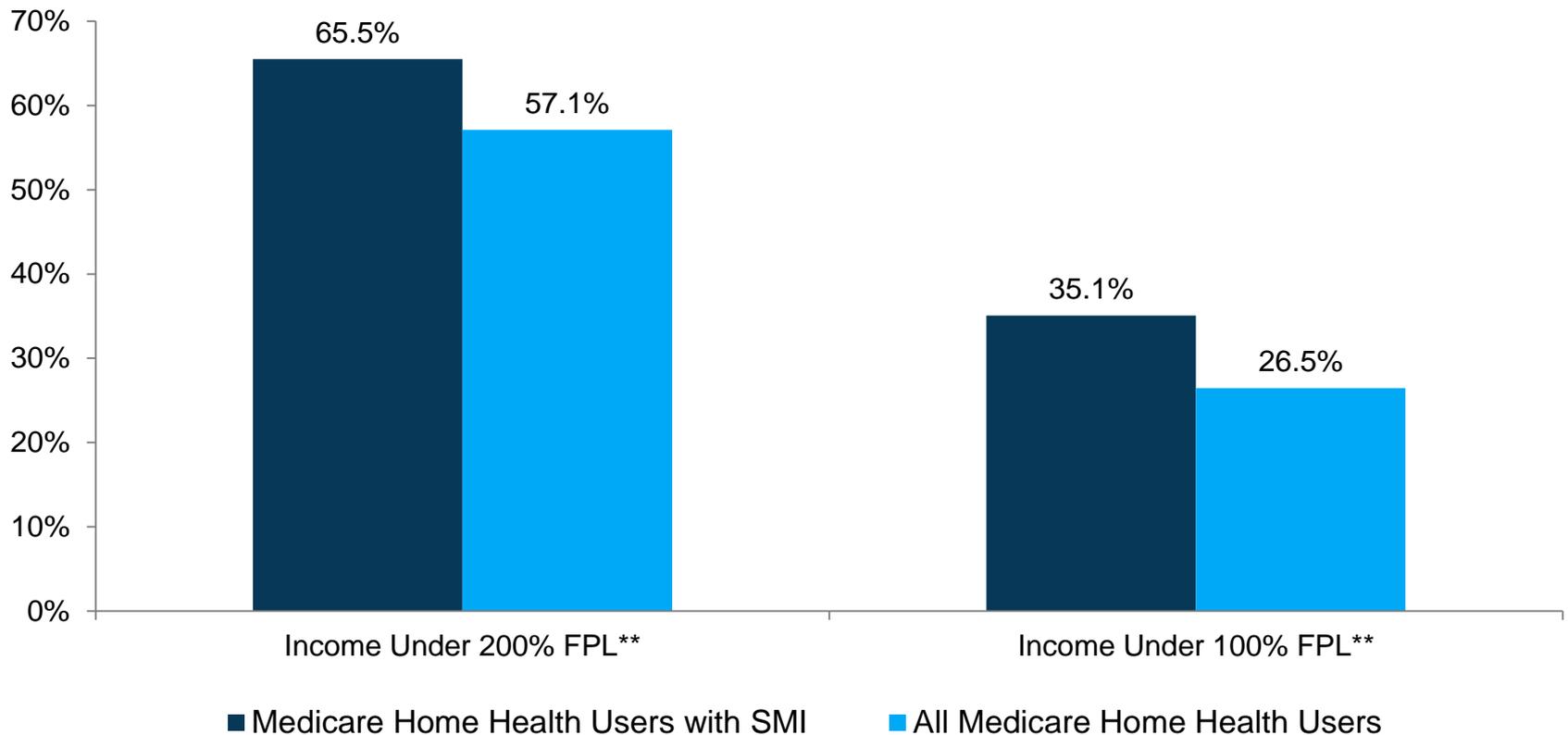
Source: Avalere analysis of the Medicare Current Beneficiary Survey, Access to Care file, 2017.

\*Severe mental illness (SMI) is defined as having depression or another mental disorder, including bipolar disorder, schizophrenia, and other psychoses.

\*\*ADL = Activities of daily living, such as eating, dressing, and bathing. Limitations with at least 2 ADLs is considered a measure of moderate to severe disability and is often the eligibility threshold for a nursing home level of care.

# Demographics of Home Health Users by Severe Mental Illness (SMI)\*

Chart 1.24: Selected Characteristics of Medicare Home Health Users with SMI and All Medicare Home Health Users, 2017



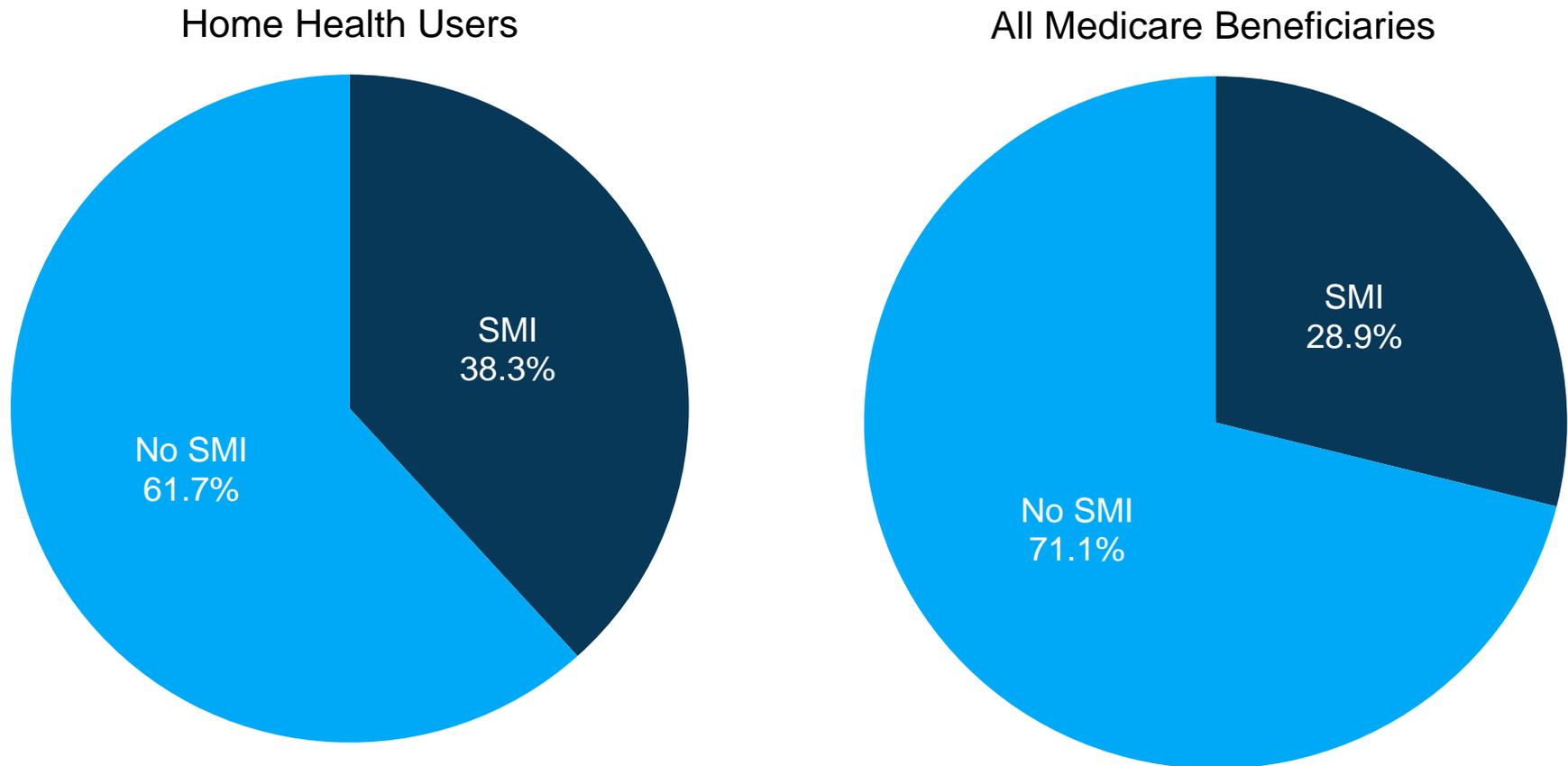
Source: Avalere analysis of the Medicare Current Beneficiary Survey, Access to Care file, 2017.

\*Severe mental illness (SMI) is defined as having depression or another mental disorder, including bipolar disorder, schizophrenia, and other psychoses.

\*\*In 2017, 100 percent of FPL for a household of 1 was \$12,060, a household of 2 was \$16,240, a household of 3 was \$20,420, and household of 4 was \$24,600. 200 percent of FPL was double each amount.

# Demographics of Home Health Users by Severe Mental Illness (SMI)\*

Chart 1.25: Percentage of Medicare Home Health Users with SMI Compared to the Percentage of Medicare Beneficiaries with SMI, 2017

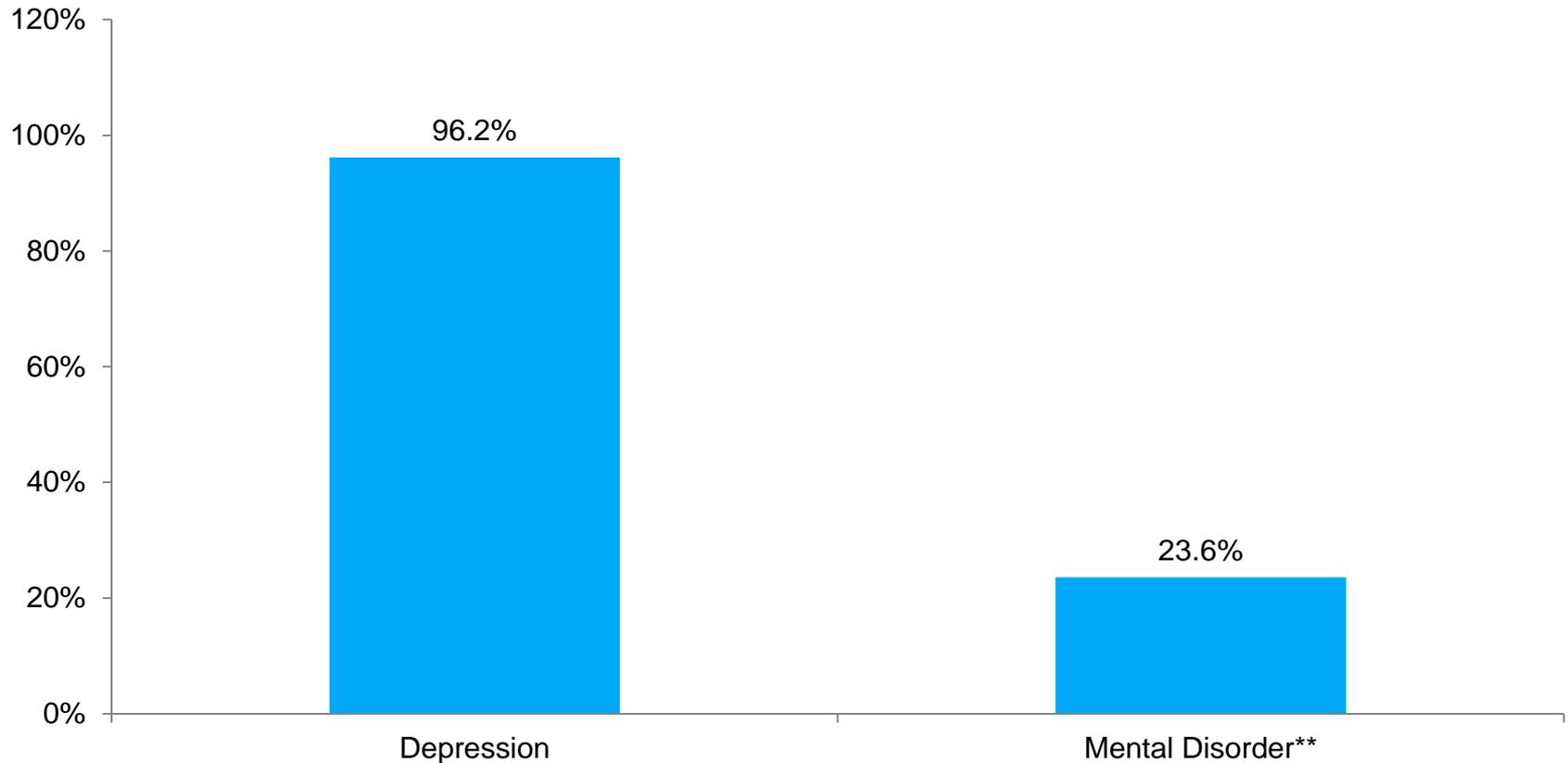


Source: Avalere analysis of the Medicare Current Beneficiary Survey, Access to Care file, 2017.

\*Severe mental illness (SMI) is defined as having depression or other mental disorder, including bipolar disorder, schizophrenia, and other psychoses.

# Demographics of Home Health Users by Severe Mental Illness (SMI)\*

Chart 1.26: Breakdown of Medicare Home Health Users with SMI by Type of SMI, 2017



Source: Avalere analysis of the Medicare Current Beneficiary Survey, Access to Care file, 2017.

\*Severe mental illness (SMI) is defined as having depression or other mental disorder, including bipolar disorder, schizophrenia, and other psychoses.

\*\*Mental disorder includes bipolar disorder, schizophrenia, and other psychoses besides depression.

# Demographic Trend of Home Health Users

Table 1.27: Selected characteristics of Medicare Home Health Users, 2011 – 2017

	2011	2012	2013	2015	2016	2017
Have 3 or more chronic conditions	83.2%	85.9%	85.1%	85.9%	80.5%	82.3%
Have 2 or more ADL limitations*	28.7%	34.2%	31.9%	32.9%	27.8%	27.8%
Have incomes under 200% of the Federal Poverty Level (FPL)**	64.5%	67.9%	67.2%	62.5%	64.0%	57.1%
Have incomes under 100% of the Federal Poverty Level (FPL)**	34.8%	32.6%	31.2%	28.7%	27.5%	26.5%
Are dual eligibles***	29.9%	29.9%	31.7%	38.1%	31.3%	32.4%
Have SMI****	26.3%	27.0%	27.2%	44.0%	39.2%	38.3%

Note: CMS did not release a 2014 Medicare Current Beneficiary Survey

Source: Avalere analysis of the Medicare Current Beneficiary Survey, Access to Care files, 2011 – 2017.

\*ADL = Activities of daily living, such as eating, dressing, and bathing. Limitations with at least 2 ADLs is considered a measure of moderate to severe disability and is often the eligibility threshold for a nursing home level of care.

\*\*100 percent of FPL for a household of 1 was \$10,890 in 2011, \$11,170 in 2012, \$11,490 in 2013, \$11,770 in 2015, \$11,880 in 2016, and \$12,060 in 2017 . 200 percent of FPL was double each amount.

\*\*\*Dual eligibles are defined as individuals with any state buy-in at any point during the year. Beneficiaries were classified as requiring assistance with an ADL (bathing, walking, transferring, dressing, toileting, and eating) if they reported needing at least stand-by assistance with that ADL.

\*\*\*\*Severe mental illness (SMI) is defined as having depression or other mental disorder, including bipolar disorder, schizophrenia, and other psychoses.



## Section 2: Clinical Profile of Home Health Users

# Clinical Profile of Home Health Users

Table 2.1: Top 20 Most Common Diagnosis Related Groups (MS-DRGs) for Beneficiaries Discharged from Hospital to Part A Home Health Episodes, 2019

MS-DRG	Number of Home Health Part A Claims, 2019	Percent of Total Home Health Part A Claims, 2019
Septicemia or severe sepsis w/o mv >96 hours w MCC	96,982	6.15%
Major hip and knee joint replacement or reattachment of lower extremity w/o mcc	81,582	5.17%
Heart failure & shock w mcc or peripheral extracorporeal membrane oxygenation (e	75,307	4.77%
Hip & femur procedures except major joint w CC	33,731	2.14%
Simple pneumonia & pleurisy w mcc	28,167	1.79%
Intracranial hemorrhage or cerebral infarction w cc or TPA in 24 hrs	27,347	1.73%
Septicemia or severe sepsis w/o mv >96 hours w/o MCC	25,985	1.65%
Pulmonary edema & respiratory failure	22,748	1.44%
Kidney & urinary tract infections w/o MCC	21,592	1.37%
Chronic obstructive pulmonary disease w MCC	21,317	1.35%
Infectious & parasitic diseases w O.R. procedure w MCC	20,842	1.32%
Renal failure w CC	20,226	1.28%
Cellulitis w/o MCC	17,182	1.09%
Renal failure w MCC	16,779	1.06%
Simple pneumonia & pleurisy w CC	15,767	1.00%
Acute myocardial infarction, discharged alive w MCC	15,454	0.98%
Major small & large bowel procedures w CC	15,197	0.96%
Kidney & urinary tract infections w MCC	15,161	0.96%
Intracranial hemorrhage or cerebral infarction w MCC	15,002	0.95%
G.I. hemorrhage w CC	14,359	0.91%
<b>Total for Top 20 MS-DRGs</b>	<b>600,727</b>	<b>38.08%</b>

Source: Avalere Health, LLC analysis of Medicare Standard Analytic Files, 2019.

Data for beneficiaries with a Part A home health episode and a prior short-term acute care hospital stay in 2019.

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

# Clinical Profile of Home Health Users

Table 2.2: Top 20 Primary International Classification of Diseases, Version 10 (ICD-10) Diagnoses for All Home Health Claims, 2019

ICD-10 Diagnosis	Number of Medicare Home Health Claims, 2019	Percent of Total Medicare Home Health Claims, 2019
Type 2 diabetes mellitus	444,729	6.93%
Orthopedic aftercare	415,393	6.47%
Encounter for other postprocedural aftercare	279,134	4.35%
Other chronic obstructive pulmonary disease	277,715	4.33%
Hypertensive heart disease	243,122	3.79%
Pressure ulcer	225,406	3.51%
Essential (primary) hypertension	224,527	3.50%
Sequelae of cerebrovascular disease	213,487	3.33%
Hypertensive heart and chronic kidney disease	180,467	2.81%
Chronic ischemic heart disease	128,381	2.00%
Fracture of femur	127,621	1.99%
Atrial fibrillation and flutter	106,048	1.65%
Parkinson's disease	104,271	1.62%
Other disorders of muscle	100,460	1.57%
Other disorders of veins	96,884	1.51%
Other disorders of urinary system	94,575	1.47%
Dorsalgia	85,418	1.33%
Osteoarthritis of knee	84,233	1.31%
Hypertensive chronic kidney disease	83,673	1.30%
Heart failure	74,345	1.16%
<b>Total for Top 20 Primary ICD-10 Diagnoses</b>	<b>3,589,889</b>	<b>55.93%</b>

# 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, 2019

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	91.55%	21.29%	Montana	91.59%	31.31%
Alaska	90.19%	25.95%	Nebraska	91.84%	30.94%
Arizona	88.44%	15.52%	Nevada	86.42%	15.17%
Arkansas	91.72%	26.94%	New Hampshire	91.97%	32.58%
California	88.61%	15.62%	New Jersey	89.92%	19.06%
Colorado	87.45%	16.46%	New Mexico	88.85%	21.67%
Connecticut	90.46%	19.55%	New York	90.58%	17.45%
Delaware	91.16%	31.06%	North Carolina	91.35%	21.81%
D.C.	87.97%	20.29%	North Dakota	94.45%	45.01%
Florida	88.22%	17.15%	Ohio	93.02%	22.97%
Georgia	91.22%	19.48%	Oklahoma	92.34%	31.76%
Hawaii	87.16%	11.02%	Oregon	90.35%	17.04%
Idaho	89.07%	24.86%	Pennsylvania	91.10%	20.86%
Illinois	93.03%	28.67%	Rhode Island	90.23%	18.37%
Indiana	93.03%	26.47%	South Carolina	90.53%	23.85%
Iowa	93.22%	32.74%	South Dakota	93.94%	40.13%
Kansas	92.36%	31.41%	Tennessee	91.53%	18.70%
Kentucky	92.38%	27.94%	Texas	90.91%	18.90%
Louisiana	91.84%	25.50%	Utah	84.09%	17.70%
Maine	93.50%	28.14%	Vermont	89.87%	36.97%
Maryland	90.43%	24.10%	Virginia	90.91%	26.29%
Massachusetts	90.84%	26.77%	Washington	90.22%	20.13%
Michigan	92.60%	25.35%	West Virginia	94.32%	34.01%
Minnesota	91.25%	21.03%	Wisconsin	93.03%	22.51%
Mississippi	91.44%	32.19%	Wyoming	87.84%	28.35%
Missouri	92.81%	26.36%			

Source: Avalere Health, LLC analysis of Medicare Standard Analytic Files, 2019.

Note: Having a chronic condition is defined as having a Medicare claim with a chronic condition listed in 2017. Medicare beneficiaries without any claims in 2018 are categorized as having no chronic conditions in 2018. Chronic conditions are defined by the Centers for Medicare and Medicaid Services' Chronic Conditions Data Warehouse.

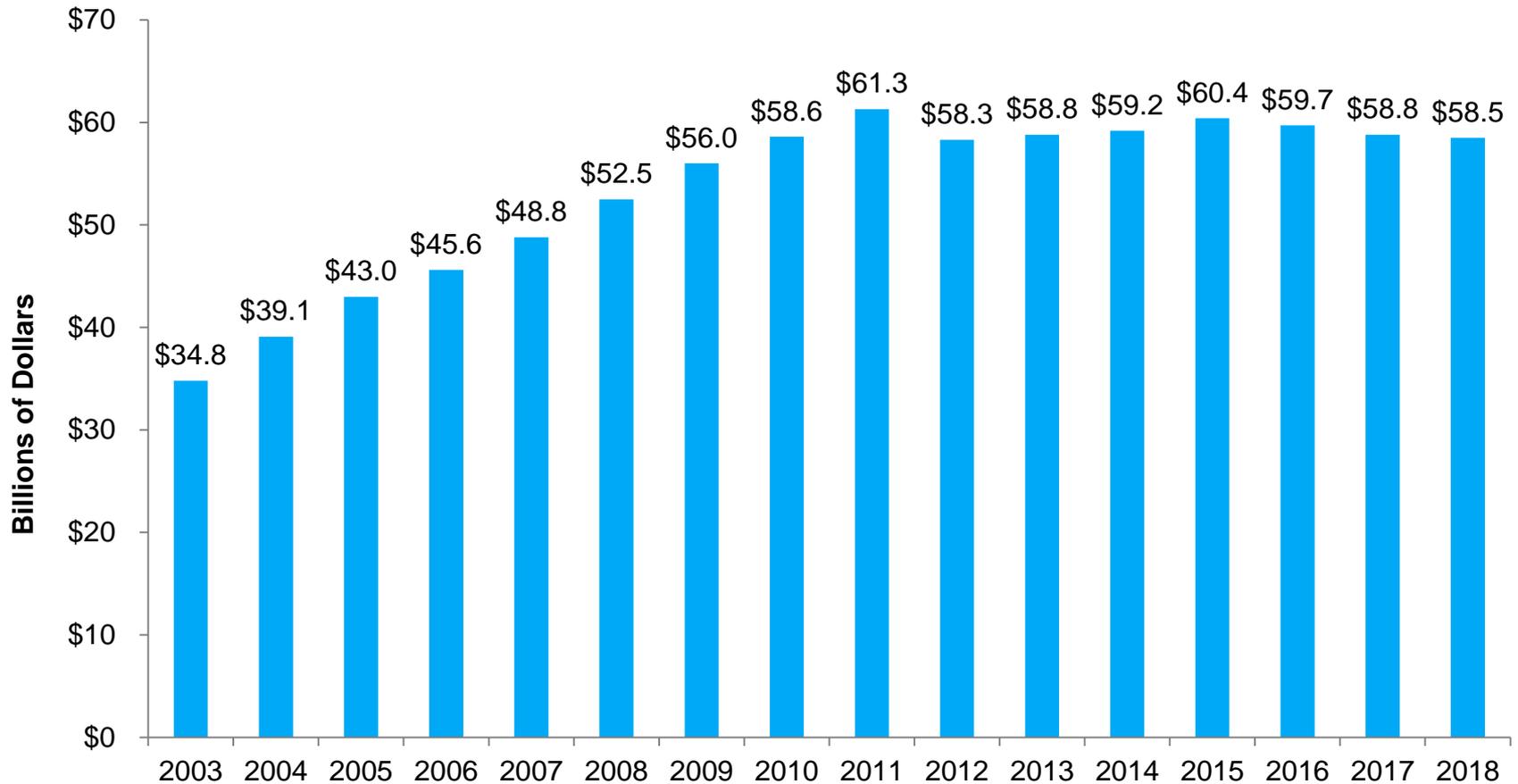


## Section 3: Post-Acute Care Market Overview



# Post-Acute Care Market Overview

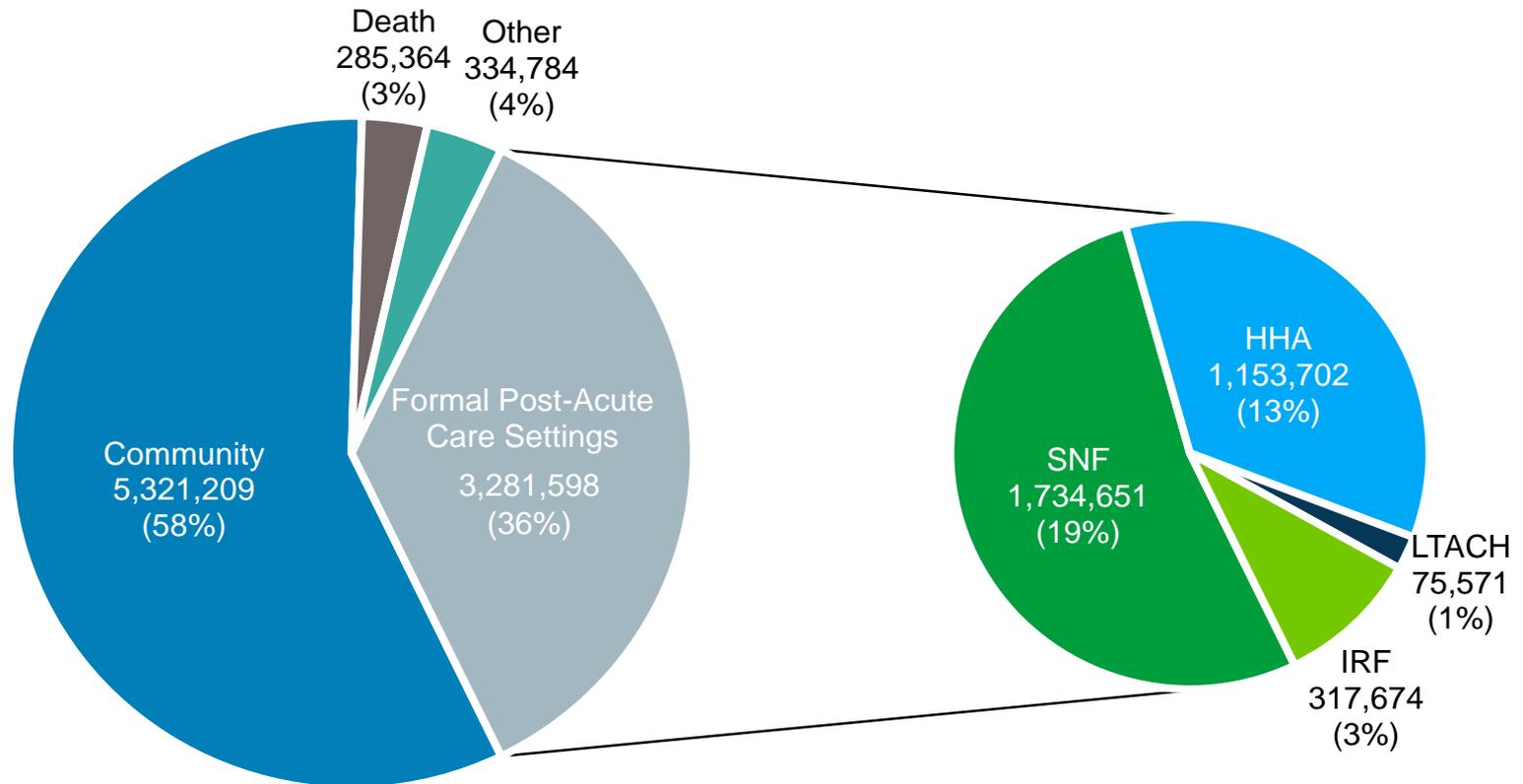
Chart 3.1: Total Medicare Post-acute Care Expenditures, Billions of Dollars, 2002-2017



Source: Medicare Payment Advisory Commission. A Data Book: Health Care Spending and the Medicare Program, June 2017, June 2018, June 2019, and June 2020.

# Post-Acute Care Market Overview

Chart 3.2: Initial Patient Destinations Following an Inpatient Hospital Stay for Medicare Beneficiaries, 2019



Source: Avalere Health, LLC analysis of Medicare Standard Analytic Files, 2019.

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

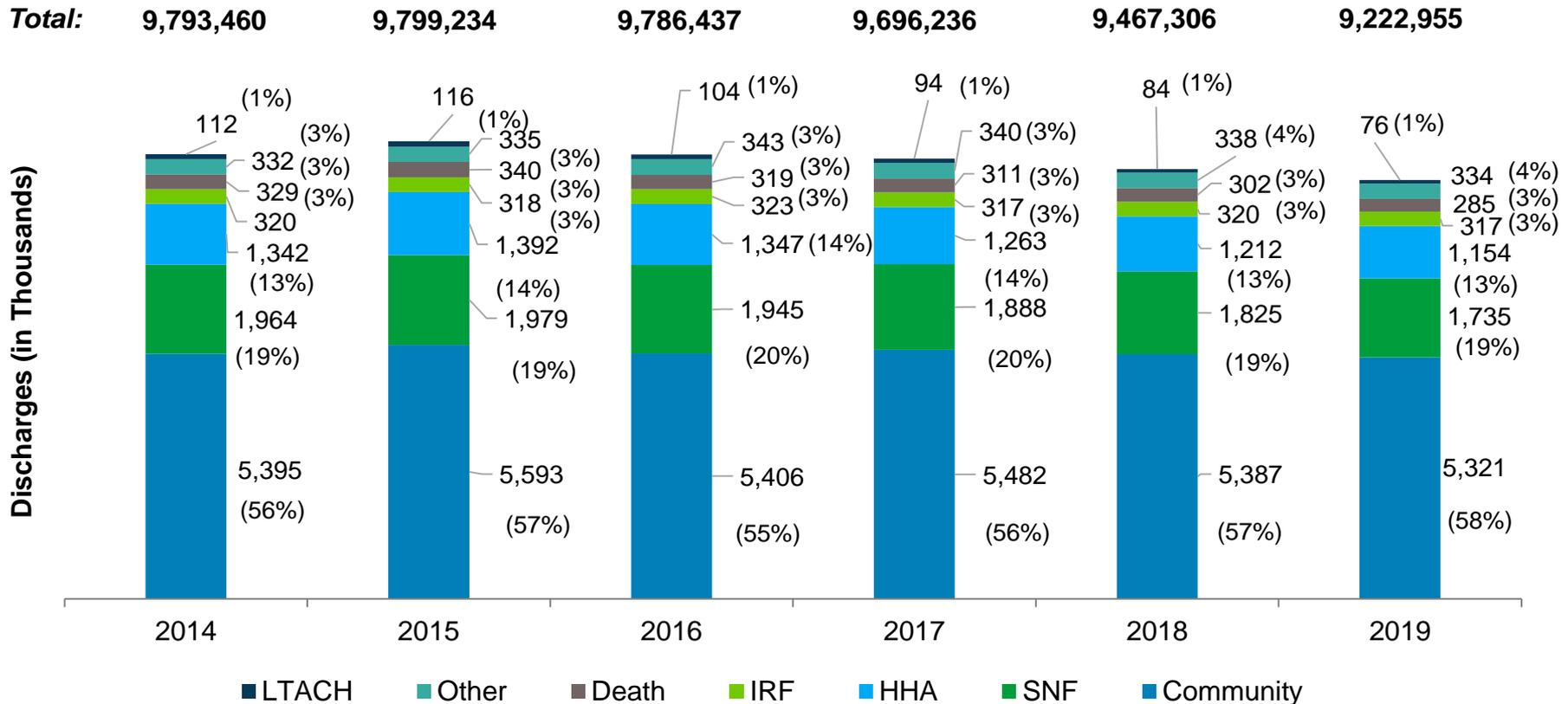
Community: Discharges to the community without skilled home health care; includes individuals living at home, assisted living facilities, and retirement communities.

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.

# Post-Acute Care Market Overview

Chart 3.3: Initial Patient Destinations Following an Inpatient Hospital Stay for Medicare Beneficiaries, 2014 – 2019



Source: Avalere Health, LLC analysis of Medicare Standard Analytic Files, 2014-2019.

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),

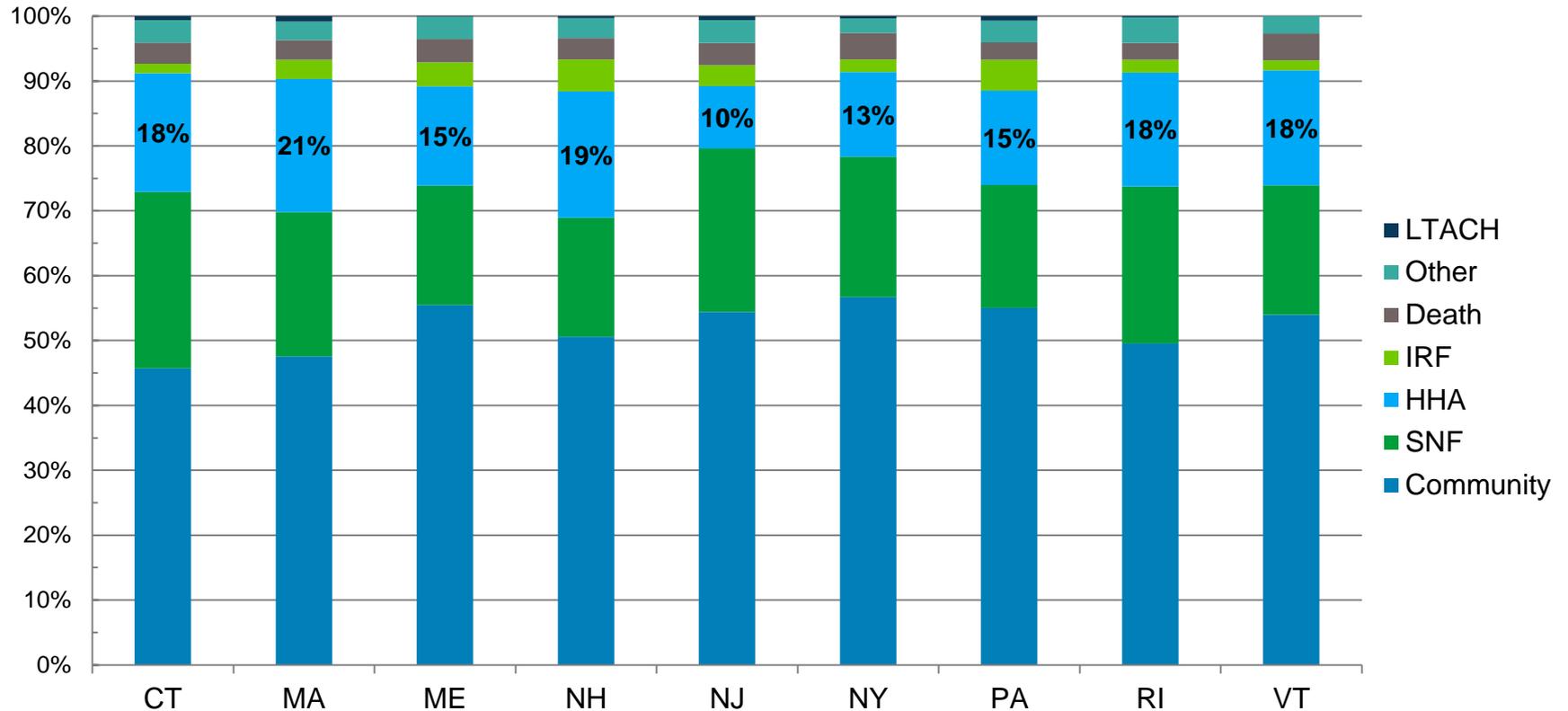
home health agencies (HHA), inpatient rehabilitation facilities (IRF), and long-term acute care hospitals (LTACH).

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

Percentages may not sum to 100 percent due to rounding.

# Post-Acute Care Market Overview

Chart 3.4: Initial Patient Destinations Following an Inpatient Hospital Stay for Medicare Beneficiaries in 2019, for States in Northeastern Region



Source: Avalere Health, LLC analysis of Medicare Standard Analytic Files, 2019.

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

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

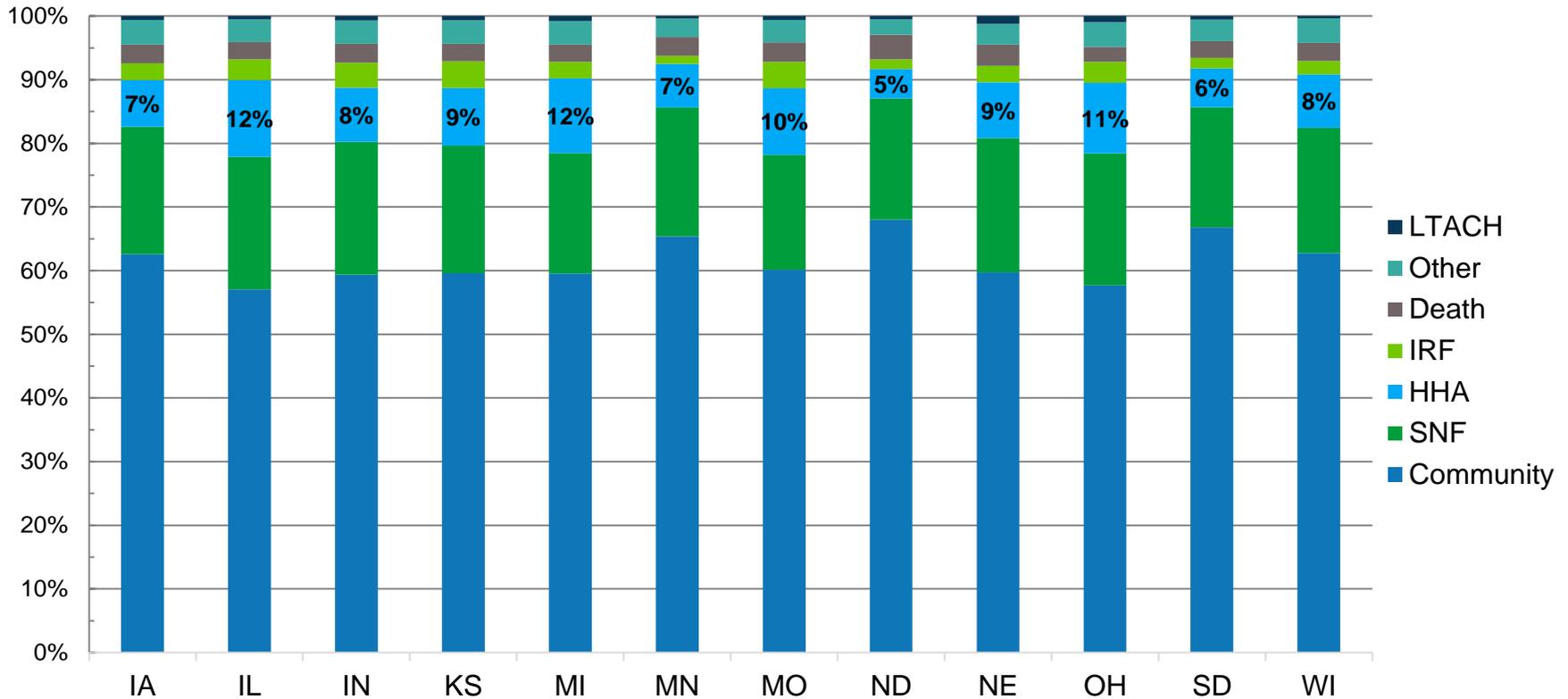
Community: Discharges to the community without skilled home health care; includes individuals living at home, assisted living facilities, and retirement communities.

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.

# Post-Acute Care Market Overview

Chart 3.5: Initial Patient Destinations Following an Inpatient Hospital Stay for Medicare Beneficiaries in 2019, for States in Midwestern Region



Source: Avalere Health, LLC analysis of Medicare Standard Analytic Files, 2019.

Note: U.S. Census Bureau defines which states are in the Midwestern Region; includes IA, IL, IN, KS, MI, MN, MO, ND, NE, OH, SD, WI.

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

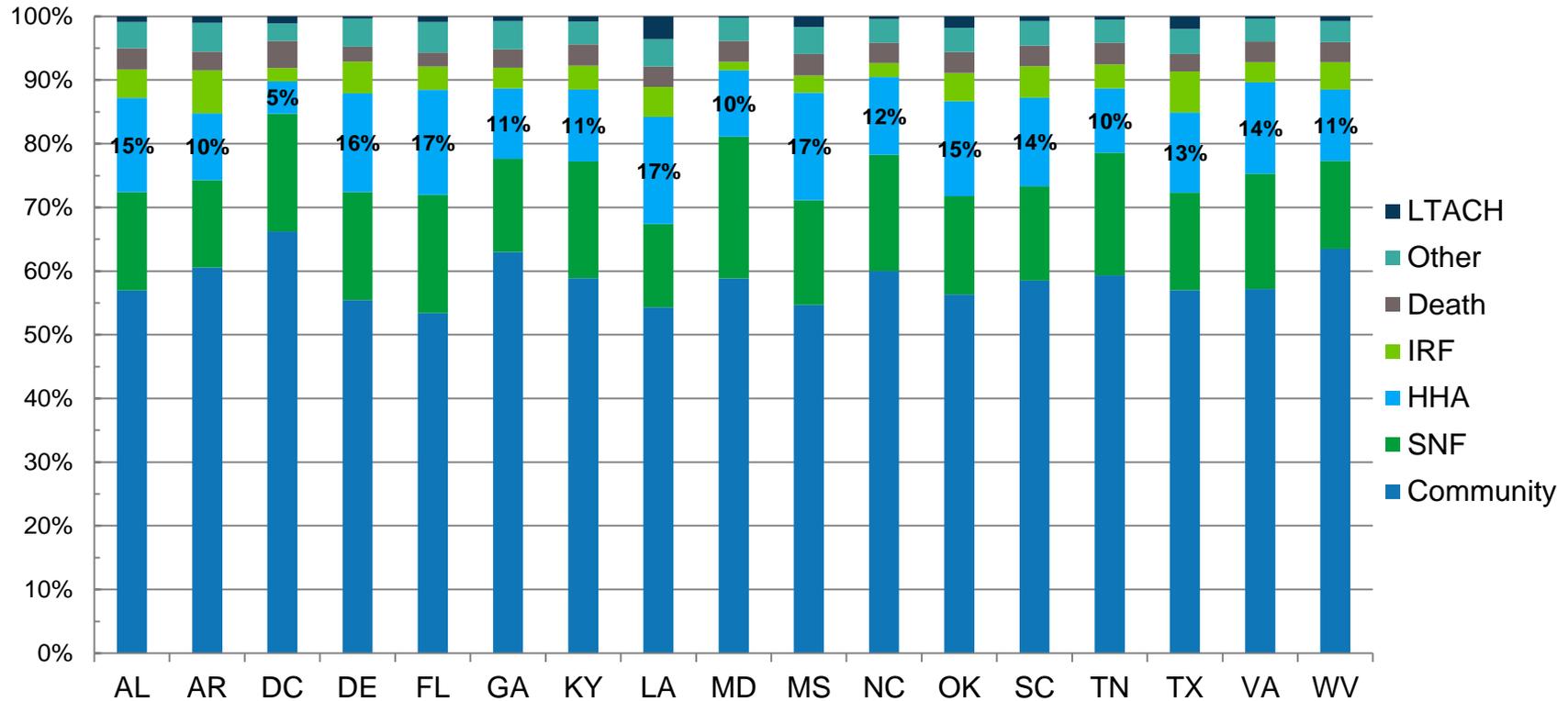
Community: Discharges to the community without skilled home health care; includes individuals living at home, assisted living facilities, and retirement communities.

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.

# Post-Acute Care Market Overview

Chart 3.6: Initial Patient Destinations Following an Inpatient Hospital Stay for Medicare Beneficiaries in 2019, for States in Southern Region



Source: Avalere Health, LLC analysis of Medicare Standard Analytic Files, 2019.

Note: U.S. Census Bureau defines which states are in the Southern Region; includes AL, AR, DC, DE, FL, GA, KY, LA, MD, MS, NC, OK, SC, TN, TX, VA, WV.

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

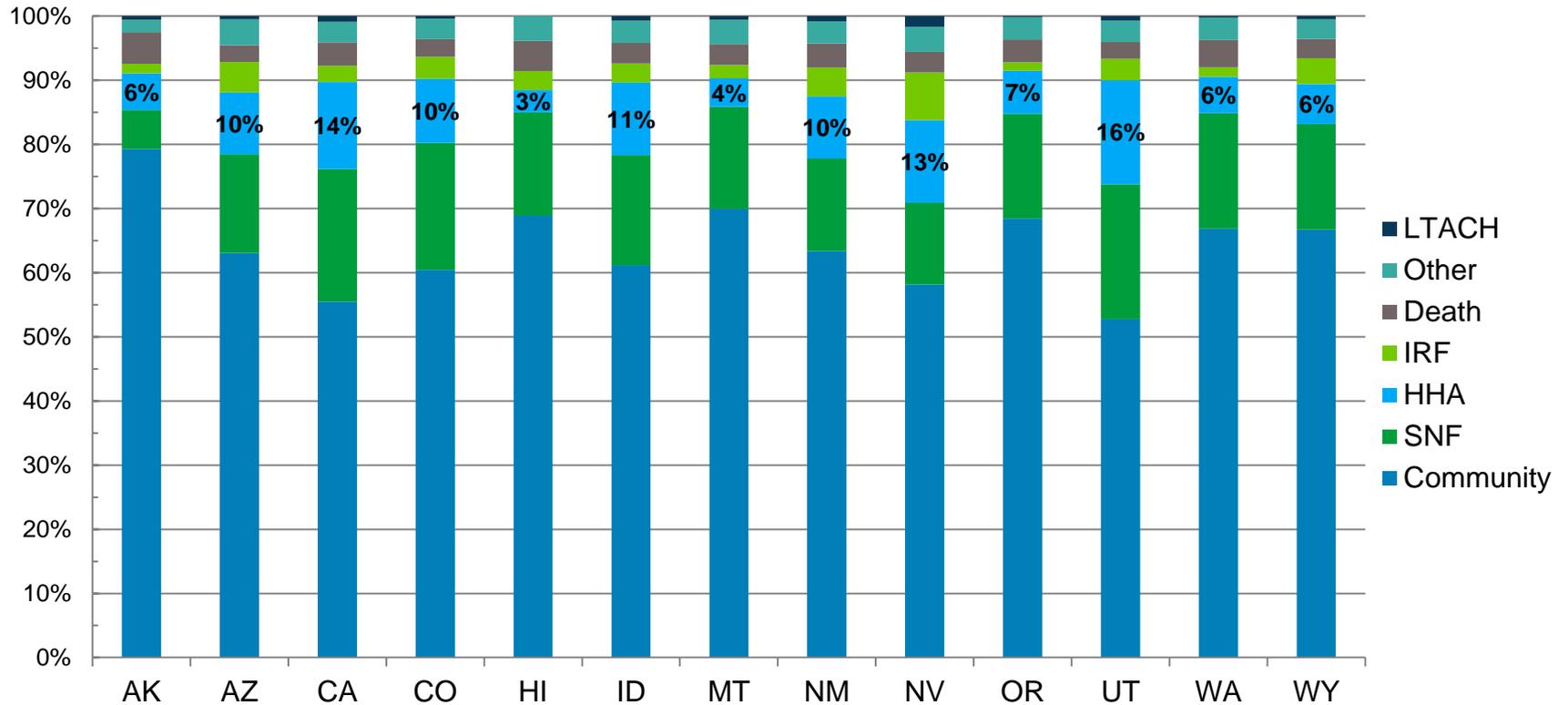
Community: Discharges to the community without skilled home health care; includes individuals living at home, assisted living facilities, and retirement communities.

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.

# Post-Acute Care Market Overview

Chart 3.7: Initial Patient Destinations Following an Inpatient Hospital Stay for Medicare Beneficiaries in 2019, for States in Western Region



Source: Avalere Health, LLC analysis of Medicare Standard Analytic Files, 2019.

Note: U.S. Census Bureau defines which states are in the Western Region; includes AK, AZ, CA, CO, HI, ID, MT, NM, NV, OR, UT, WA, WY.

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

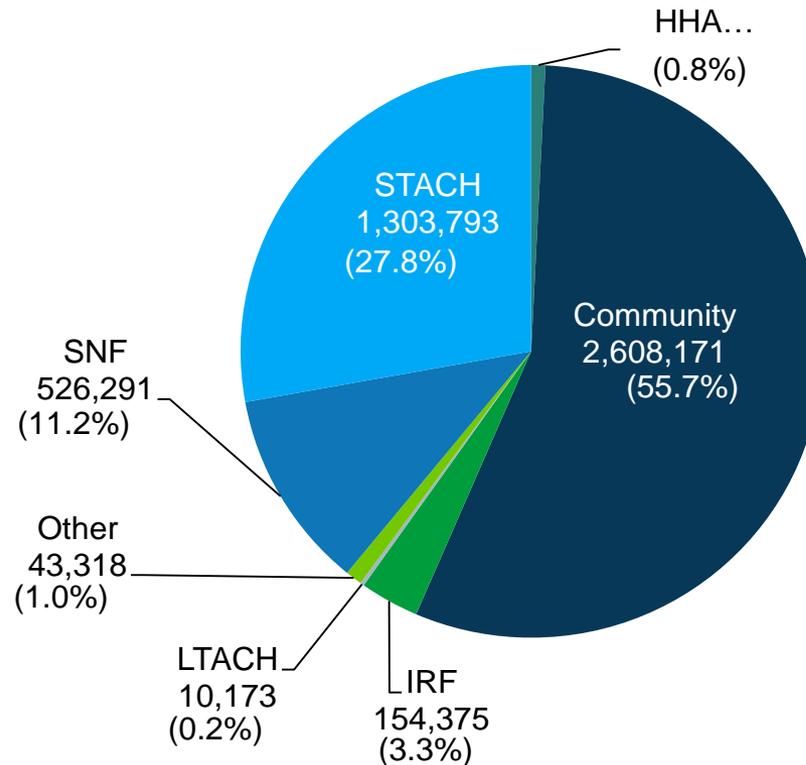
Community: Discharges to the community without skilled home health care; includes individuals living at home, assisted living facilities, and retirement communities.

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.

# Post-Acute Care Market Overview

Chart 3.8: Distribution of Care Settings Prior to Home Health Episodes, 2019



Source: Avalere Health, LLC analysis of Medicare Standard Analytic Files, 2019.

Note: Analysis includes care setting in three days prior to home health episode.

SNF: Skilled nursing facility, HHA: Home health agency, IRF: Inpatient rehabilitation facility, LTACH: Long-term acute care hospital, 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.

Other: Hospice, another inpatient hospital, or other inpatient hospitals such as inpatient psychiatric facilities.

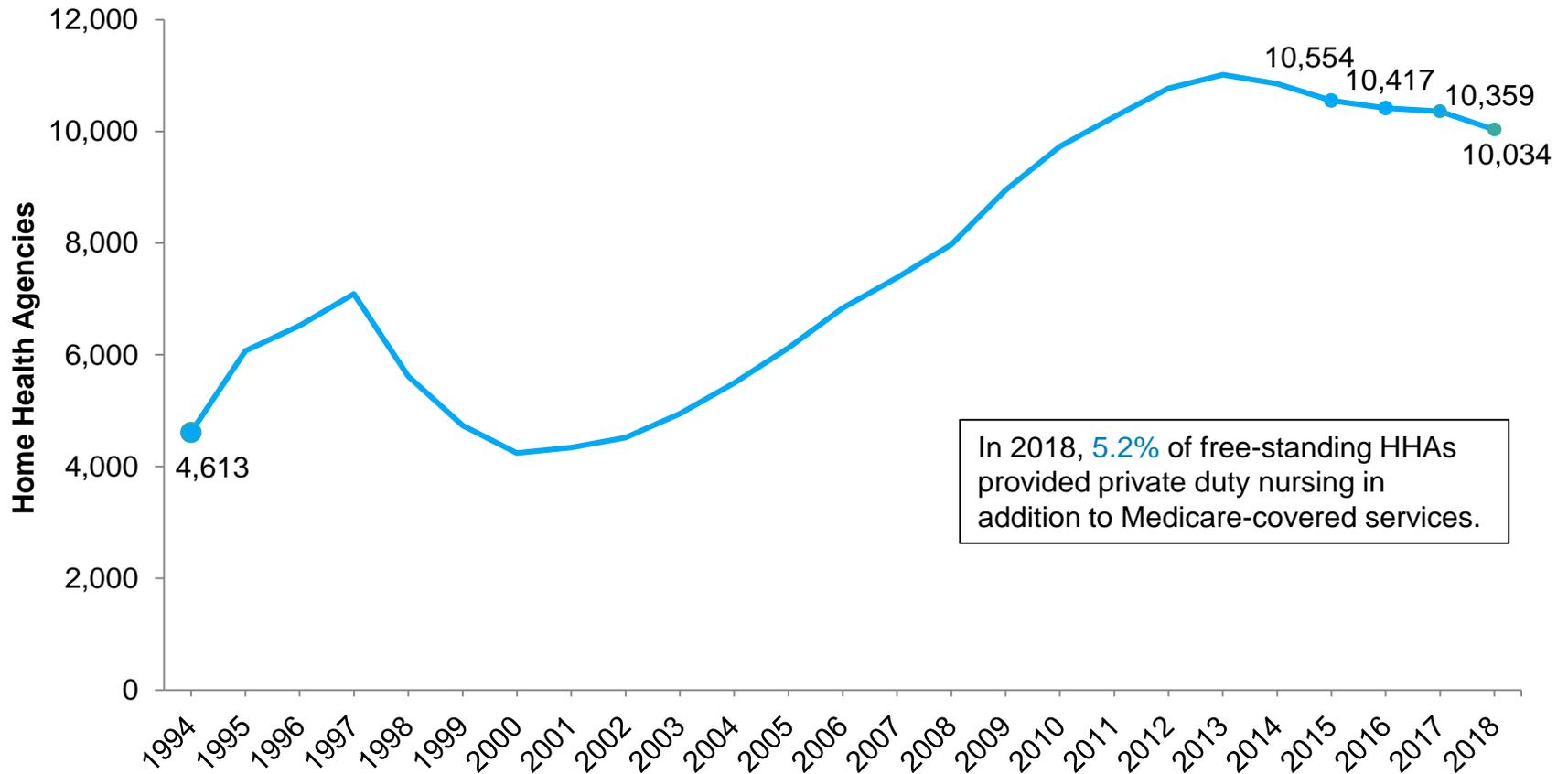


## Section 4: Organizational Trends in Home Health



# Organizational Trends in Home Health

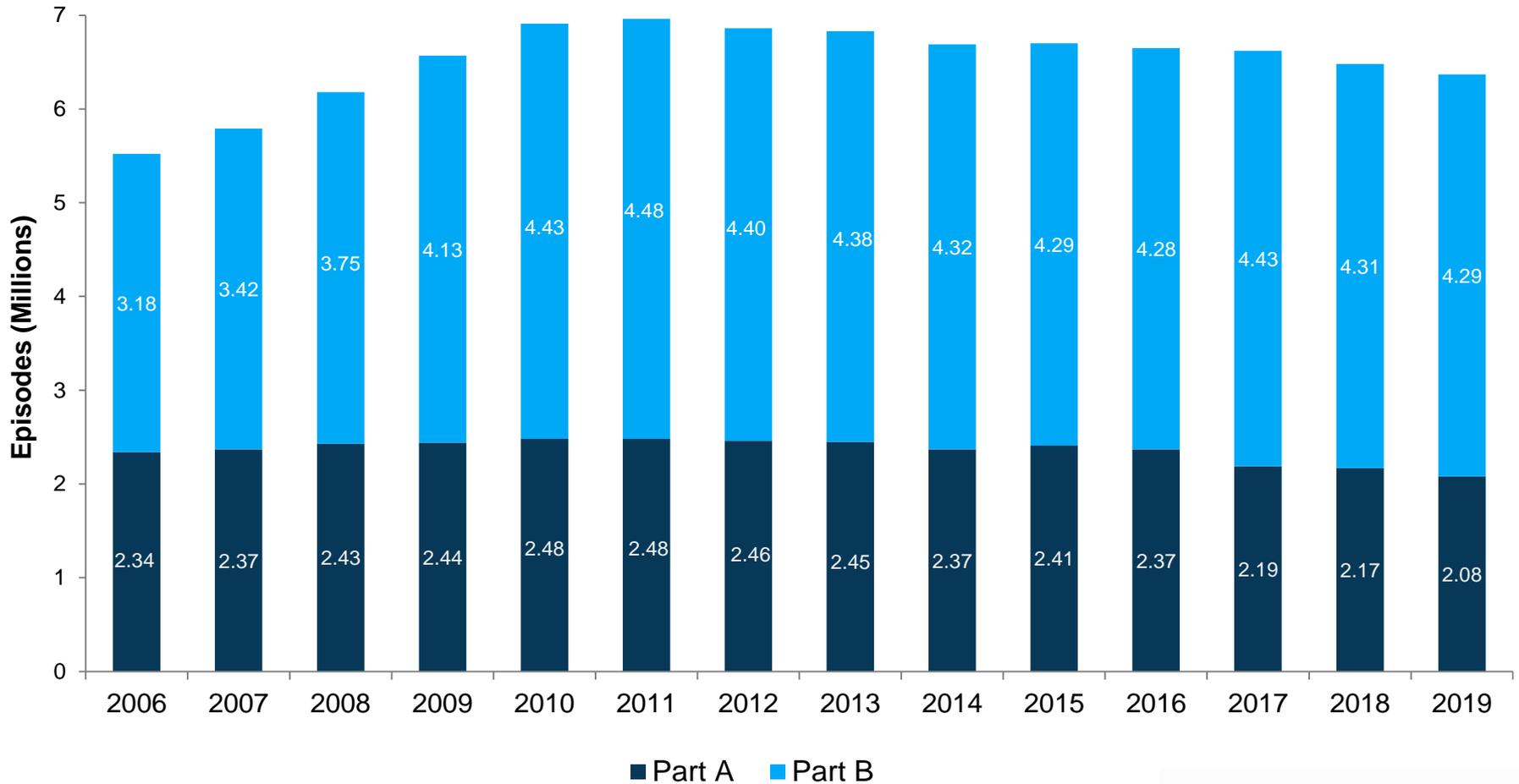
Chart 4.1: Number of Medicare-Certified Free-Standing Home Health Agencies (HHAs), 1994-2018



Source: Medicare Cost Reports from the Centers for Medicare and Medicaid Services.

# Organizational Trends in Home Health

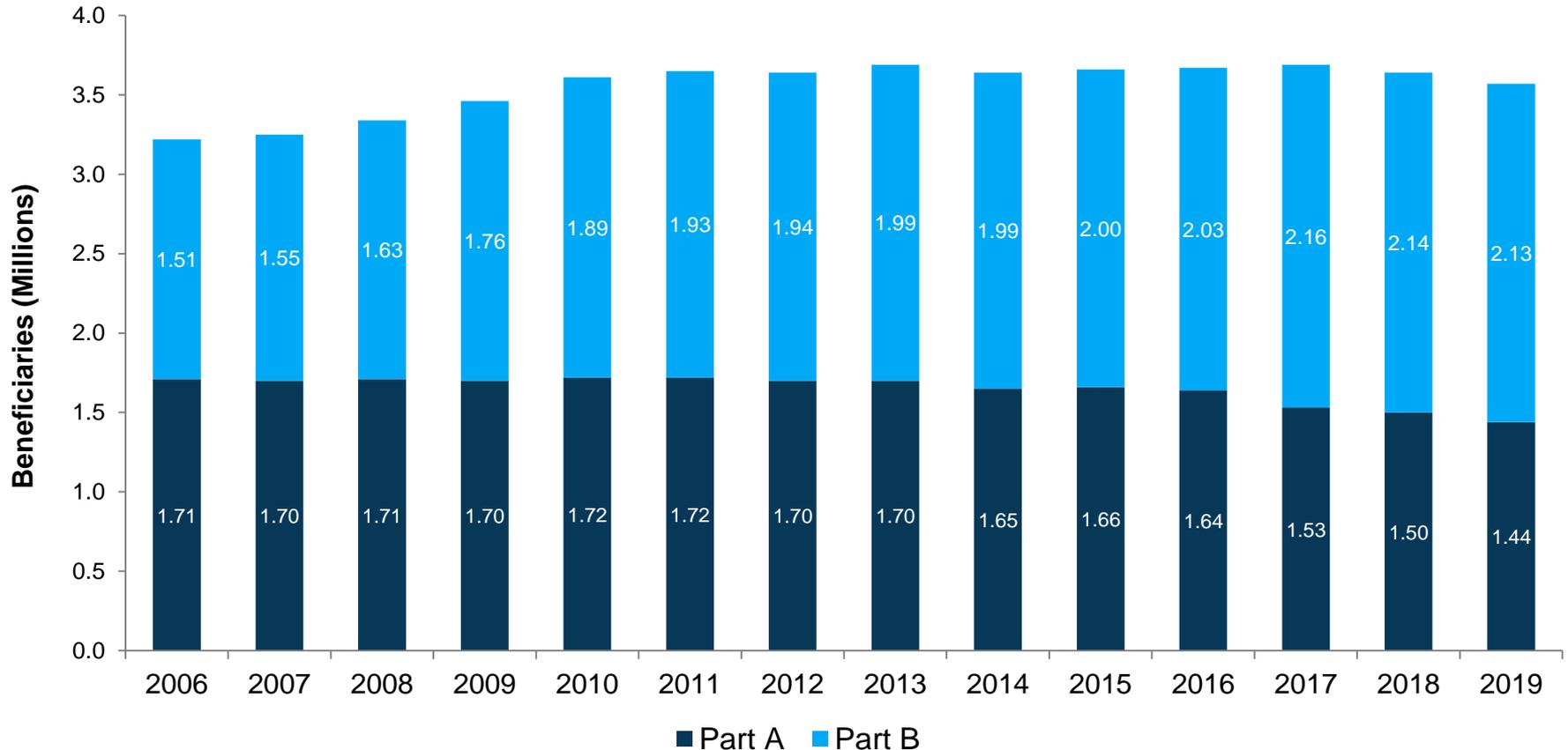
Chart 4.2: Number of Medicare Part A and Part B Home Health Episodes, in Millions, 2006-2019



Source: Avalere Health, LLC analysis of Medicare Standard Analytic Files, 2006 – 2019.

# Organizational Trends in Home Health

Chart 4.3: Number of Medicare Part A and Part B Beneficiaries with a Home Health Episode, in Millions, 2006-2019



Source: Avalere Health, LLC analysis of Medicare Standard Analytic Files, 2006 – 2019.

Note: Beneficiaries are double-counted if they had both a Part A and a Part B home health episode during the year.

# Organizational Trends in Home Health

Table 4.4: Number of Medicare Beneficiaries with a Home Health Episode, by State, 2019

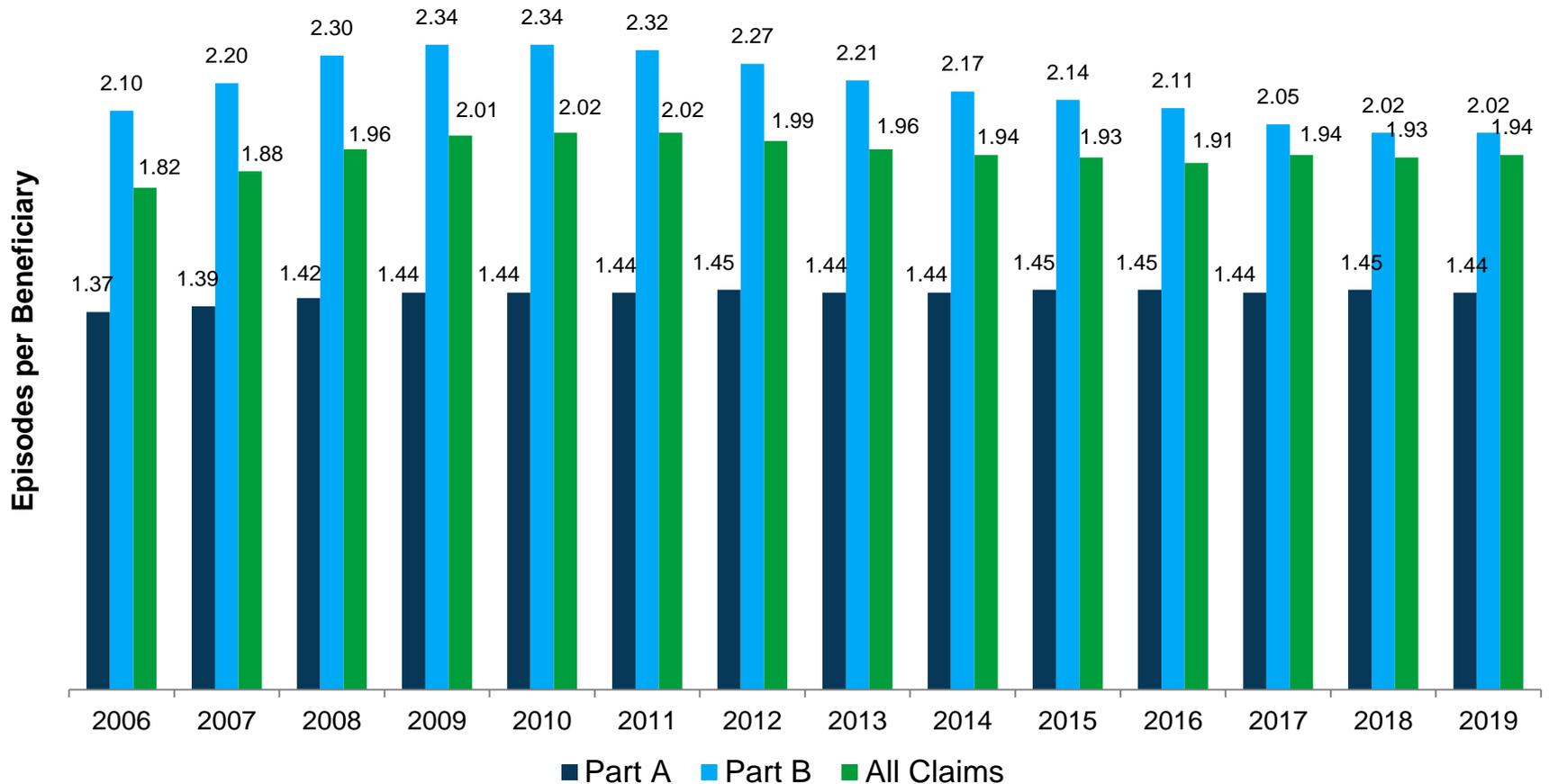
State	Number of Beneficiaries	State	Number of Beneficiaries	State	Number of Beneficiaries
Alabama	65,085	Kentucky	54,874	North Dakota	3,693
Alaska	2,835	Louisiana	59,578	Ohio	114,369
Arizona	47,153	Maine	18,293	Oklahoma	67,148
Arkansas	37,232	Maryland	69,162	Oregon	24,606
California	339,232	Massachusetts	111,568	Pennsylvania	135,037
Colorado	34,123	Michigan	116,512	Rhode Island	11,688
Connecticut	44,929	Minnesota	33,703	South Carolina	65,050
Delaware	14,707	Mississippi	56,891	South Dakota	5,660
District of Columbia	4,736	Missouri	56,180	Tennessee	68,952
Florida	301,430	Montana	6,392	Texas	270,031
Georgia	83,893	Nebraska	16,114	Utah	23,487
Hawaii	4,054	Nevada	30,979	Vermont	11,452
Idaho	15,143	New Hampshire	21,728	Virginia	101,789
Illinois	151,357	New Jersey	85,858	Washington	47,481
Indiana	59,381	New Mexico	17,589	West Virginia	24,773
Iowa	23,400	New York	163,206	Wisconsin	37,545
Kansas	29,164	North Carolina	104,718	Wyoming	4,219
				<b>Total U.S.*</b>	<b>3,305,946</b>

Source: Avalere Health, LLC analysis of Medicare Standard Analytic Files, 2019.

\*Total includes 7,767 other or unknown beneficiaries (i.e. beneficiaries from US territories or beneficiaries not attributed to a specific state).

# Organizational Trends in Home Health

Chart 4.5: Number of Home Health Episodes per Medicare Home Health User by Part A, Part B, and all Claims, 2006-2019

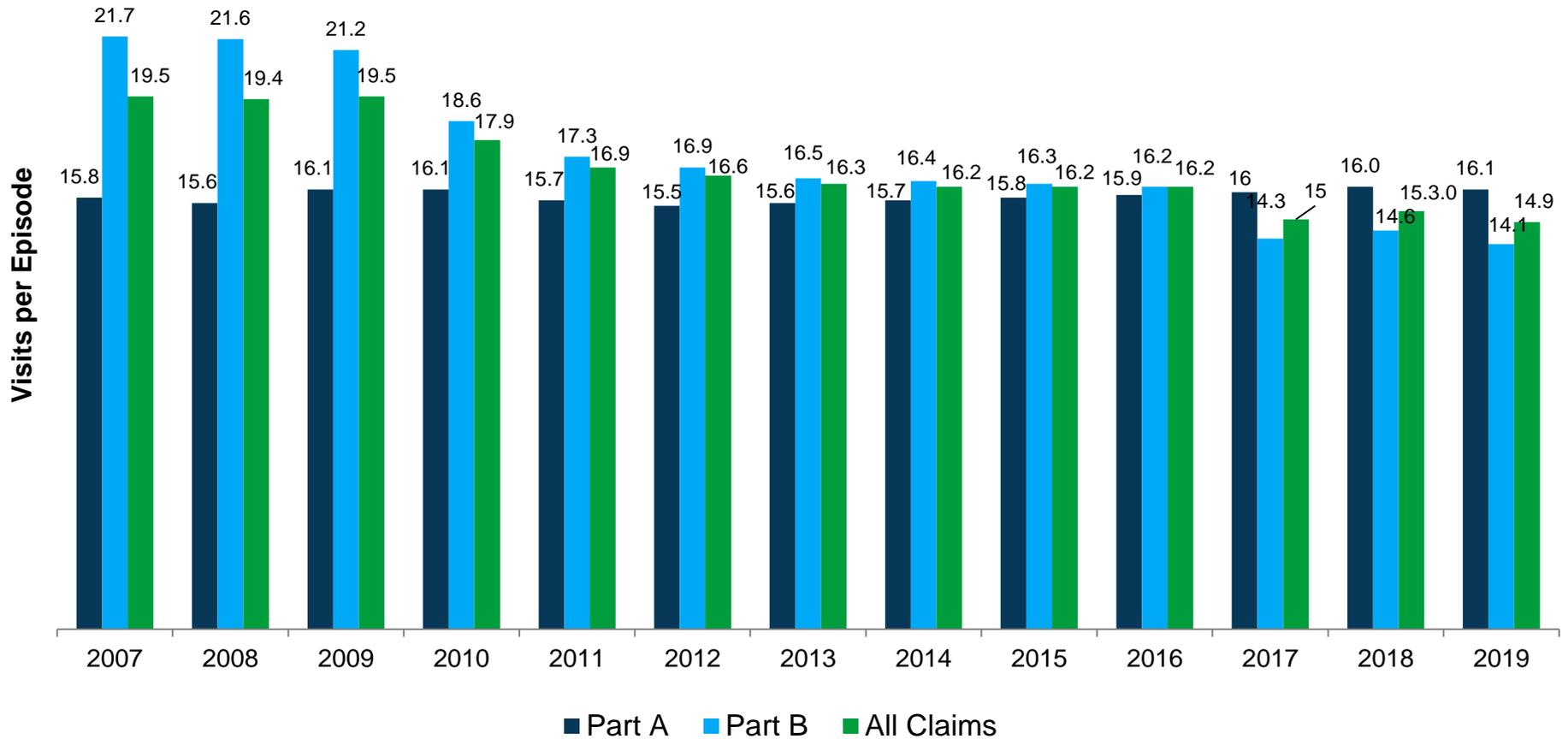


Source: Avalere Health, LLC analysis of Medicare Standard Analytic Files, 2006 – 2019.

Note: These data reflect the number of home health episodes for Medicare beneficiaries with at least one Part A or Part B home health episode.

# Organizational Trends in Home Health

Chart 4.6: Number of Home Health Visits per Episode by Part A, Part B, and all Claims, 2006-2019



Source: Avalere Health, LLC analysis of Medicare Standard Analytic Files, 2006 – 2019.

Note: These data reflect the number of home health episodes for Medicare beneficiaries with at least one Part A or Part B home health episode.



## Section 5: Economic Contribution of Home Health Agencies

# Economic Contribution of Home Health Agencies

Table 5.1: Impact of Home Health on Employment, by State, 2019

State	Estimated Number of HH Employees <sup>1</sup>	Multiplier for Employment <sup>2</sup>	Estimated Jobs Created by HH Industry <sup>3</sup>	State	Estimated Number of HH Employees <sup>1</sup>	Multiplier for Employment <sup>2</sup>	Estimated Jobs Created by HH Industry <sup>3</sup>
Alabama	12,953	1.5655	20,278	Montana	3,105	1.3495	4,190
Alaska	2,230	1.273	2,839	Nebraska	3,559	1.4198	5,053
Arizona	25,072	1.4732	36,936	Nevada	5,766	1.5069	8,689
Arkansas	6,947	1.3891	9,650	New Hampshire	4,051	1.4743	5,972
California	95,352	1.5001	143,038	New Jersey	49,445	1.4573	72,056
Colorado	21,081	1.5544	32,768	New Mexico	13,763	1.3597	18,714
Connecticut	14,867	1.4533	21,606	New York	264,546	1.3369	353,672
Delaware	4,322	1.3804	5,966	North Carolina	42,768	1.4777	63,198
D.C.	7,367	1.1209	8,258	North Dakota	735	1.3635	1,002
Florida	79,513	1.5813	125,734	Ohio	62,661	1.4792	92,688
Georgia	27,918	1.6011	44,700	Oklahoma	12,690	1.4695	18,648
Hawaii	4,630	1.3785	6,382	Oregon	6,164	1.4949	9,215
Idaho	10,218	1.3798	14,099	Pennsylvania	67,814	1.5268	103,538
Illinois	44,810	1.4753	66,108	Rhode Island	4,881	1.4224	6,943
Indiana	21,660	1.5008	32,507	South Carolina	17,283	1.485	25,665
Iowa	6,957	1.4567	10,134	South Dakota	1,965	1.3423	2,638
Kansas	7,875	1.4723	11,594	Tennessee	21,413	1.6274	34,848
Kentucky	8,944	1.5376	13,752	Texas	265,445	1.5286	405,759
Louisiana	20,508	1.44	29,532	Utah	8,410	1.5969	13,430
Maine	4,386	1.4632	6,418	Vermont	2,424	1.3987	3,390
Maryland	24,142	1.4241	34,381	Virginia	33,608	1.4038	47,179
Massachusetts	45,424	1.4625	66,433	Washington	11,787	1.4576	17,181
Michigan	39,162	1.4883	58,285	West Virginia	6,844	1.36	9,308
Minnesota	26,020	1.4003	36,436	Wisconsin	13,300	1.4529	19,324
Mississippi	7,373	1.4919	11,000	Wyoming	655	1.3427	879
Missouri	19,376	1.4545	28,182	<b>Total U.S.</b>	<b>1,514,189</b>		<b>2,220,193</b>

1 Quarterly Census of Employment and Wages (QCEW) collected by the U.S. Bureau of Labor Statistics, 2019.

2 U.S. Bureau of Economic Analysis multipliers, 2018.

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, Illinois, 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 5.2: Impact of Home Health on Labor Income, by State, 2019

State	Estimated Home Health Total Wages <sup>1</sup>	Multiplier for Earnings <sup>2</sup>	Estimated Impact of HH Payroll on Labor Income <sup>3</sup>	State	Estimated Home Health Total Wages	Multiplier for Earnings	Estimated Impact of HH Payroll on Labor Income
Alabama	\$ 619,559,014	1.4895	\$ 922,833,151	Montana	\$ 90,843,313	1.3937	\$ 126,608,325
Alaska	\$ 49,980,846	1.361	\$ 68,023,931	Nebraska	\$ 133,641,558	1.4524	\$ 194,100,999
Arizona	\$ 780,408,210	1.5986	\$ 1,247,560,565	Nevada	\$ 280,948,388	1.4539	\$ 408,470,861
Arkansas	\$ 257,160,461	1.4242	\$ 366,247,929	New Hampshire	\$ 182,748,481	1.491	\$ 272,477,985
California	\$ 3,979,855,960	1.6084	\$ 6,401,200,326	New Jersey	\$ 1,610,662,953	1.5961	\$ 2,570,779,139
Colorado	\$ 809,158,866	1.631	\$ 1,319,738,110	New Mexico	\$ 290,843,351	1.4058	\$ 408,867,583
Connecticut	\$ 684,909,527	1.4792	\$ 1,013,118,172	New York	\$ 8,071,726,971	1.4821	\$ 11,963,106,544
Delaware	\$ 175,866,181	1.3908	\$ 244,594,685	North Carolina	\$ 1,280,077,160	1.6069	\$ 2,056,955,988
D.C.	\$ 208,486,016	1.1727	\$ 244,491,551	North Dakota	\$ 33,172,432	1.3563	\$ 44,991,770
Florida	\$ 3,202,141,108	1.6043	\$ 5,137,194,980	Ohio	\$ 1,899,629,829	1.5987	\$ 3,036,938,208
Georgia	\$ 985,503,161	1.6606	\$ 1,636,526,549	Oklahoma	\$ 416,665,587	1.5084	\$ 628,498,371
Hawaii	\$ 156,394,614	1.4901	\$ 233,043,614	Oregon	\$ 244,548,858	1.5001	\$ 366,847,742
Idaho	\$ 243,546,787	1.4241	\$ 346,834,979	Pennsylvania	\$ 2,745,794,217	1.5873	\$ 4,358,399,161
Illinois	\$ 1,424,716,694	1.6836	\$ 2,398,653,026	Rhode Island	\$ 183,882,898	1.4484	\$ 266,335,989
Indiana	\$ 727,543,613	1.5407	\$ 1,120,926,445	South Carolina	\$ 551,499,069	1.5595	\$ 860,062,798
Iowa	\$ 281,697,557	1.405	\$ 395,785,068	South Dakota	\$ 65,735,587	1.3649	\$ 89,722,503
Kansas	\$ 283,325,173	1.473	\$ 417,337,980	Tennessee	\$ 914,701,054	1.6391	\$ 1,499,286,498
Kentucky	\$ 437,735,395	1.488	\$ 651,350,268	Texas	\$ 5,787,370,172	1.7274	\$ 9,997,103,235
Louisiana	\$ 665,249,458	1.4871	\$ 989,292,469	Utah	\$ 314,581,166	1.597	\$ 502,386,122
Maine	\$ 173,980,545	1.4769	\$ 256,951,867	Vermont	\$ 98,058,851	1.3947	\$ 136,762,679
Maryland	\$ 892,103,637	1.5176	\$ 1,353,856,480	Virginia	\$ 1,022,422,484	1.5303	\$ 1,564,613,127
Massachusetts	\$ 1,831,716,039	1.533	\$ 2,808,020,688	Washington	\$ 513,681,182	1.4888	\$ 764,768,544
Michigan	\$ 1,424,139,244	1.5648	\$ 2,228,493,089	West Virginia	\$ 237,506,519	1.3696	\$ 325,288,928
Minnesota	\$ 813,158,788	1.5551	\$ 1,264,543,231	Wisconsin	\$ 480,357,589	1.5064	\$ 723,610,672
Mississippi	\$ 334,157,948	1.4284	\$ 477,311,213	Wyoming	\$ 24,225,637	1.3078	\$ 31,682,288
Missouri	\$ 606,053,566	1.5352	\$ 930,413,435	<b>Total U.S.</b>	<b>\$49,523,873,714</b>		<b>\$77,673,009,859</b>

1 Quarterly Census of Employment and Wages (QCEW) collected by the U.S. Bureau of Labor Statistics, 2019.

2 U.S. Bureau of Economic Analysis multipliers, 2018.

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, Illinois, 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.

# Economic Contribution of Home Health Agencies

Table 5.3: Impact of Home Health on Output, by State, 2019

State	Estimated Home Health Expenditures <sup>1</sup>	Multiplier for Output <sup>2</sup>	Estimated Impact of HH Spending on Output <sup>3</sup>	State	Estimated Home Health Expenditures	Multiplier for Output	Estimated Impact of HH Spending on Output
Alabama	\$ 513,346,466	1.97	\$ 1,011,292,538	Montana	\$ 57,360,982	1.7645	\$ 101,213,453
Alaska	\$ 1,620,477,958	1.7182	\$ 2,784,305,227	Nebraska	\$ 128,153,440	1.8732	\$ 240,057,024
Arizona	\$ 436,817,962	2.1703	\$ 948,026,023	Nevada	\$ 249,650,033	1.9015	\$ 474,709,538
Arkansas	\$ 595,602,937	1.8362	\$ 1,093,646,113	New Hampshire	\$ 209,881,719	1.9038	\$ 399,572,817
California	\$ 3,077,896,826	2.2131	\$ 6,811,693,466	New Jersey	\$ 588,558,558	2.213	\$ 1,302,480,089
Colorado	\$ 458,876,869	2.2472	\$ 1,031,188,100	New Mexico	\$ 173,339,249	1.7802	\$ 308,578,531
Connecticut	\$ 985,931,659	1.9476	\$ 1,920,200,499	New York	\$ 1,665,415,348	1.9894	\$ 3,313,177,293
Delaware	\$ 149,437,975	1.7576	\$ 262,652,185	North Carolina	\$ 840,536,811	2.2111	\$ 1,858,510,943
D.C.	\$ 119,062,936	1.2986	\$ 154,615,129	North Dakota	\$ 11,908,402	1.7047	\$ 20,300,253
Florida	\$ 2,535,580,240	2.1768	\$ 5,519,451,066	Ohio	\$ 1,232,680,309	2.1938	\$ 2,704,254,062
Georgia	\$ 643,513,643	2.3086	\$ 1,485,615,596	Oklahoma	\$ 517,421,528	1.9693	\$ 1,018,958,215
Hawaii	\$ 39,899,793	1.9682	\$ 78,530,773	Oregon	\$ 233,419,047	1.9843	\$ 463,173,415
Idaho	\$ 2,535,580,240	1.8177	\$ 4,608,924,202	Pennsylvania	\$ 1,846,046,925	2.1737	\$ 4,012,752,201
Illinois	\$ 643,513,643	2.391	\$ 1,538,641,120	Rhode Island	\$ 137,551,086	1.8611	\$ 255,996,326
Indiana	\$ 39,899,793	2.0834	\$ 83,127,229	South Carolina	\$ 366,626,846	2.1306	\$ 781,135,158
Iowa	\$ 299,493,417	1.8022	\$ 539,747,036	South Dakota	\$ 29,403,808	1.7092	\$ 50,256,989
Kansas	\$ 289,662,055	1.9676	\$ 569,939,059	Tennessee	\$ 832,058,635	2.2769	\$ 1,894,514,306
Kentucky	\$ 375,903,381	1.9823	\$ 745,153,272	Texas	\$ 3,456,358,788	2.4711	\$ 8,541,008,201
Louisiana	\$ 495,993,463	1.9437	\$ 964,062,494	Utah	\$ 313,970,545	2.201	\$ 691,049,170
Maine	\$ 254,730,992	1.9123	\$ 487,122,076	Vermont	\$ 181,259,847	1.741	\$ 315,573,394
Maryland	\$ 756,231,611	2.0297	\$ 1,534,923,301	Virginia	\$ 709,666,700	2.0644	\$ 1,465,035,935
Massachusetts	\$ 1,331,436,602	2.0512	\$ 2,731,042,758	Washington	\$ 384,660,451	1.9886	\$ 764,935,773
Michigan	\$ 1,474,386,925	2.1053	\$ 3,104,026,793	West Virginia	\$ 240,634,742	1.6898	\$ 406,624,587
Minnesota	\$ 469,933,217	2.0988	\$ 986,295,836	Wisconsin	\$ 424,646,524	1.9849	\$ 842,880,885
Mississippi	\$ 345,043,474	1.8347	\$ 633,051,262	Wyoming	\$ 29,908,515	1.6143	\$ 48,281,316
Missouri	\$ 531,008,600	2.0653	\$ 1,096,692,062	<b>Total U.S.</b>	<b>\$35,880,381,515</b>		<b>\$ 74,998,995,088</b>

1 CMS Medicare Cost Reports for Home Health Agencies, 2018.

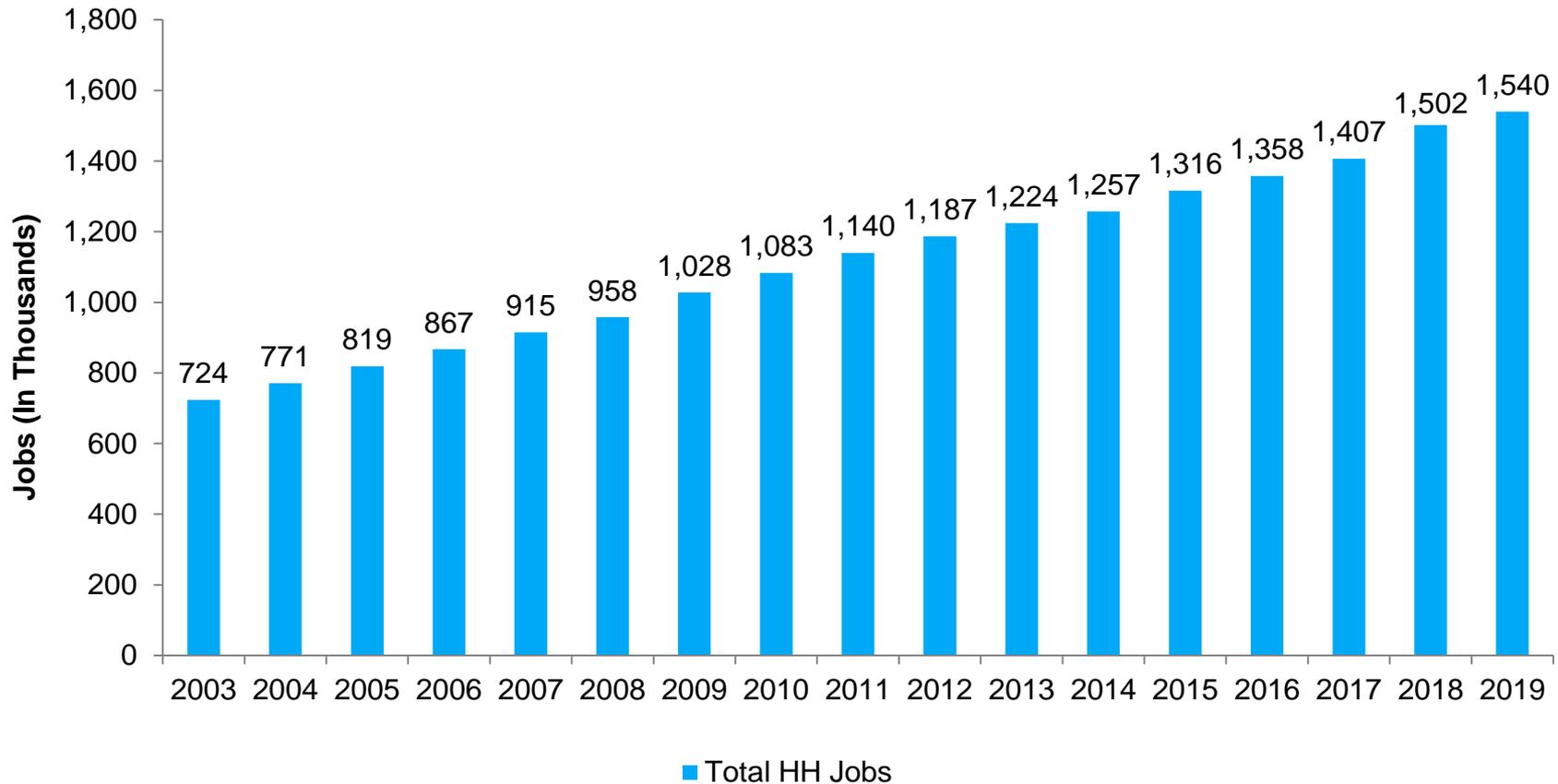
2 U.S. Bureau of Economic Analysis multipliers, 2018.

3 Avalere calculation.

Note: All Medicare-certified home health agencies are required to submit an annual cost report, which includes cost and charges by cost center in total and for Medicare. Cost report data do not include expenditures from HHA contractors, but the multiplier is intended to account for such figures.

# Economic Contribution of Home Health Agencies

Chart 5.4: Impact of Home Health on Jobs, Nationally, 2003 - 2019



Source: Quarterly Census of Employment and Wages (QCEW) collected by the U.S. Bureau of Labor Statistics. Private, NAICS 6216 Home health care services. Annual Averages, All establishment sizes.

Note: This chart reports employment data for privately-owned facilities only, including for-profit and non-profit organizations, and does not include employment from government-owned facilities. Output is not adjusted by U.S. Bureau of Economic Analysis multipliers. 2014 employment data in Chart 6.4 differs from data in Table 6.1 because Chart 6.4 does not include employment from government-owned facilities, which are included in Table 6.1.



## Section 6: Outcomes



# Outcomes: Readmissions Among Post-Acute Care Users

Table 6.1: 30-day Readmission Rates for Top 20 Most Common MS-DRGs Discharged from Hospital to Selected Post-Acute Care (PAC) Settings, by Setting, 2019

MS-DRG	% of Home Health Users Readmitted Within 30 Days	% of SNF Users Readmitted Within 30 Days
Renal failure w mcc	26.38%	21.99%
Other kidney & urinary tract diagnoses w mcc	25.71%	22.80%
Heart failure & shock w mcc or peripheral extracorporeal membrane oxygenation	23.58%	24.30%
Acute myocardial infarction, discharged alive w mcc	22.90%	24.92%
Pulmonary edema & respiratory failure	21.95%	24.28%
Chronic obstructive pulmonary disease w mcc	21.91%	21.96%
Respiratory infections & inflammations w mcc	21.67%	21.65%
Kidney & urinary tract infections w mcc	21.45%	16.22%
Renal failure w cc	21.40%	19.02%
Septicemia or severe sepsis w/o mv >96 hours w mcc	20.10%	21.74%
Infectious & parasitic diseases w OR procedure w mcc	19.48%	25.61%
Intracranial hemorrhage or cerebral infarction w mcc	18.95%	19.72%
Simple pneumonia & pleurisy w mcc	18.08%	19.08%
Kidney & urinary tract infections w/o mcc	17.13%	13.58%
Septicemia or severe sepsis w/o mv >96 hours w/o mcc	16.23%	15.72%
Cellulitis w/o mcc	14.21%	13.36%
Intracranial hemorrhage or cerebral infarction w cc or tpa in 24 hrs	13.02%	13.30%
Medical back problems w/o mcc	12.54%	11.04%
Hip & femur procedures except major joint w cc	6.13%	10.42%
Major hip and knee joint replacement or reattachment of lower extremity w/o mcc	4.39%	7.75%
<b>Average Rate Across All MS-DRGs**</b>	<b>17.60%</b>	<b>17.60%</b>

\*\*Includes all MS-DRGs, including those not listed

\*Analysis includes Medicare Part A claims only.

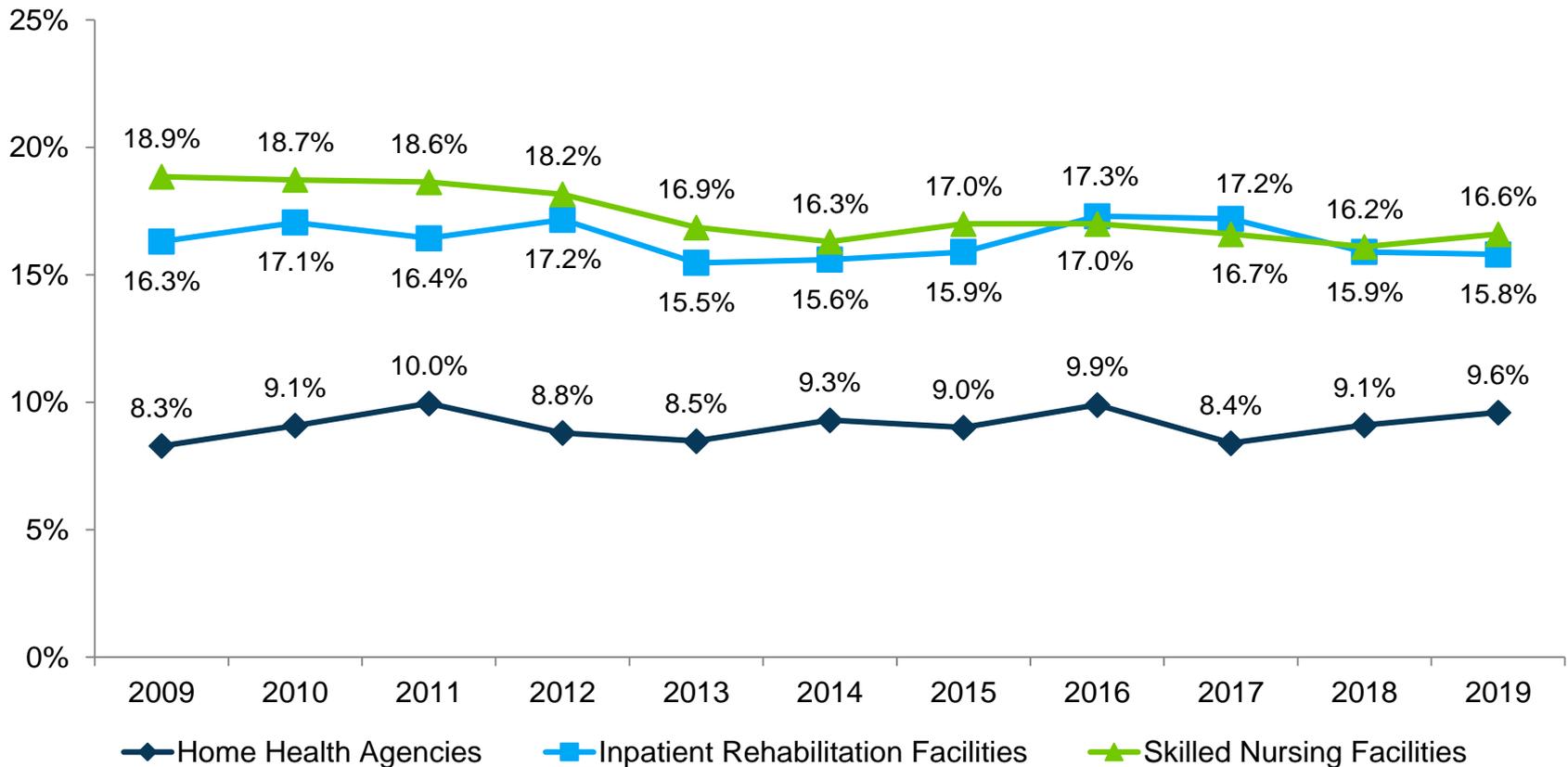
Source: Avalere Health, LLC, analysis of Medicare Standard Analytic Files, 2019.

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

SNF: Skilled Nursing Facilities

# Outcomes: Major Joint Readmissions Among Post-Acute Care Users

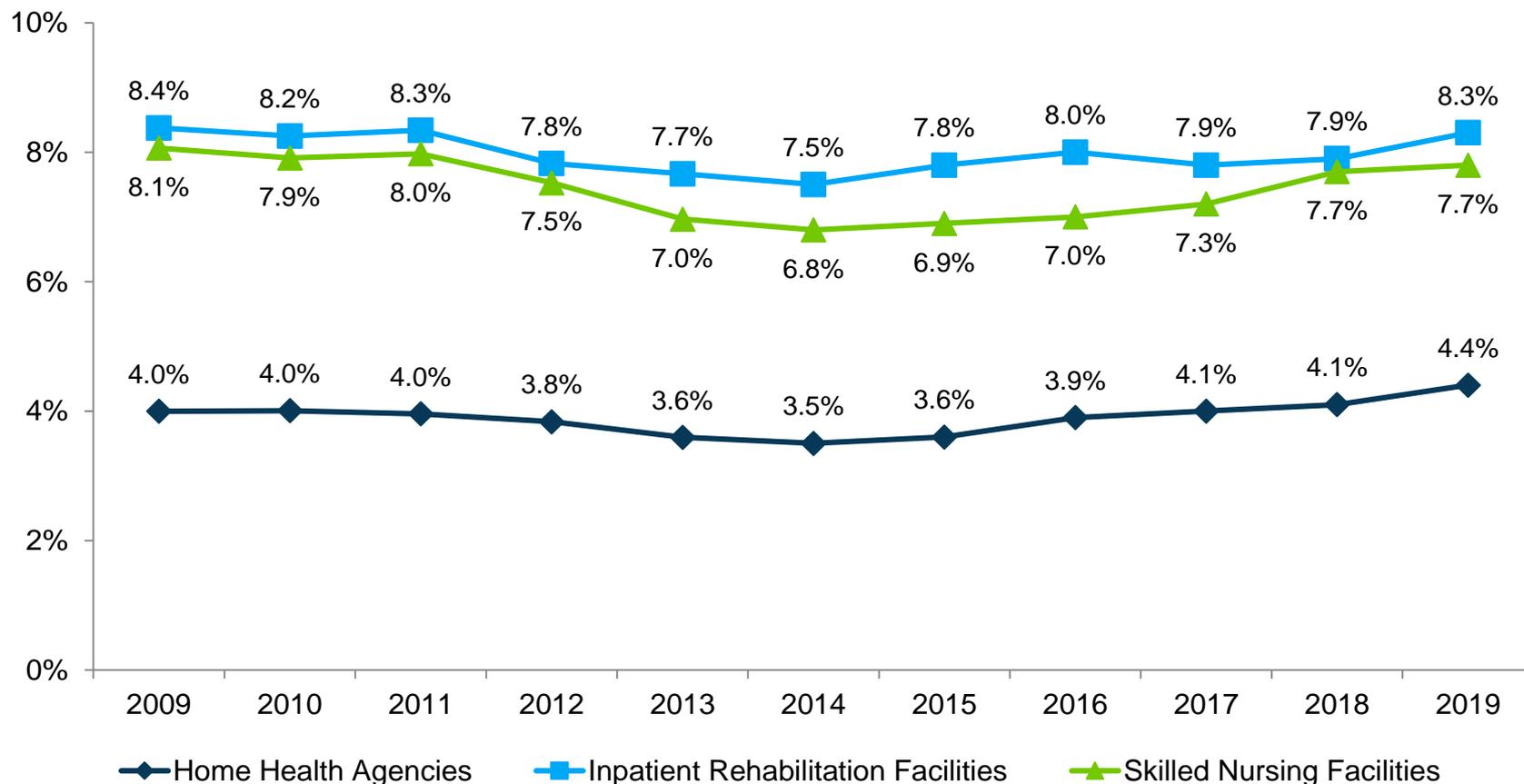
Chart 6.2: 30-day Readmission Rates for MS-DRG 469 Discharged from Hospital to Selected PAC Settings, by Care Setting, 2009 - 2019



Source: Avalere Health, LLC, analysis of Medicare Standard Analytic Files, 2009 – 2019.  
 \*Analysis includes Medicare Part A claims only.  
 MS-DRG 469: Major joint replacement or reattachment of lower extremity with major complication or comorbidity.

# Outcomes: Major Joint Readmissions Among Post-Acute Care Users

Chart 6.3: 30-day Readmission Rates for MS-DRG 470 Discharged from Hospital to Selected PAC Settings, by Care Setting, 2009 - 2019



Source: Avalere Health, LLC, analysis of Medicare Standard Analytic Files, 2009 – 2019.

\*Analysis includes Medicare Part A claims only.

MS-DRG 470: Major joint replacement or reattachment of lower extremity with out major complication or comorbidity.

# Outcomes: Quality of Home Health Care

Table 6.4: National Averages for How Often Home Health Team Met Quality Measures Related to Patient Care, 2011 - 2019

Measure	2011	2012	2013	2014	2015	2016	2017	2018	2019
Checked patients for pain	98%	99%	99%	99%	99%	99%	N/A	N/A	N/A
Checked patients for the risk of developing pressure sores	98%	98%	99%	99%	99%	99%	N/A	N/A	N/A
Treated heart failure symptoms	98%	98%	98%	98%	98%	98%	N/A	N/A	N/A
Treated patients' pain	97%	98%	98%	98%	99%	99%	N/A	N/A	N/A
Checked patients for depression	97%	97%	98%	98%	98%	98%	98%	98%	98%
Checked patients' risk of falling	95%	94%	98%	98%	98%	99%	100%	100%	100%
Included treatments to prevent pressure sores in the plan of care	95%	96%	97%	98%	98%	98%	N/A	N/A	N/A
Took doctor-ordered action to prevent pressure sores	94%	95%	96%	97%	97%	98%	N/A	N/A	N/A
For diabetic patients, got doctor's orders, gave and educated about foot care	91%	93%	94%	95%	95%	96%	97%	98%	98%
Taught patients (or their family caregivers) about their drugs	89%	92%	93%	93%	94%	96%	98%	98%	99%
Began care in timely manner	90%	92%	92%	92%	92%	92%	93%	94%	95%
Determined whether patients received a flu shot for the current flu season	67%	69%	72%	73%	71%	69%	76%	78%	79%
Determined whether patients received a pneumococcal vaccine	65%	68%	71%	73%	72%	73%	80%	81%	82%

N/A indicates measures removed from CMS Home Health Quality Reporting Program beginning in 2017  
 Source: Centers for Medicare and Medicaid Services, Medicare Home Health Compare.

# Outcomes: Quality of Home Health Care

Table 6.5: State Averages for How Often Home Health Team Met Quality Measures Related to Patient Care in 2019 by State (AK-KY)

State	Checked patients for depression	Checked patients' risk of falling	For diabetic patients, got doctor's orders, gave and educated about foot care	Taught patients (or their family caregivers) about their drugs	Began care in timely manner	Determined whether patients received a flu shot for the current flu season	Determined whether patients received a pneumococcal vaccine (pneumonia shot)
AK	94.4%	99.5%	95.6%	94.4%	90.3%	62.9%	73.0%
AL	97.6%	99.9%	99.0%	99.4%	98.3%	79.0%	80.5%
AR	98.6%	99.8%	98.5%	98.9%	97.0%	79.8%	83.6%
AZ	97.2%	99.6%	97.6%	98.4%	96.7%	77.7%	81.7%
CA	97.9%	99.6%	97.9%	98.3%	94.2%	80.6%	84.0%
CO	98.2%	99.7%	97.6%	98.6%	96.9%	84.1%	87.2%
CT	96.7%	99.3%	95.7%	98.7%	94.9%	78.2%	81.3%
DC	94.9%	98.8%	97.0%	95.9%	88.5%	81.3%	81.9%
DE	96.3%	99.3%	97.5%	99.1%	91.6%	81.2%	81.2%
FL	96.9%	99.6%	97.5%	98.1%	97.4%	75.7%	76.6%
GA	96.5%	99.7%	98.1%	98.8%	95.5%	79.0%	80.6%
HI	97.6%	99.6%	97.8%	98.9%	90.1%	76.1%	80.0%
IA	98.8%	99.7%	96.7%	98.4%	93.4%	82.7%	87.9%
ID	98.8%	99.9%	98.4%	99.0%	98.1%	81.0%	84.0%
IL	97.9%	99.6%	98.2%	98.6%	94.7%	73.7%	77.0%
IN	97.7%	99.7%	97.1%	98.8%	94.7%	77.8%	82.0%
KS	98.6%	99.6%	96.8%	98.5%	97.3%	84.2%	88.7%
KY	98.2%	99.9%	98.5%	99.3%	98.0%	79.6%	83.6%

Source: Centers for Medicare and Medicaid Services, Medicare Home Health Compare.

# Outcomes: Quality of Home Health Care

Table 6.6: State Averages for How Often Home Health Team Met Quality Measures Related to Patient Care in 2019 by State (LA-NY)

State	Checked patients for depression	Checked patients' risk of falling	For diabetic patients, got doctor's orders, gave and educated about foot care	Taught patients (or their family caregivers) about their drugs	Began care in timely manner	Determined whether patients received a flu shot for the current flu season	Determined whether patients received a pneumococcal vaccine (pneumonia shot)
LA	98.2%	99.8%	98.4%	98.9%	98.3%	77.6%	81.3%
MA	97.1%	99.5%	96.4%	98.2%	94.4%	76.6%	80.7%
MD	96.6%	99.7%	98.9%	99.5%	96.1%	84.4%	83.8%
ME	97.5%	99.8%	97.6%	99.5%	91.7%	78.4%	85.6%
MI	98.0%	99.7%	97.3%	98.1%	91.5%	79.1%	82.0%
MN	97.1%	99.4%	97.0%	97.0%	92.5%	82.1%	91.4%
MO	97.9%	99.6%	97.6%	98.7%	95.1%	81.7%	86.6%
MS	98.6%	99.7%	98.9%	99.0%	98.6%	77.5%	80.5%
MT	96.6%	99.4%	93.6%	97.7%	92.8%	79.1%	87.9%
NC	97.2%	99.8%	97.9%	99.1%	95.5%	83.2%	85.8%
ND	99.1%	99.9%	98.7%	99.6%	95.8%	83.7%	92.6%
NE	96.2%	99.6%	97.8%	98.2%	96.4%	86.5%	89.1%
NH	97.7%	99.8%	96.6%	99.4%	96.8%	82.3%	89.6%
NJ	97.1%	99.6%	97.7%	99.2%	89.0%	76.7%	78.2%
NM	95.3%	98.9%	96.3%	97.2%	93.9%	78.7%	81.9%
NV	98.0%	99.6%	98.0%	98.3%	93.9%	70.7%	74.6%
NY	96.4%	99.6%	96.6%	98.7%	95.9%	78.0%	75.3%

Source: Centers for Medicare and Medicaid Services, Medicare Home Health Compare.

# Outcomes: Quality of Home Health Care

Table 6.7: State Averages for How Often Home Health Team Met Quality Measures Related to Patient Care in 2019 by State (OH-WY)

State	Checked patients for depression	Checked patients' risk of falling	For diabetic patients, got doctor's orders, gave and educated about foot care	Taught patients (or their family caregivers) about their drugs	Began care in timely manner	Determined whether patients received a flu shot for the current flu season	Determined whether patients received a pneumococcal vaccine (pneumonia shot)
OH	98.4%	99.6%	98.0%	98.2%	96.0%	79.2%	84.1%
OK	98.4%	99.8%	98.0%	98.8%	96.3%	81.5%	83.8%
OR	95.3%	99.7%	97.0%	98.6%	87.9%	79.6%	88.5%
PA	97.3%	99.6%	97.8%	98.2%	95.3%	80.1%	84.5%
RI	97.2%	99.5%	96.8%	99.0%	97.9%	82.2%	86.6%
SC	96.5%	99.7%	98.0%	99.3%	97.0%	83.4%	86.1%
SD	99.7%	99.9%	96.8%	99.1%	97.4%	83.3%	88.9%
TN	97.0%	99.7%	98.4%	99.2%	97.2%	81.2%	83.6%
TX	97.9%	99.7%	97.5%	98.2%	95.7%	78.0%	81.3%
UT	97.6%	99.6%	95.4%	98.8%	97.5%	86.1%	90.2%
VA	97.3%	99.7%	97.7%	98.9%	95.6%	82.9%	86.2%
VT	98.3%	99.7%	97.9%	98.8%	94.5%	79.9%	86.2%
WA	97.4%	99.7%	97.3%	99.1%	92.8%	81.5%	86.7%
WI	98.1%	99.7%	97.9%	98.7%	95.9%	82.9%	91.2%
WV	97.9%	99.9%	98.6%	99.5%	98.2%	79.4%	83.2%
WY	95.3%	99.4%	91.3%	94.2%	93.0%	75.2%	81.9%

Source: Centers for Medicare and Medicaid Services, Medicare Home Health Compare.

# Outcomes: Quality of Home Health Care

Table 6.8: National Averages for Patient Outcomes while in Home Health Care, 2011 – 2019

Measure	2011	2012	2013	2014	2015	2016	2017	2018	2019
Wounds improved or healed after operation	88%	89%	89%	89%	89%	90%	91%	91%	92%
Got better at bathing	65%	66%	67%	68%	69%	71%	74%	77%	80%
Had less pain when moving around	66%	67%	68%	68%	68%	70%	74%	78%	81%
Breathing improved	63%	64%	65%	65%	66%	70%	73%	77%	81%
Got better at walking or moving around	56%	59%	61%	63%	64%	66%	71%	75%	78%
Got better at getting in and out of bed	54%	55%	57%	59%	59%	62%	68%	74%	79%
Got better at taking drugs correctly by mouth	47%	49%	51%	53%	53%	56%	61%	66%	71%
Had to be admitted to hospital	27%*	17%	16%	16%	16%	16%	16%	16%	16%
Needed any urgent, unplanned care in the hospital emergency room – without being admitted to the hospital	N/A	12%	12%	12%	12%	12%	13%	13%	13%

Source: Centers for Medicare and Medicaid Services, Medicare Home Health Compare.

\*In 2011, CMS calculated hospital admissions using OASIS data that captured every time a home health patient went to the hospital, regardless of length of stay in home health, and that accounted for all payer sources. Beginning in 2012, CMS calculated hospital admissions based on claims that only included Medicare fee-for-service beneficiaries and that adjusted for repeat hospital admissions by the same beneficiary during an episode.

# Outcomes: Quality of Home Health Care

Table 6.9: State Averages for Patient Outcomes while in Home Health Care in 2019 by State (AK-KY)

State	Wounds improved or healed after operation	Got better at bathing	Had less pain when moving around	Breathing improved	Got better at walking or moving around	Got better at getting in and out of bed	Got better at taking drugs correctly by mouth	Had to be admitted to hospital	Urgent, unplanned care in ER – w/o being admitted to the hospital
AK	88.3%	64.3%	58.5%	63.4%	63.3%	66.0%	52.9%	14.6%	18.0%
AL	93.6%	87.1%	89.0%	85.8%	83.7%	82.6%	77.2%	16.7%	12.3%
AR	93.4%	85.8%	84.0%	83.0%	81.4%	81.9%	74.8%	16.3%	14.4%
AZ	90.5%	81.4%	81.4%	82.1%	76.4%	78.4%	70.5%	14.0%	14.3%
CA	92.5%	78.4%	82.4%	80.3%	76.3%	75.4%	67.9%	14.1%	11.8%
CO	92.9%	82.7%	80.6%	83.0%	78.7%	79.0%	70.3%	14.5%	14.9%
CT	91.4%	75.9%	78.7%	78.5%	76.0%	75.6%	67.8%	16.5%	13.9%
DC	93.3%	80.6%	83.2%	93.1%	79.7%	81.3%	78.0%	14.0%	13.9%
DE	90.5%	78.3%	83.4%	81.3%	76.0%	78.2%	67.5%	15.0%	13.3%
FL	94.2%	85.1%	84.7%	82.6%	81.0%	81.7%	74.5%	15.1%	11.4%
GA	92.6%	82.4%	84.7%	84.1%	80.2%	81.0%	72.3%	16.5%	13.9%
HI	85.5%	76.9%	78.5%	82.7%	72.6%	75.3%	62.5%	14.1%	15.8%
IA	89.0%	79.5%	78.2%	77.5%	77.3%	77.2%	70.1%	15.8%	14.6%
ID	92.8%	83.7%	81.4%	84.9%	80.7%	81.6%	73.1%	13.8%	14.5%
IL	89.8%	78.4%	82.1%	79.1%	76.8%	77.2%	70.7%	15.8%	12.1%
IN	90.6%	78.3%	79.2%	78.9%	76.8%	77.9%	69.8%	15.7%	13.5%
KS	90.8%	82.0%	79.8%	80.7%	78.9%	79.6%	70.7%	16.7%	12.8%
KY	92.1%	81.7%	83.5%	82.7%	80.8%	80.5%	72.8%	16.0%	13.3%

Source: Centers for Medicare and Medicaid Services, Medicare Home Health Compare.

# Outcomes: Quality of Home Health Care

Table 6.10: State Averages for Patient Outcomes while in Home Health Care in 2019 by State (LA-NY)

State	Wounds improved or healed after operation	Got better at bathing	Had less pain when moving around	Breathing improved	Got better at walking or moving around	Got better at getting in and out of bed	Got better at taking drugs correctly by mouth	Had to be admitted to hospital	Urgent, unplanned care in ER – w/o being admitted to the hospital
LA	93.3%	84.5%	84.1%	81.5%	80.4%	80.5%	75.4%	16.3%	14.3%
MA	92.4%	79.6%	80.6%	79.9%	79.1%	81.3%	71.5%	17.1%	12.5%
MD	93.1%	81.4%	84.7%	85.3%	80.0%	81.0%	72.3%	15.1%	13.1%
ME	90.5%	77.1%	80.7%	77.7%	76.7%	79.1%	66.7%	15.5%	16.2%
MI	90.4%	80.4%	80.8%	79.4%	77.2%	78.2%	70.4%	15.5%	12.5%
MN	87.9%	73.4%	72.8%	72.1%	73.0%	72.4%	62.9%	16.3%	12.5%
MO	91.0%	80.2%	77.5%	80.3%	78.4%	80.5%	70.5%	16.1%	12.7%
MS	93.4%	87.0%	86.7%	85.0%	84.1%	83.0%	78.1%	16.7%	13.7%
MT	88.9%	74.7%	70.9%	74.0%	72.0%	75.5%	64.3%	14.7%	13.9%
NC	92.1%	81.0%	83.0%	82.7%	79.3%	80.0%	71.2%	15.5%	14.3%
ND	88.7%	81.6%	80.9%	82.0%	78.7%	78.2%	74.4%	15.3%	12.7%
NE	86.6%	78.9%	78.6%	80.0%	76.5%	78.1%	68.2%	15.9%	11.7%
NH	91.0%	79.0%	81.1%	80.2%	77.6%	80.4%	69.1%	17.0%	14.0%
NJ	91.8%	77.2%	83.7%	83.3%	77.3%	79.6%	70.2%	15.7%	10.9%
NM	93.1%	80.0%	74.3%	79.0%	76.1%	74.6%	70.1%	14.4%	15.3%
NV	91.8%	79.7%	78.7%	79.4%	75.1%	77.6%	70.5%	15.6%	12.6%
NY	91.6%	77.8%	81.1%	83.3%	77.8%	76.6%	70.1%	16.4%	10.6%

Source: Centers for Medicare and Medicaid Services, Medicare Home Health Compare.

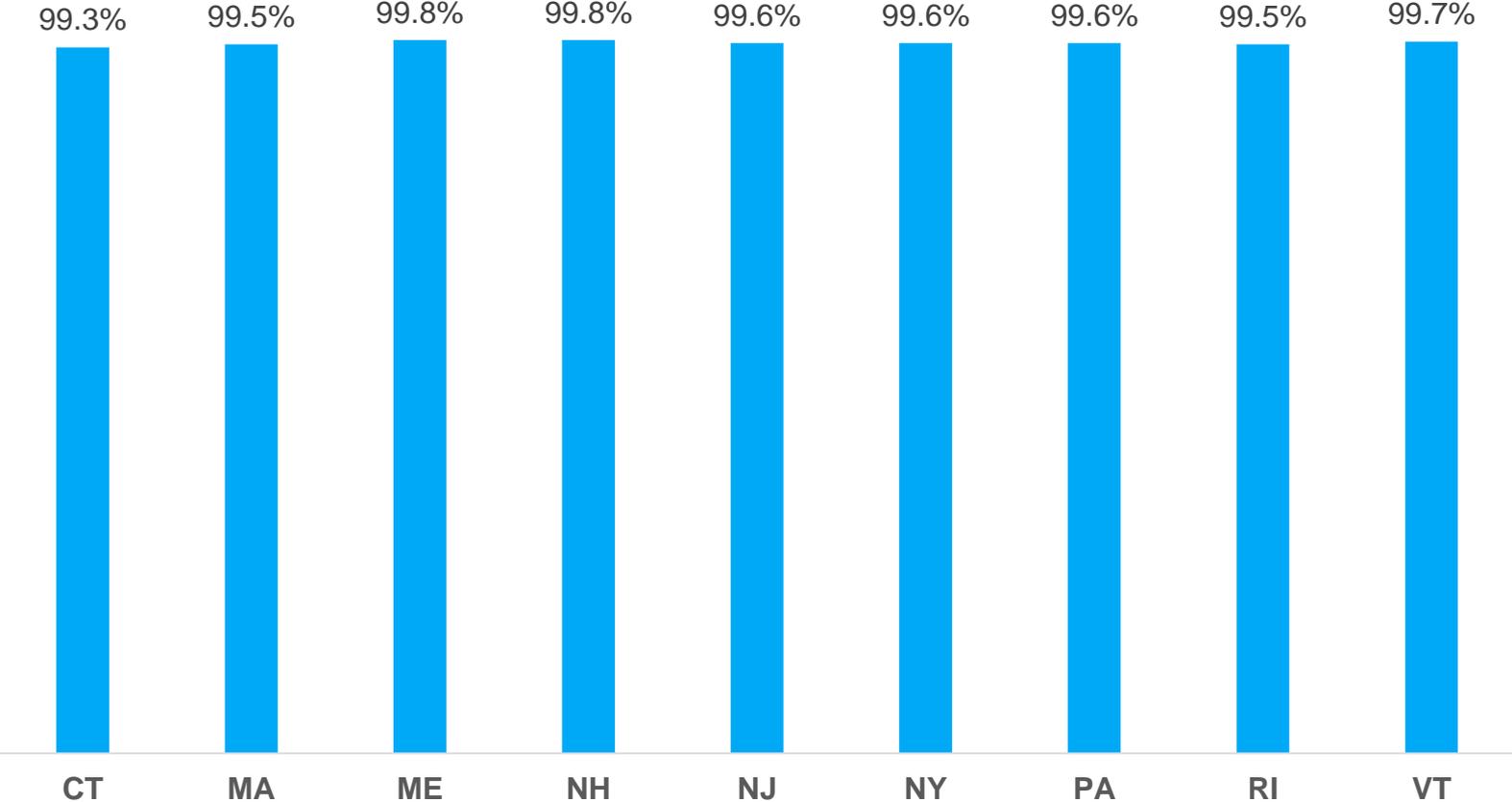
# Outcomes: Quality of Home Health Care

Table 6.11: State Averages for Patient Outcomes while in Home Health Care in 2019 by State (OH-WY)

State	Wounds improved or healed after operation	Got better at bathing	Had less pain when moving around	Breathing improved	Got better at walking or moving around	Got better at getting in and out of bed	Got better at taking drugs correctly by mouth	Had to be admitted to hospital	Urgent, unplanned care in ER – w/o being admitted to the hospital
OH	89.9%	79.0%	78.2%	78.1%	77.3%	77.9%	69.5%	15.5%	14.0%
OK	93.1%	82.3%	78.6%	75.2%	79.3%	77.4%	72.1%	15.5%	14.6%
OR	91.4%	75.9%	74.1%	76.3%	74.2%	75.2%	63.3%	14.3%	16.4%
PA	91.6%	78.6%	80.0%	80.6%	78.2%	78.8%	70.0%	16.7%	12.2%
RI	96.0%	79.2%	82.7%	81.5%	78.1%	79.3%	69.8%	16.5%	11.8%
SC	92.4%	82.1%	83.1%	83.0%	79.5%	80.5%	71.5%	15.9%	14.2%
SD	84.3%	78.3%	76.9%	78.7%	76.9%	78.6%	70.2%	16.2%	12.3%
TN	91.4%	85.6%	85.4%	84.1%	82.0%	82.4%	76.3%	16.2%	12.9%
TX	89.5%	78.5%	76.1%	72.1%	75.0%	73.8%	67.4%	15.1%	13.1%
UT	92.9%	84.1%	79.7%	81.8%	81.0%	81.3%	74.8%	13.6%	13.3%
VA	90.9%	78.2%	80.9%	81.6%	77.5%	78.9%	69.6%	15.8%	14.0%
VT	92.4%	77.7%	78.6%	74.2%	75.2%	75.7%	67.7%	15.9%	15.6%
WA	90.4%	78.8%	77.8%	79.7%	76.4%	77.8%	67.5%	14.7%	15.6%
WI	90.1%	76.9%	79.7%	78.9%	77.3%	78.0%	67.9%	15.2%	14.5%
WV	92.4%	84.6%	87.5%	85.2%	82.3%	81.9%	74.8%	16.5%	14.6%
WY	90.4%	74.8%	67.2%	72.9%	72.9%	75.1%	64.1%	15.6%	16.2%

# Outcomes: Quality of Home Health Care

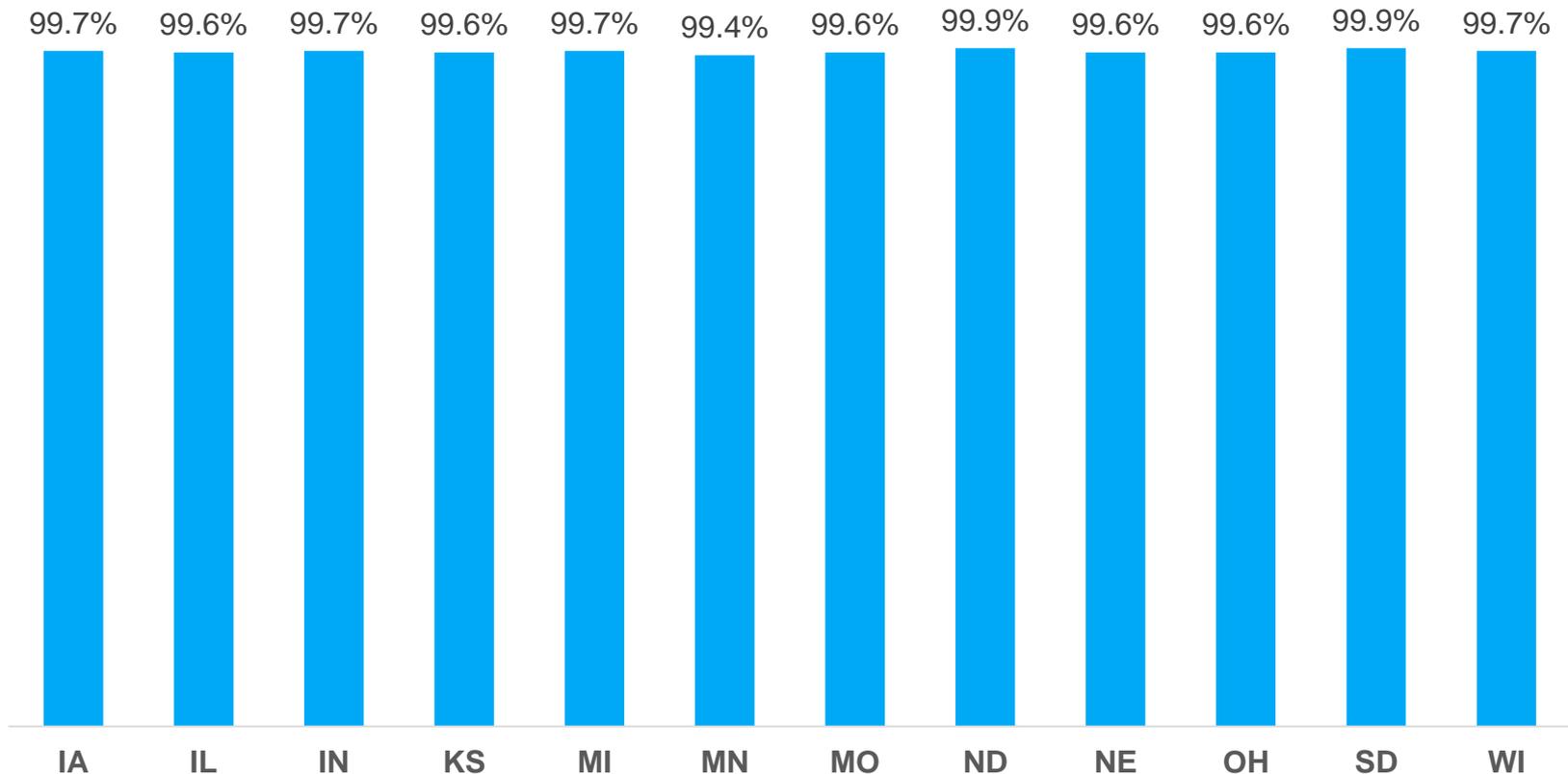
Chart 6.12: Performance on “How Often The Home Health Team Checked Patients’ Risk Of Falling” Measure in 2019, for States in Northeastern Region



Source: Centers for Medicare and Medicaid Services, Medicare Home Health Compare.  
Note: U.S. Census Bureau defines which states are in the Northeast Region; includes CT, MA, ME, NH, NJ, NY, PA, RI, VT.

# Outcomes: Quality of Home Health Care

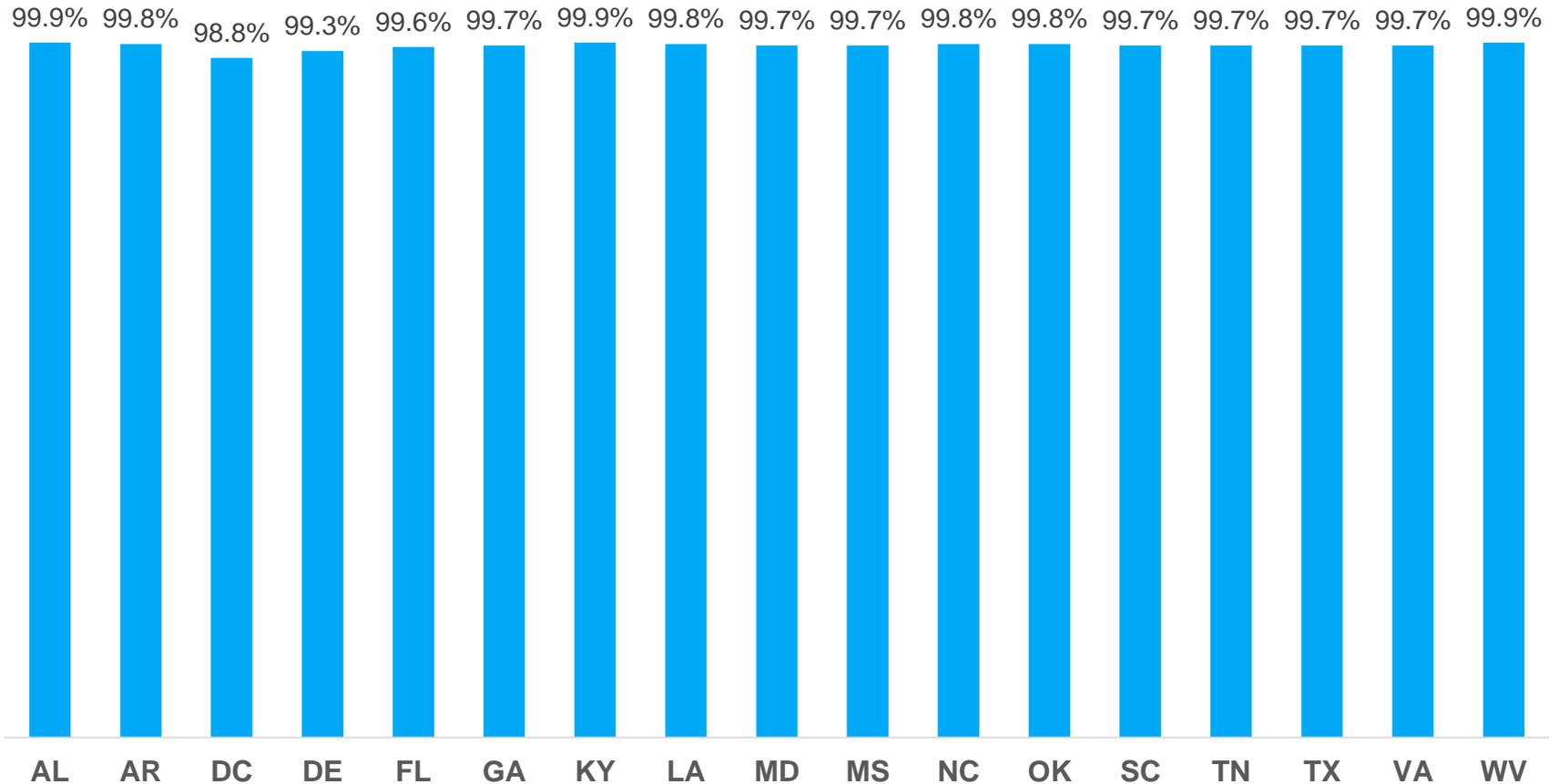
Chart 6.13: Performance on “How Often The Home Health Team Checked Patients’ Risk Of Falling” Measure in 2019, for States in Midwestern Region



Source: Centers for Medicare and Medicaid Services, Medicare Home Health Compare  
Note: U.S. Census Bureau defines which states are in the Midwestern Region; includes IA, IL, IN, KS, MI, MN, MO, ND, NE, OH, SD, WI.

# Outcomes: Quality of Home Health Care

Chart 6.14: Performance on “How Often The Home Health Team Checked Patients’ Risk Of Falling” Measure in 2019, for States in Southern Region

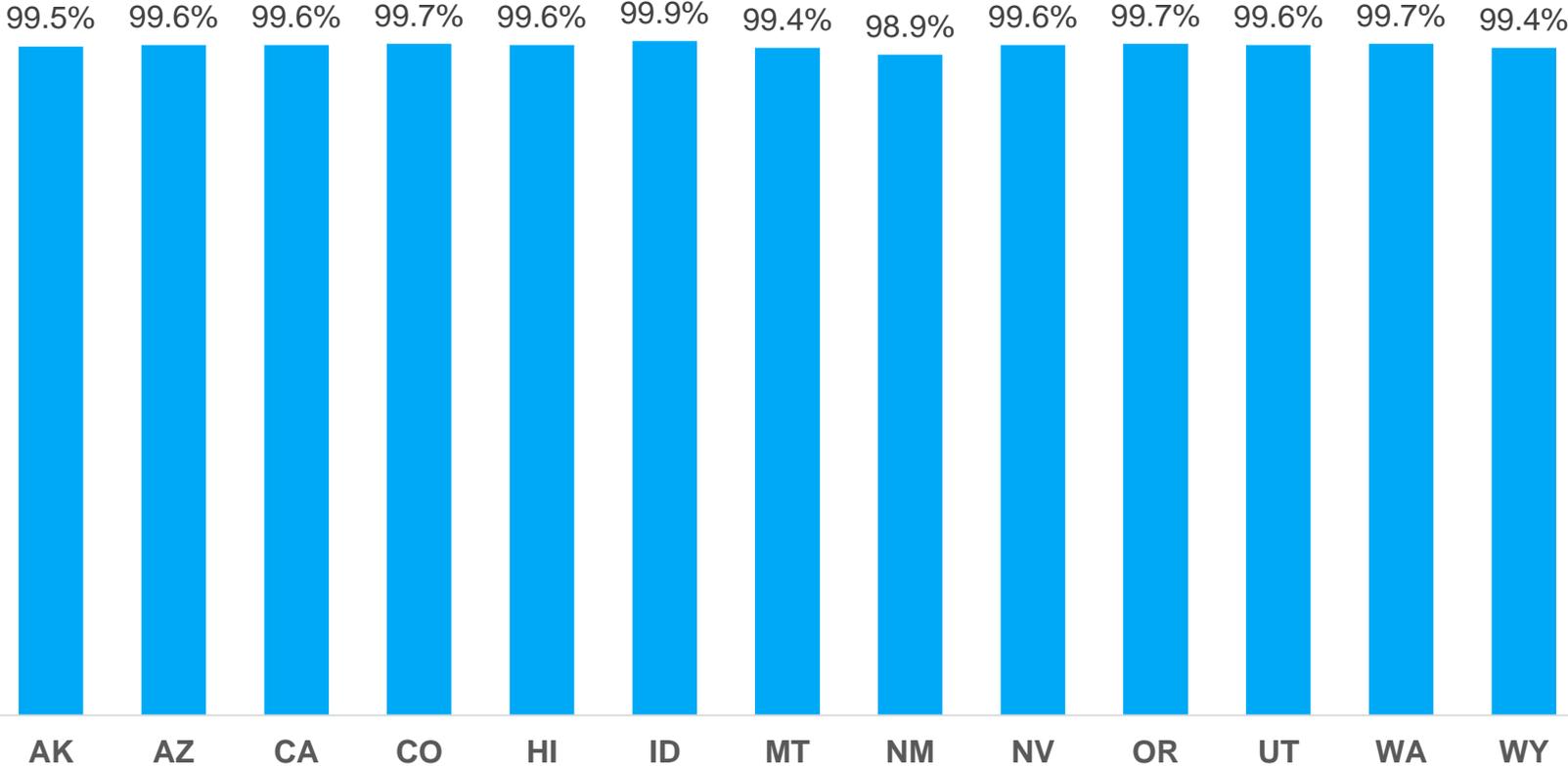


Source: Centers for Medicare and Medicaid Services, Medicare Home Health Compare.

Note: U.S. Census Bureau defines which states are in the Southern Region; includes AL, AR, DC, DE, FL, GA, KY, LA, MD, MS, NC, OK, SC, TN, TX, VA, WV.

# Outcomes: Quality of Home Health Care

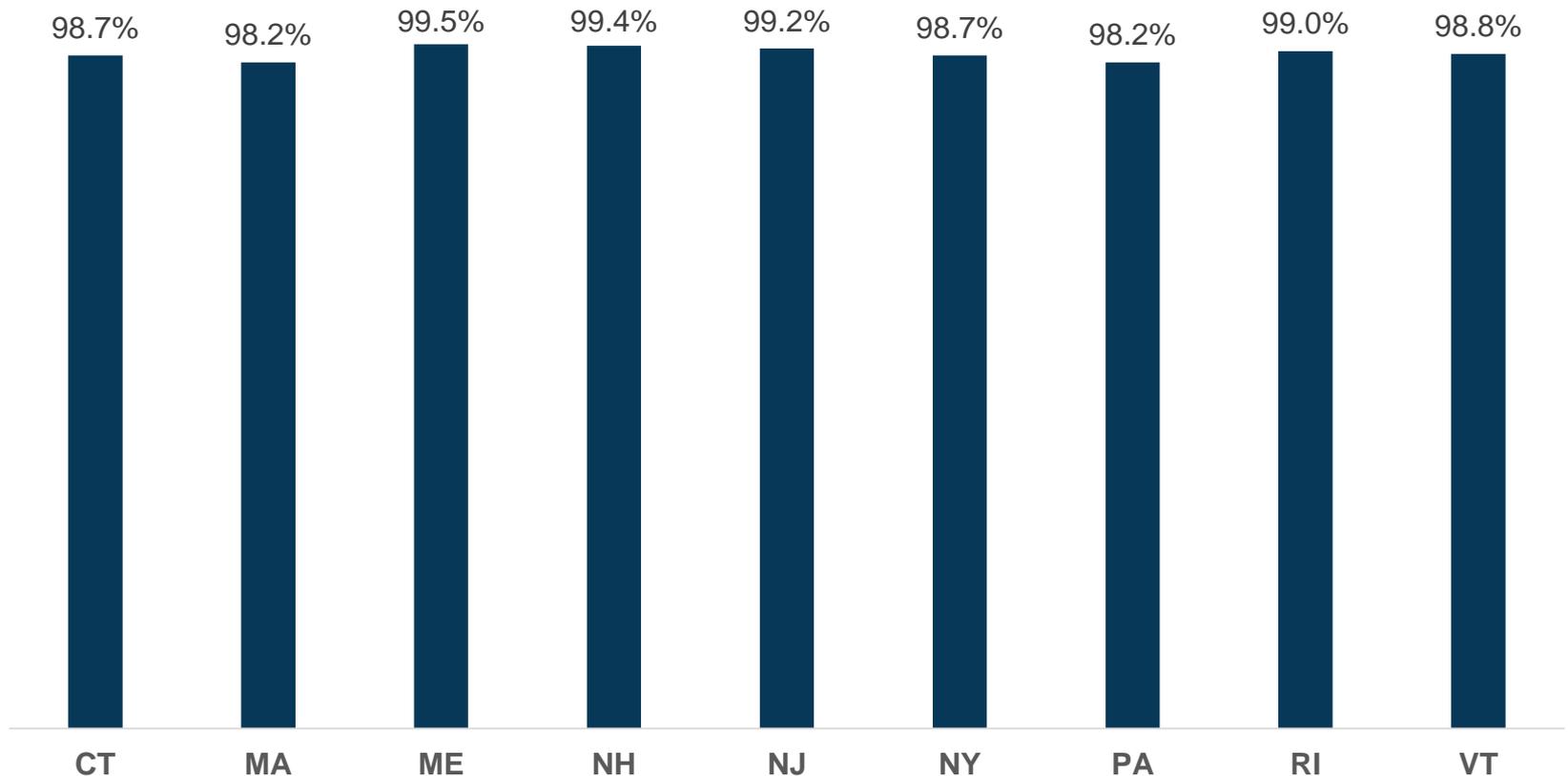
Chart 6.15: Performance on “How Often The Home Health Team Checked Patients’ Risk Of Falling” Measure in 2019, for States in Western Region



Source: Centers for Medicare and Medicaid Services, Medicare Home Health Compare.  
Note: U.S. Census Bureau defines which states are in the Western Region; includes AK, AZ, CA, CO, HI, ID, MT, NM, NV, OR, UT, WA, WY.

# Outcomes: Quality of Home Health Care

Chart 6.16: Performance on “How Often The Home Health Team Taught Patients (or Their Family Caregivers) About Their Drugs” Measure in 2019, for States in Northeastern Region

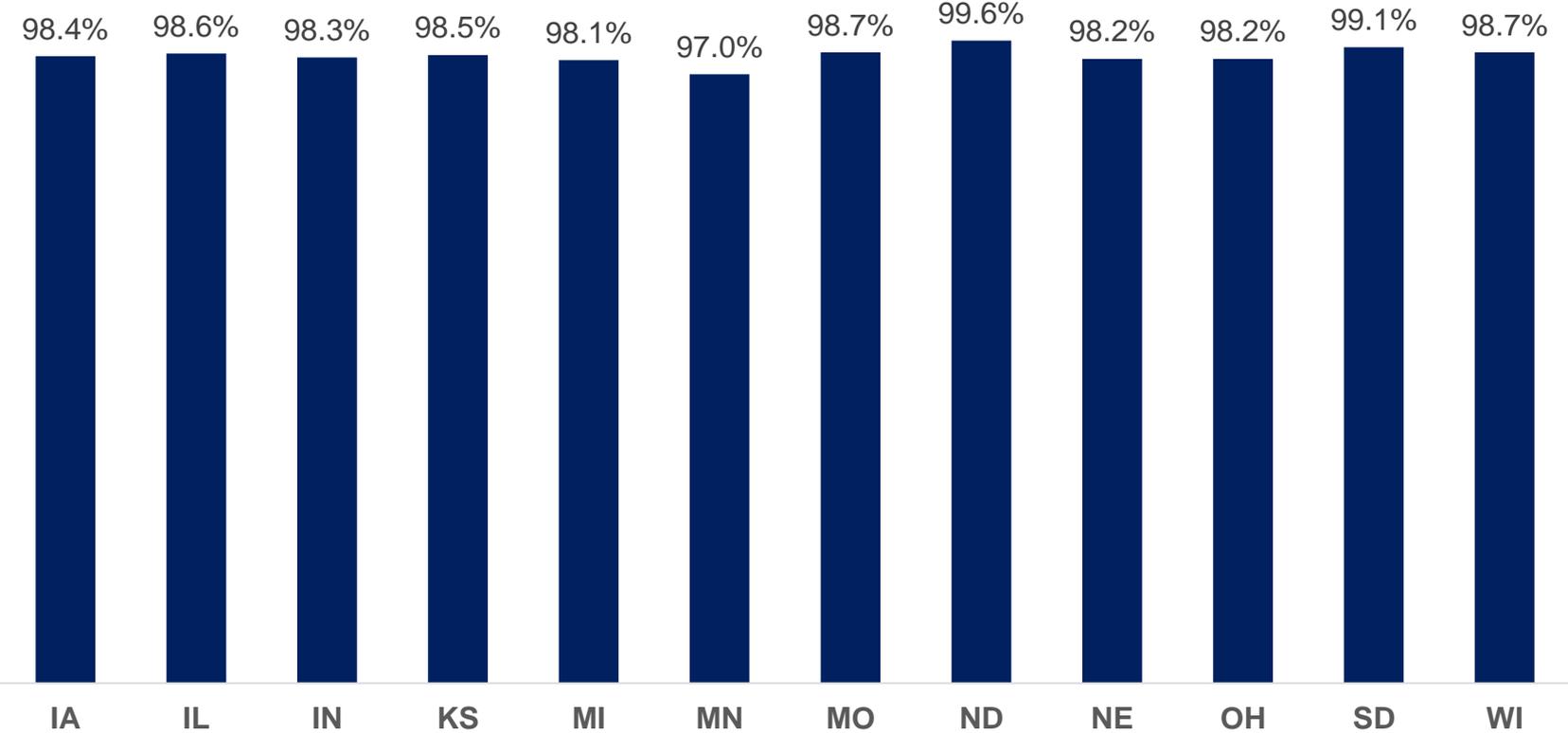


Source: Centers for Medicare and Medicaid Services, Medicare Home Health Compare.

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

# Outcomes: Quality of Home Health Care

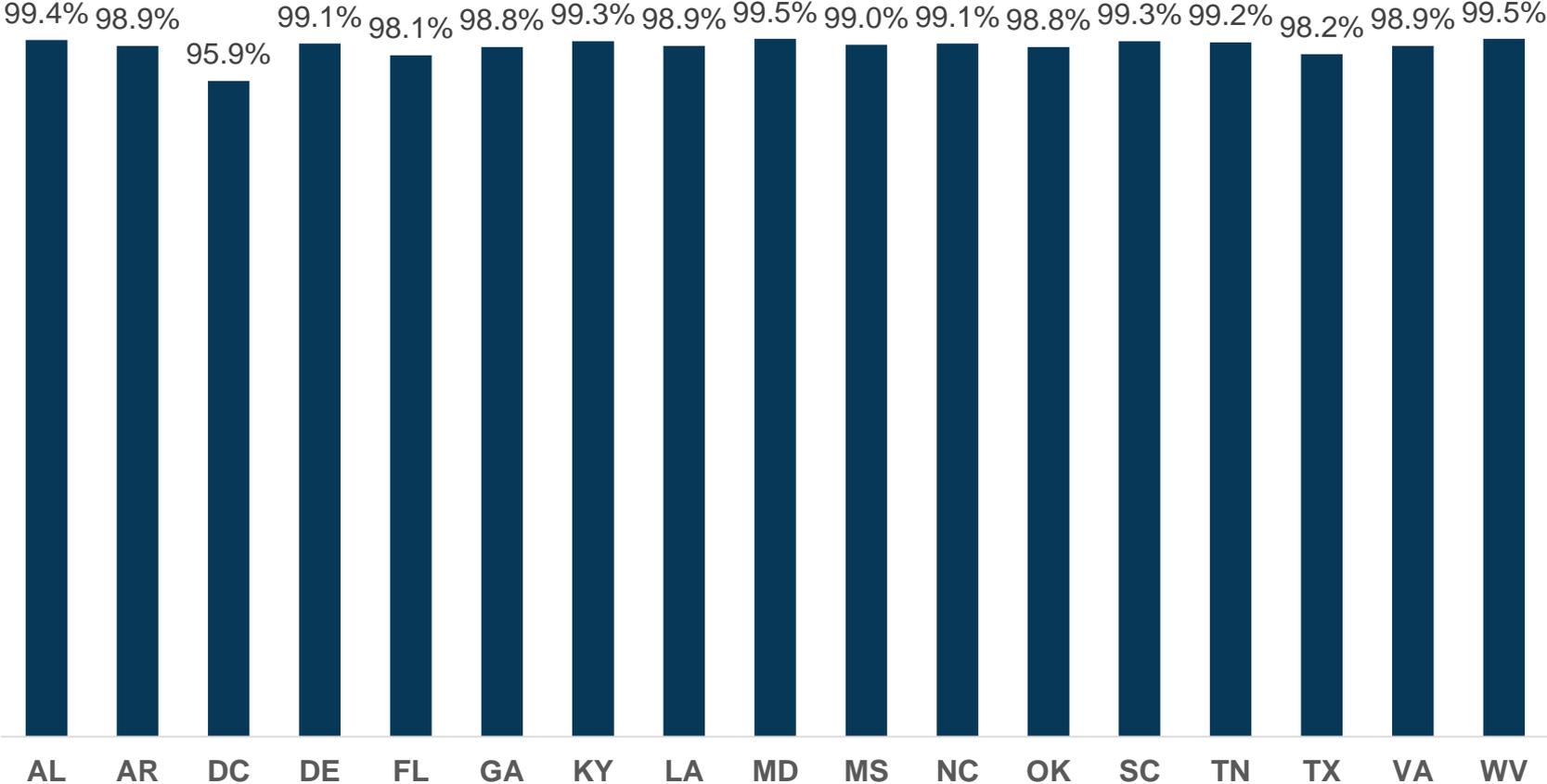
Chart 6.17: Performance on “How Often The Home Health Team Taught Patients (or Their Family Caregivers) About Their Drugs” Measure in 2019, for States in Midwestern Region



Source: Centers for Medicare and Medicaid Services, Medicare Home Health Compare.  
Note: U.S. Census Bureau defines which states are in the Midwestern Region; includes IA, IL, IN, KS, MI, MN, MO, ND, NE, OH, SD, WI.

# Outcomes: Quality of Home Health Care

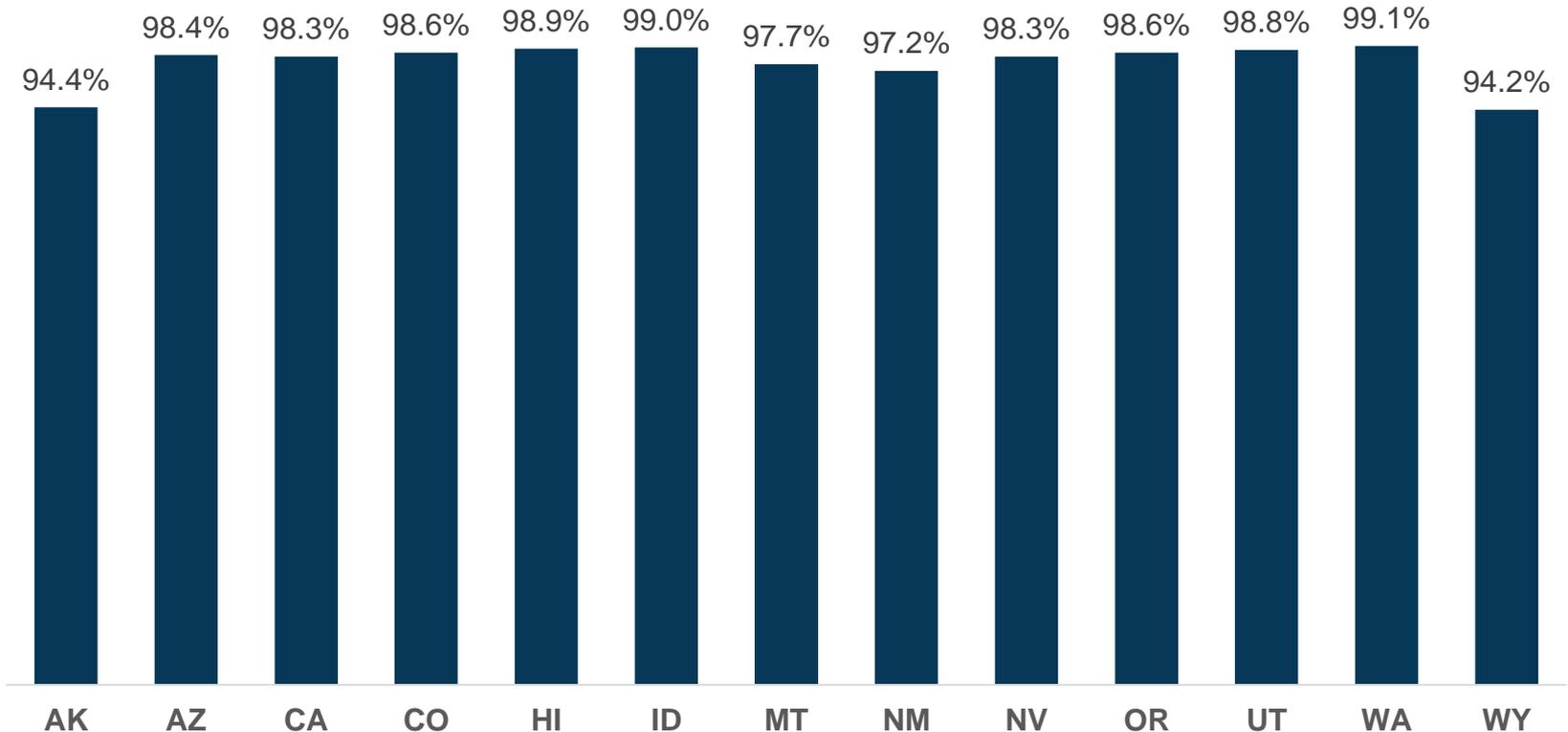
Chart 6.18: Performance on “How Often The Home Health Team Taught Patients (or Their Family Caregivers) About Their Drugs” Measure in 2019, for States in Southern Region



Source: Centers for Medicare and Medicaid Services, Medicare Home Health Compare  
Note: U.S. Census Bureau defines which states are in the Southern Region; includes AL, AR, DC, DE, FL, GA, KY, LA, MD, MS, NC, OK, SC, TN, TX, VA, WV.

# Outcomes: Quality of Home Health Care

Chart 6.19: Performance on “How Often The Home Health Team Taught Patients (or Their Family Caregivers) About Their Drugs” Measure in 2019, for States in Western Region

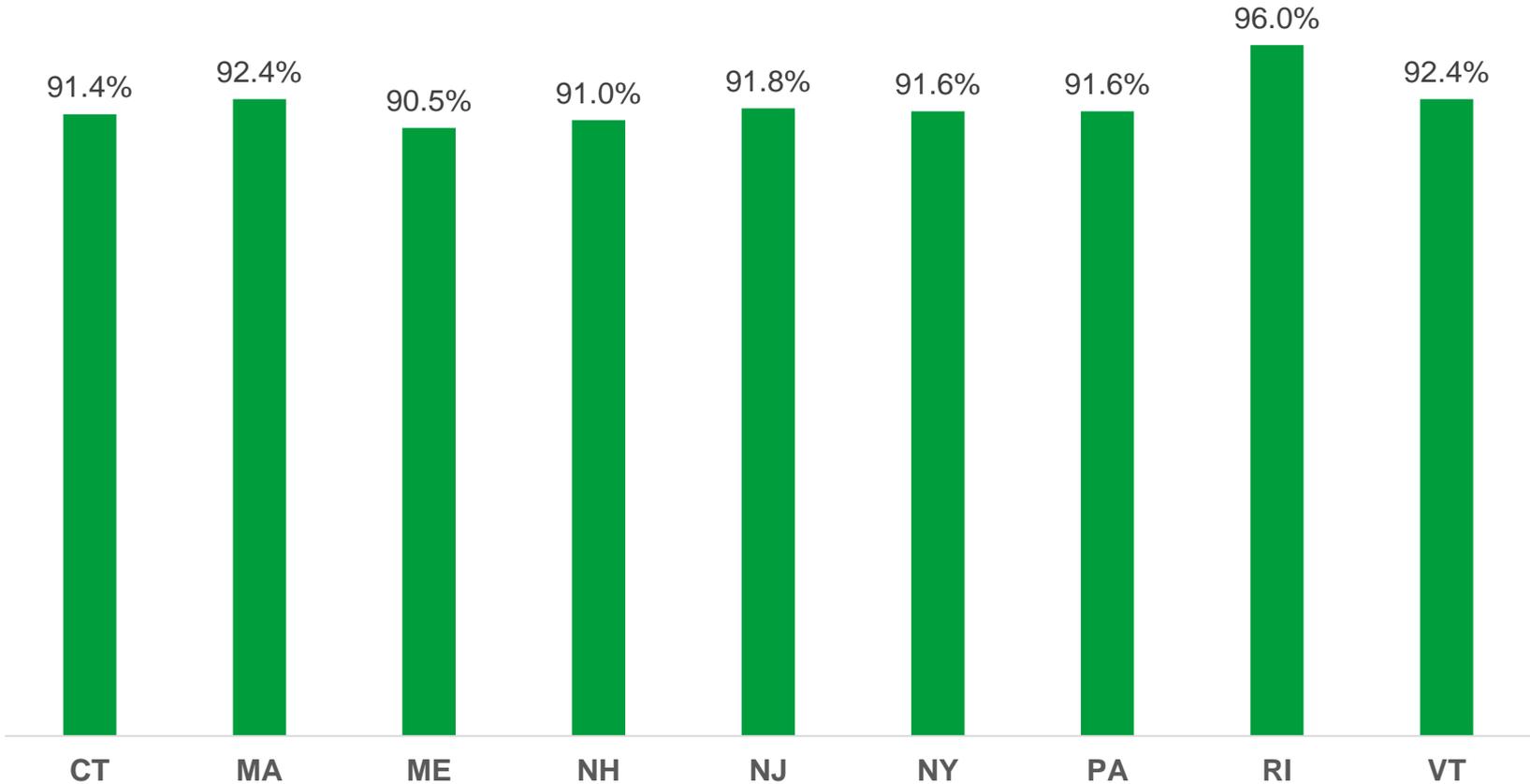


Source: Centers for Medicare and Medicaid Services, Medicare Home Health Compare

Note: U.S. Census Bureau defines which states are in the Western Region; includes AK, AZ, CA, CO, HI, ID, MT, NM, NV, OR, UT, WA, WY.

# Outcomes: Quality of Home Health Care

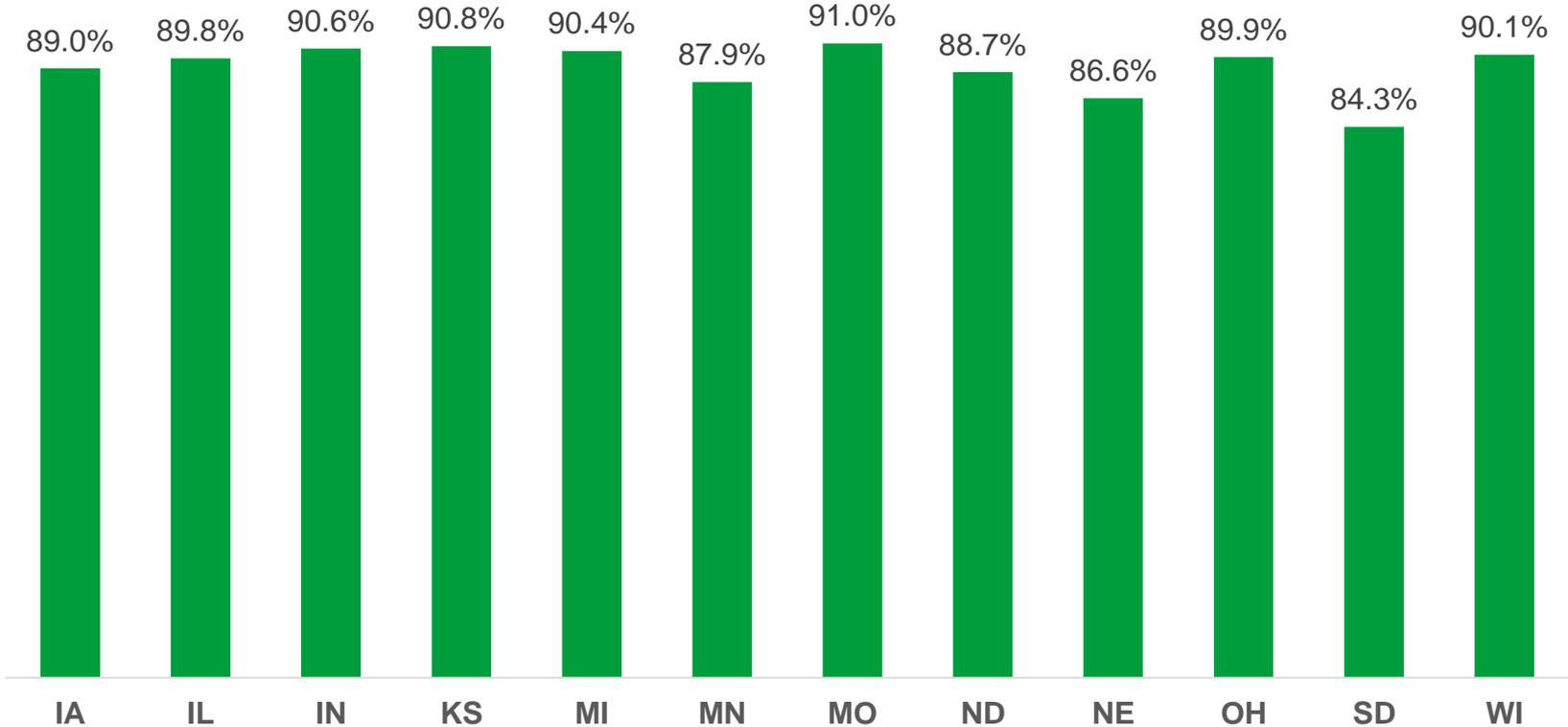
Chart 6.20: Performance on “How Often Patients’ Wounds Improved or Healed After An Operation” Measure in 2019, for States in Northeastern Region



Source: Centers for Medicare and Medicaid Services, Medicare Home Health Compare.  
Note: U.S. Census Bureau defines which states are in the Northeast Region; includes CT, MA, ME, NH, NJ, NY, PA, RI, VT.

# Outcomes: Quality of Home Health Care

Chart 6.21: Performance on “How Often Patients’ Wounds Improved or Healed After An Operation” Measure in 2019, for States in Midwestern Region



Source: Centers for Medicare and Medicaid Services, Medicare Home Health Compare  
Note: U.S. Census Bureau defines which states are in the Midwestern Region; includes IA, IL, IN, KS, MI, MN, MO, ND, NE, OH, SD, WI.

# Outcomes: Quality of Home Health Care

Chart 6.22: Performance on “How Often Patients’ Wounds Improved or Healed After An Operation” Measure in 2019, for States in Southern Region

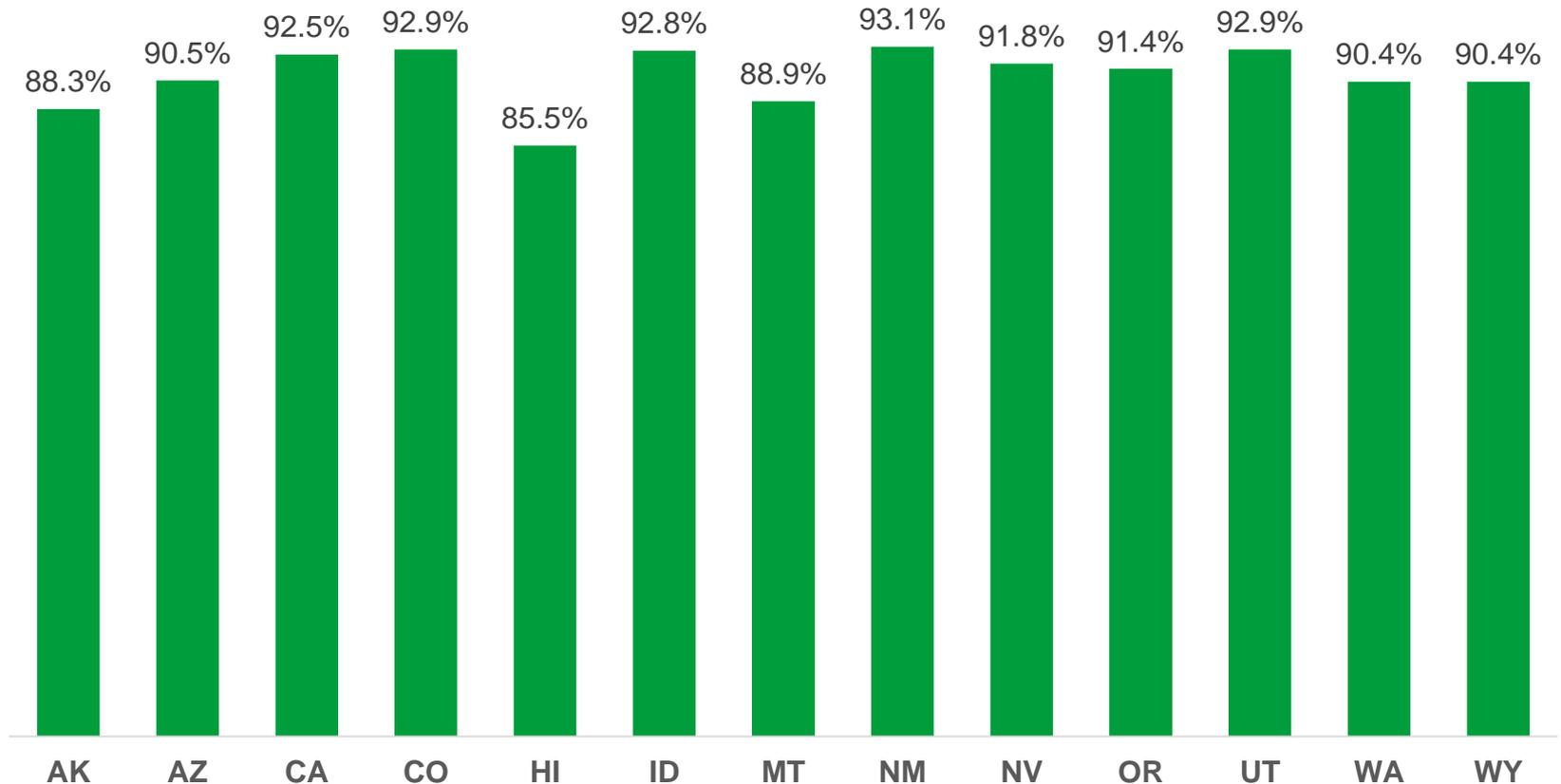


Source: Centers for Medicare and Medicaid Services, Medicare Home Health Compare.

Note: U.S. Census Bureau defines which states are in the Southern Region; includes AL, AR, DC, DE, FL, GA, KY, LA, MD, MS, NC, OK, SC, TN, TX, VA, WV.

# Outcomes: Quality of Home Health Care

Chart 6.23: Performance on “How Often Patients’ Wounds Improved or Healed After An Operation” Measure in 2019, for States in Western Region



Source: Centers for Medicare and Medicaid Services, Medicare Home Health Compare.

Note: U.S. Census Bureau defines which states are in the Western Region; includes AK, AZ, CA, CO, HI, ID, MT, NM, NV, OR, UT, WA, WY.

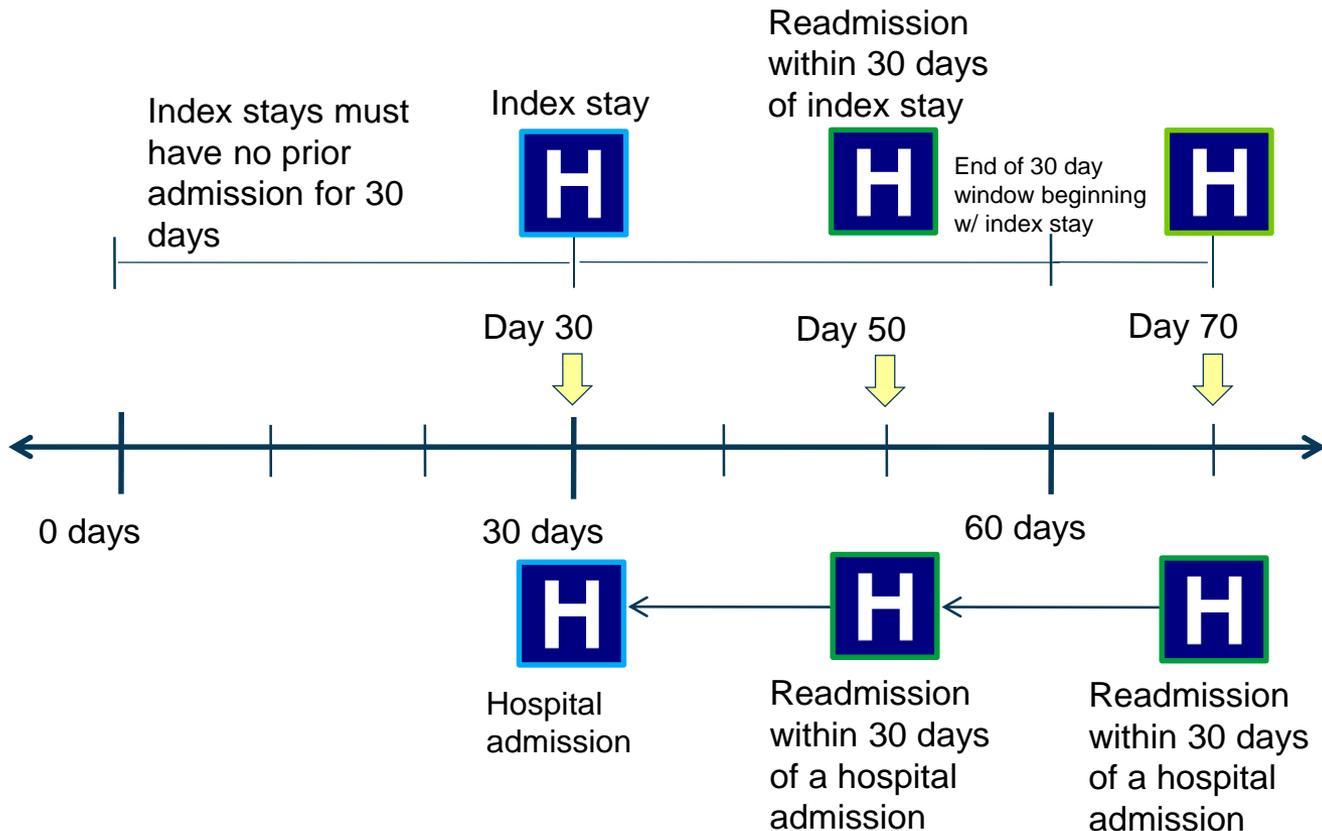


## Appendix: Readmission Rate Methodology



# Methodology: Calculating Readmission Rates

The ACA methodology defines a readmission as an admission to a short-term acute care hospital (STACH) within 30 days of an initial, or 'index', admission to a STACH. To be considered an index admission, there must be no other STACH admission in the prior 30 days. These data are based on raw Medicare claims and no risk-based or geographic adjustments have been applied.



Using the Affordable Care Act (ACA) methodology, this episode of care results in **one** 30-day readmission

Without defining index stays as above, this episode of care results in **two** 30-day readmissions