



Home Health Chartbook

September 2012

Avalere Health LLC

Table of Contents

- 1. National Overview**
- 2. Demographics of Home Health Users**
 1. Demographics of Home Health Users by Sex
 2. Demographics of Home Health Users by Dual Eligible Status
- 3. Clinical Profile of Home Health Users**
- 4. Home Health Agency Workforce**
- 5. Organizational Trends in Home Health**
- 6. Economic Contribution of Home Health Agencies**
- 7. Outcomes**
 1. Re-hospitalizations Among Post-Acute Care Users
 2. Quality of Home Health Care
- 8. National Trends**
- 9. Appendix A: Readmission Rate Methodology**
- 10. Appendix B: Clinically Appropriate and Cost-Effective Placement (CACEP) Study**



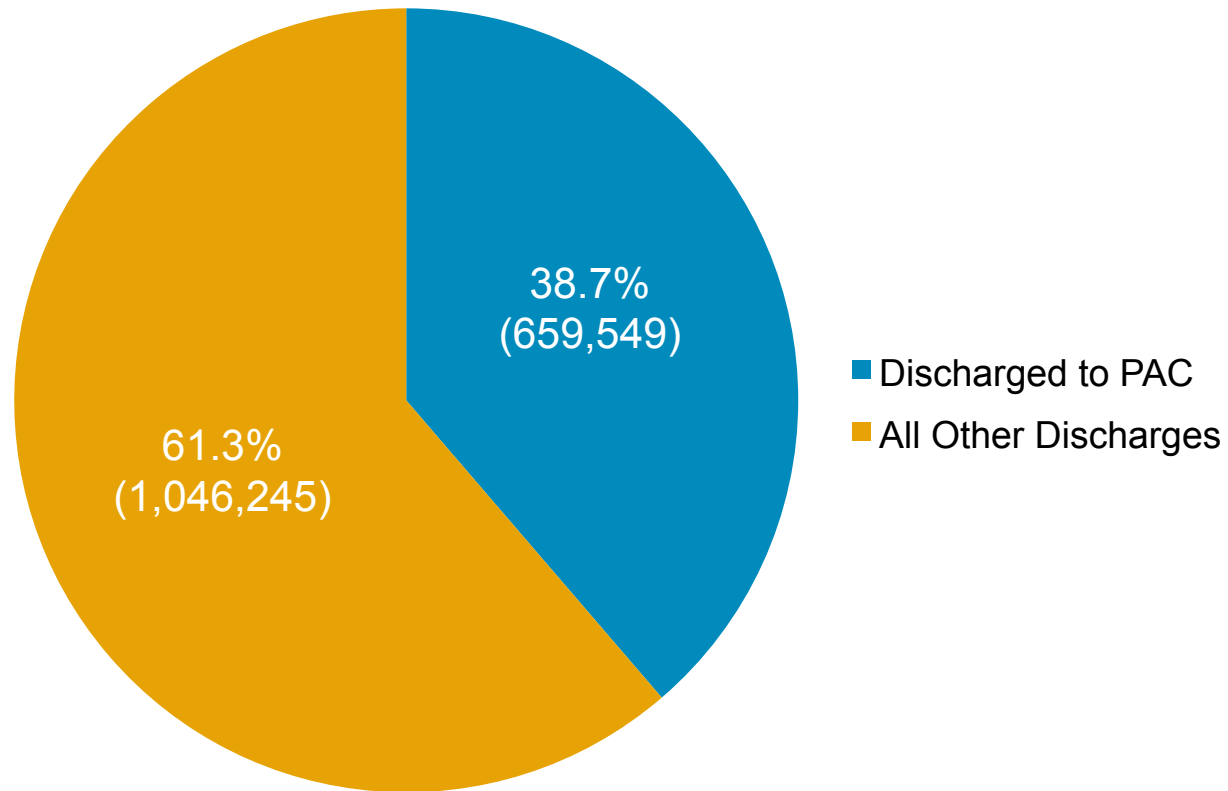
Section 1: National Overview



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National Overview

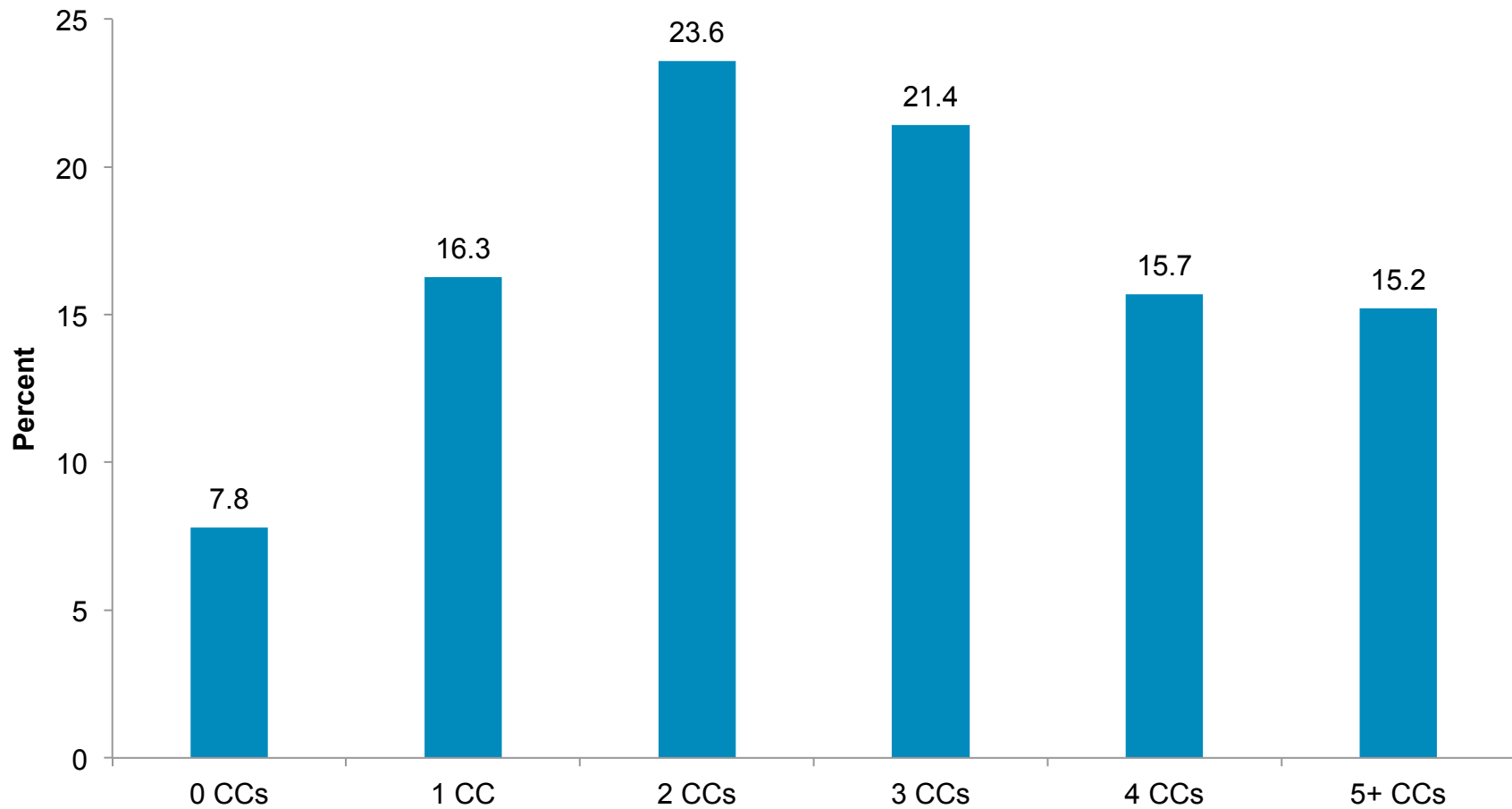
Chart 1.1: Percentage of Medicare Beneficiaries Discharges to Post-Acute Care (PAC) Following an Inpatient Stay, 2008



Source: RTI International. "Post-Acute Care Episodes Expanded Analytic File: Data Chart Book." 2011.

National Overview

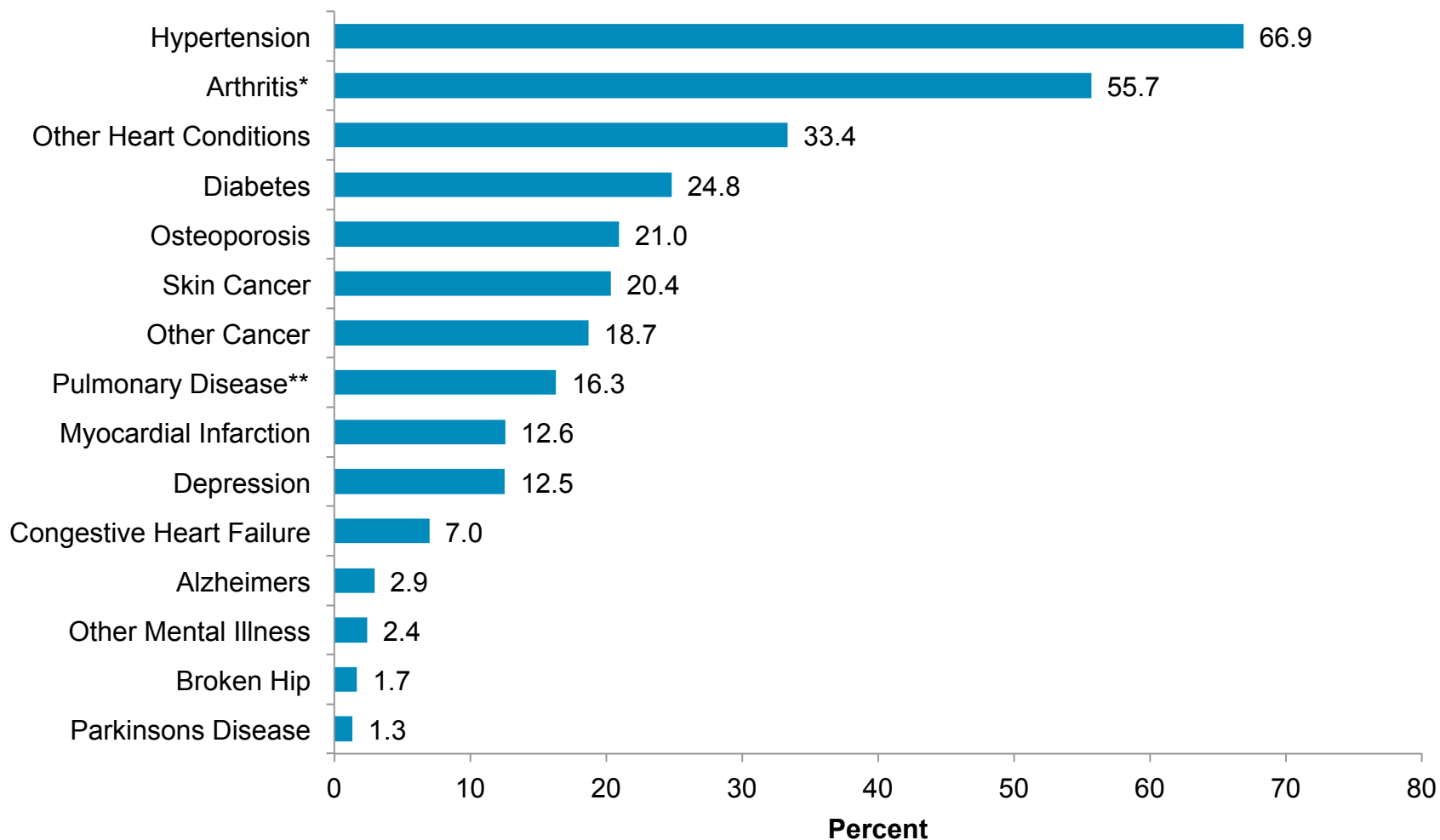
Chart 1.2: Percentage of Medicare Beneficiaries over 65 with Chronic Conditions by Number of Chronic Conditions, 2010



Source: Medicare Current Beneficiary Survey, Access to Care file, 2010

National Overview

Chart 1.3: Percentage of Medicare Beneficiaries over 65 with Selected Chronic Conditions, 2010



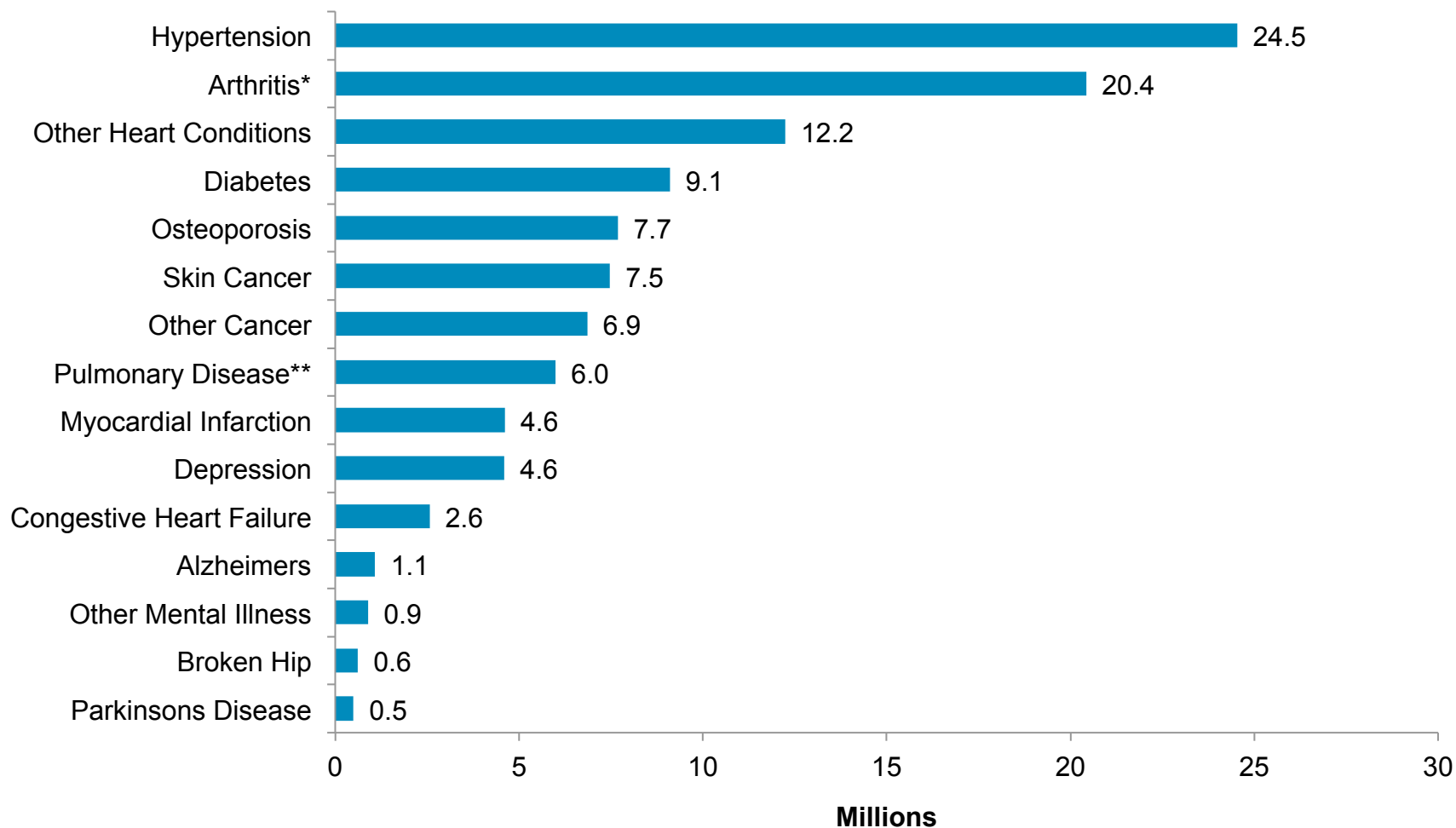
Source: Medicare Current Beneficiary Survey, Access to Care file, 2010

*Includes rheumatoid and non-rheumatoid arthritis.

**Includes emphysema, asthma, and chronic obstructive pulmonary disease (COPD).

National Overview

Chart 1.4: Number of Medicare Beneficiaries over 65 with Chronic Conditions by Type of Condition, in Millions, 2010



Source: Medicare Current Beneficiary Survey, Access to Care file, 2010

*Includes rheumatoid and non-rheumatoid arthritis.

** Includes emphysema, asthma, and chronic obstructive pulmonary disease (COPD).



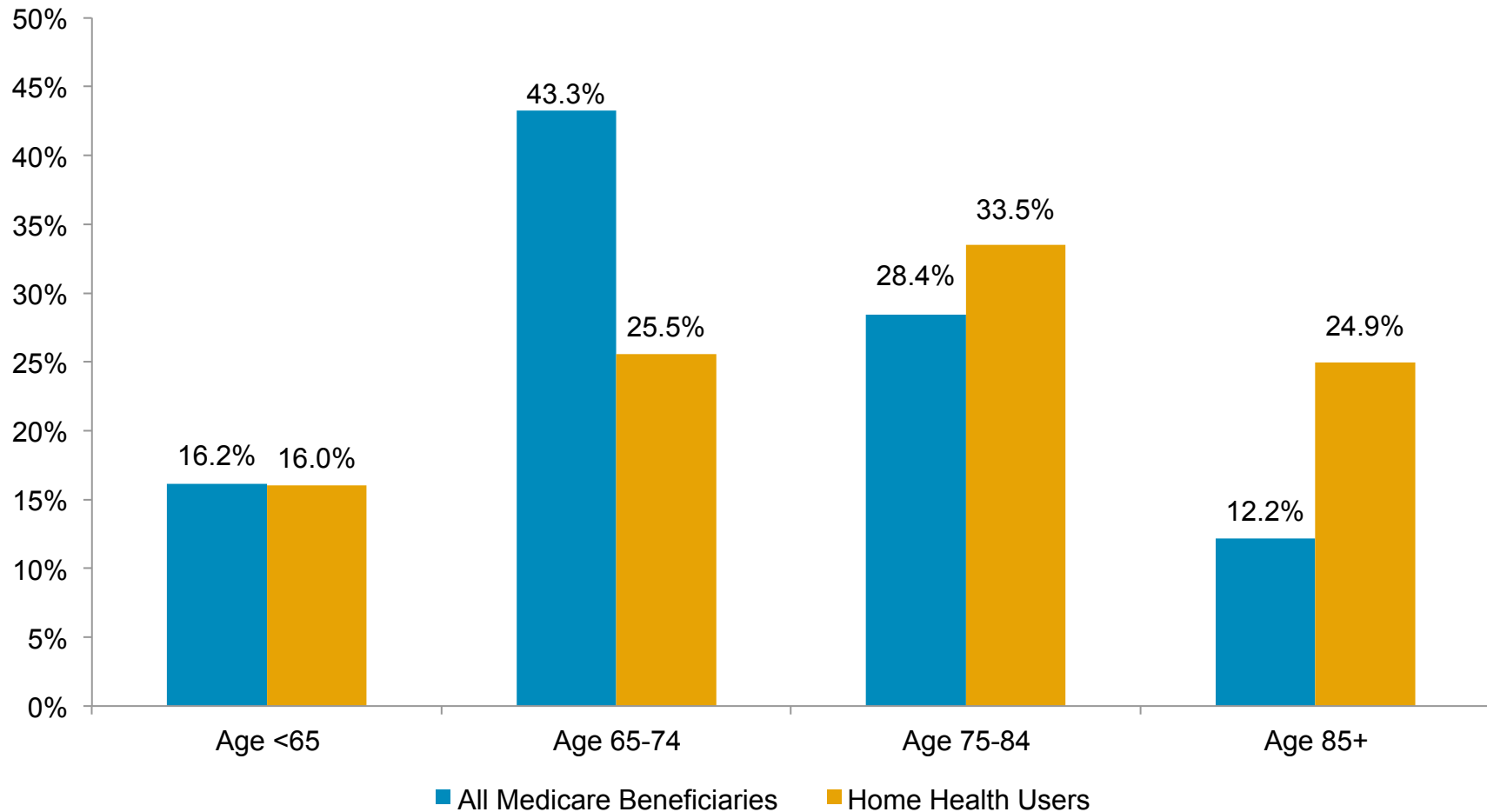
Section 2: Demographics of Home Health Users



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Demographics of Home Health Users

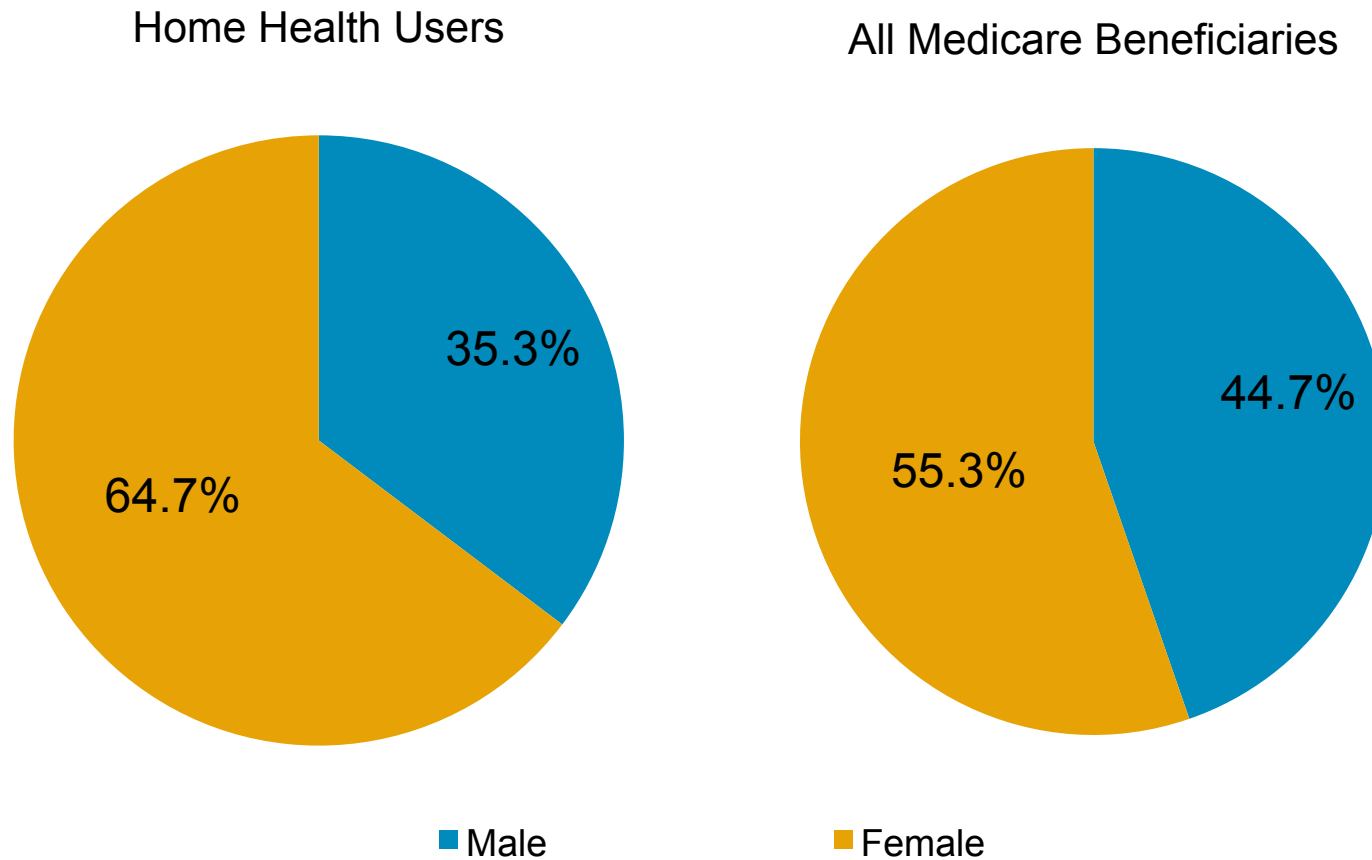
Chart 2.1: Age Distribution of Home Health Users and All Medicare Beneficiaries, 2010



Source: Avalere analysis of the Medicare Current Beneficiary Survey, Access to Care file 2010

Demographics of Home Health Users

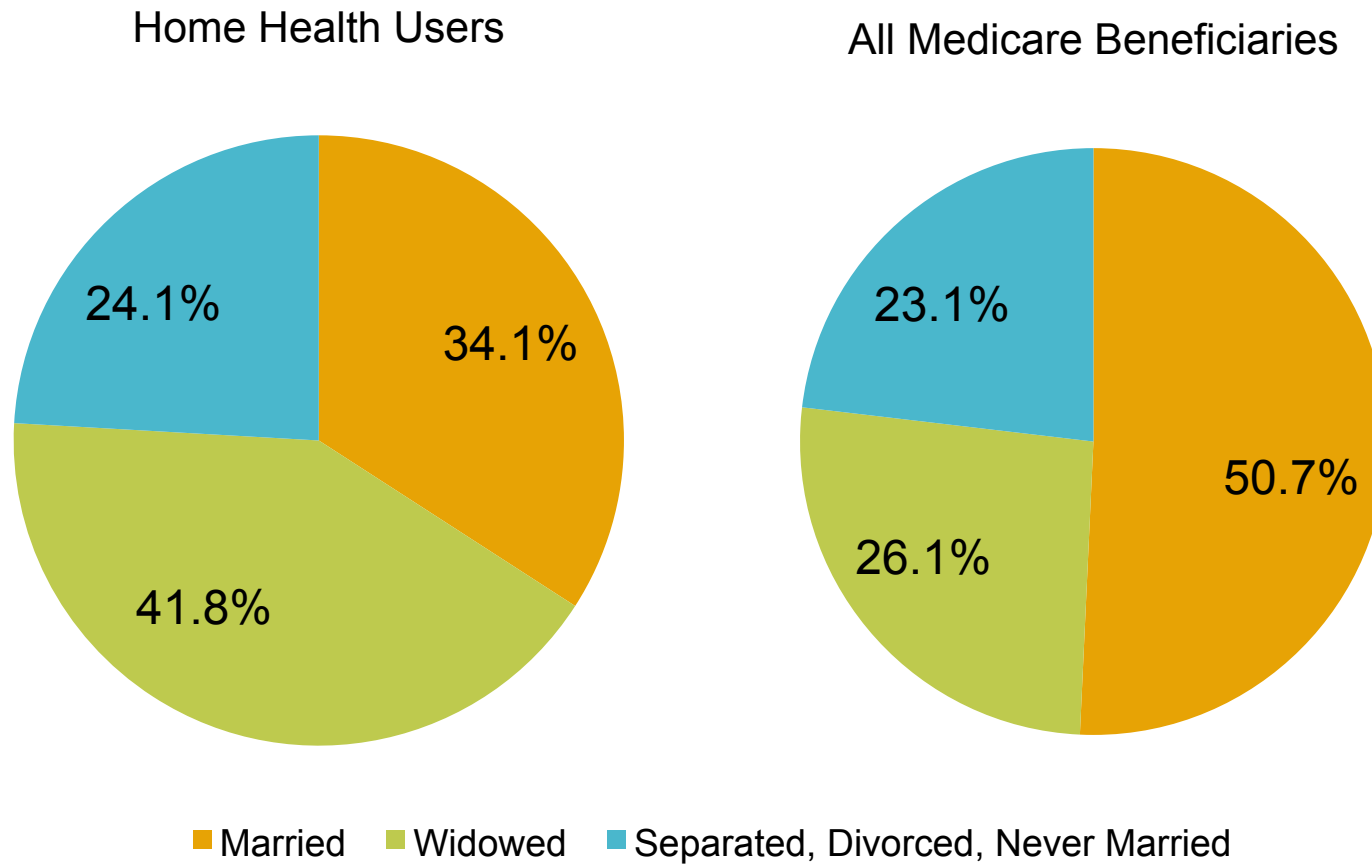
Chart 2.2: Gender Distribution of Home Health Users and All Medicare Beneficiaries, 2010



Source: Avalere analysis of the Medicare Current Beneficiary Survey, Access to Care file 2010

Demographics of Home Health Users

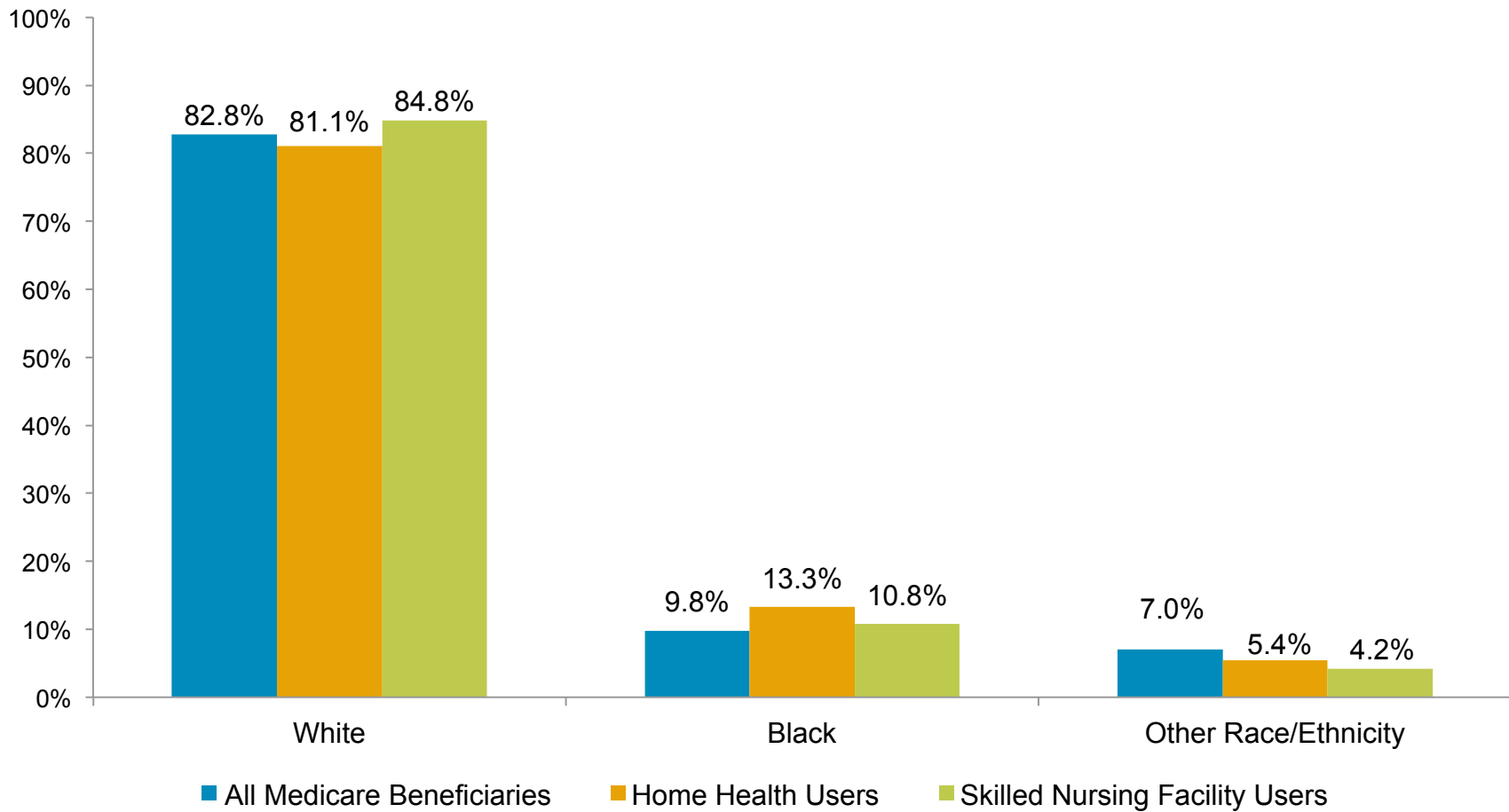
Chart 2.3: Marital Status of Home Health Users and All Medicare Beneficiaries, 2010



Source: Avalere analysis of the Medicare Current Beneficiary Survey, Access to Care file 2010

Demographics of Home Health Users

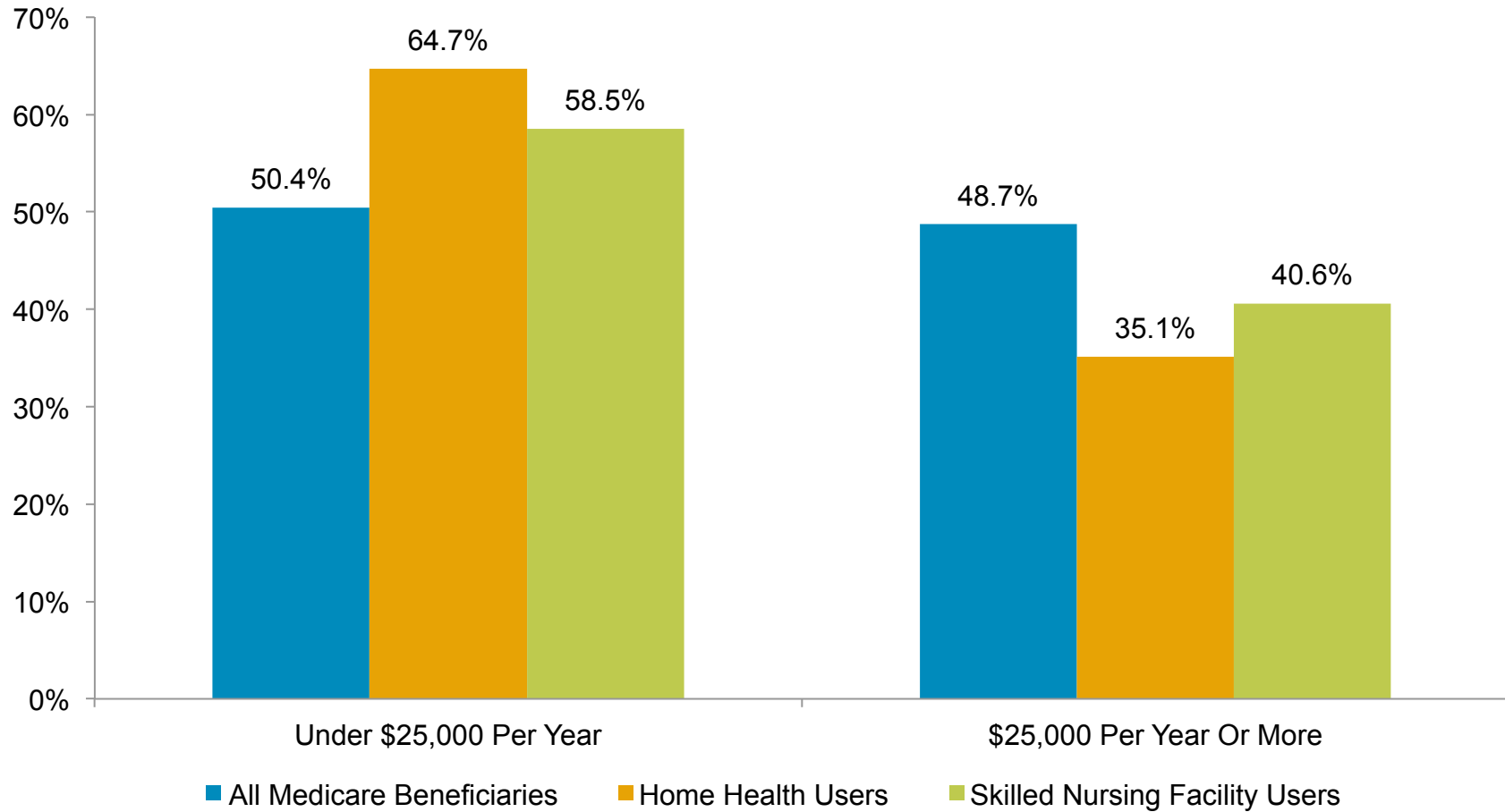
Chart 2.4: Race of Home Health Users, Skilled Nursing Facility Users, and All Medicare Beneficiaries 2010



Source: Avalere analysis of the Medicare Current Beneficiary Survey, Access to Care file 2010

Demographics of Home Health Users

Chart 2.5: Income Distribution of Home Health Users, Skilled Nursing Facility Users, and All Medicare Beneficiaries, 2010



Source: Avalere analysis of the Medicare Current Beneficiary Survey, Access to Care file 2010

Demographics of Home Health Users

Table 2.6: Selected Characteristics of Medicare Home Health Users and All Medicare Beneficiaries, 2010

	All Medicare Home Health Users	All Medicare Beneficiaries
Over age 85	25.2%	12.3%
Live alone	38.9%	30.3%
Have 3 or more chronic conditions	86.0%	66.2%
Have 2 or more ADL limitations*	22.5%	5.5%
Report fair or poor health	46.5%	25.3%
Are in somewhat or much worse health than last year	44.5%	22.4%
Have incomes under 200% of the Federal Poverty Level (FPL)**	62.6%	48.9%
Have incomes under 100% of the Federal Poverty Level (FPL)**	30.2%	21.8%

Source: Avalere analysis of the Medicare Current Beneficiary Survey, Access to Care file 2010.

*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 2010, FPL for a household of 1 was \$10,890, a household of 2 was \$14,710, a household of 3 was \$18,530, and household of 4 was \$22,350.

Demographics of Home Health Users*

Table 2.7: 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, 2010

Living Expense	One-Person Elderly Household	Two-Person Elderly Household	All Elderly Household Sizes
Housing	\$5,918	\$7,230	\$6,810
Food	\$2,305	\$3,792	\$3,265
Transportation	\$1,430	\$3,593	\$2,686
Health Care (out-of-pocket costs)	\$1,823	\$3,194	\$2,387
Total	\$11,476	\$17,809	\$15,648

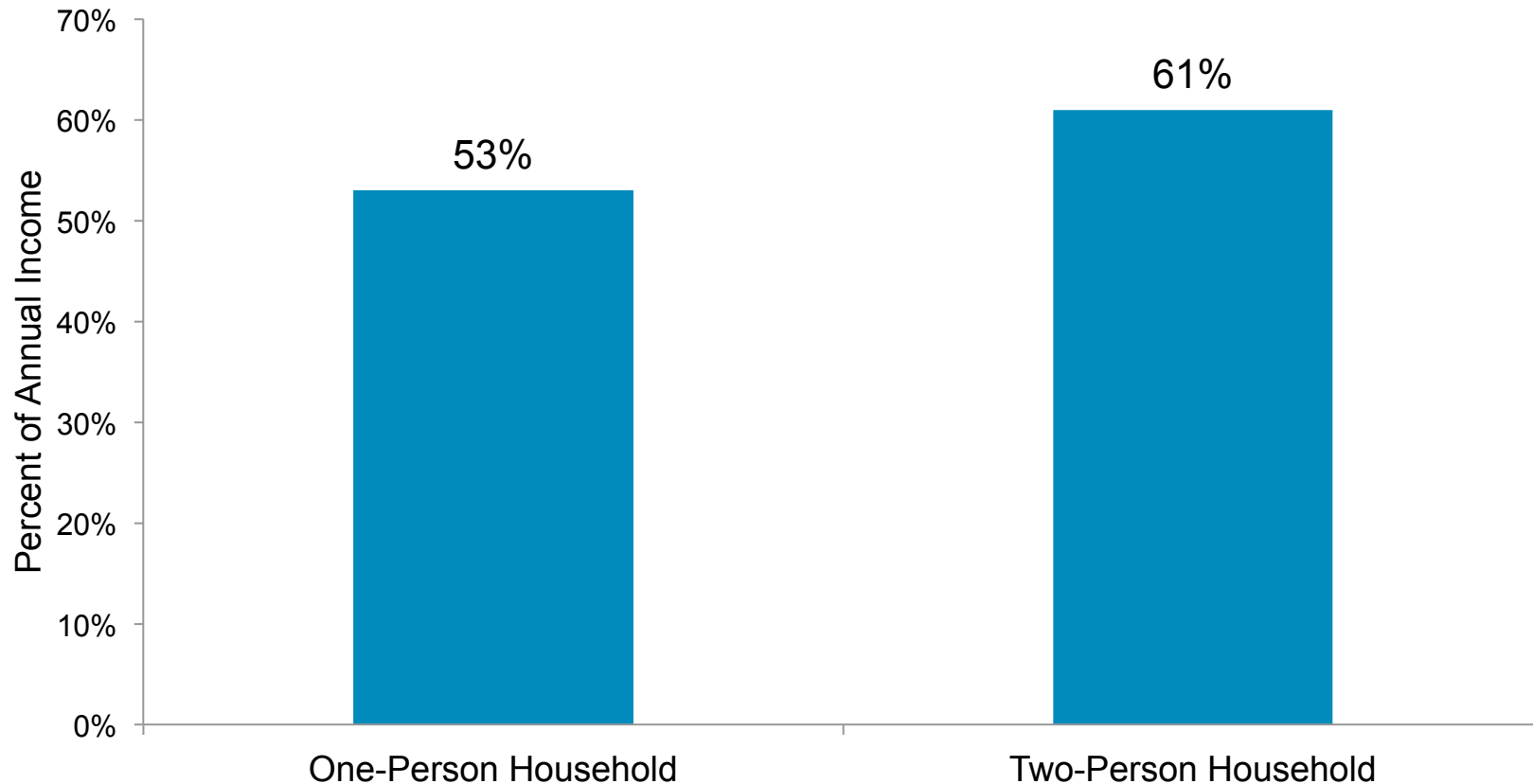
Source: Avalere analysis of the 2010 Bureau of Labor Statistics Consumer Expenditure Survey. The analysis includes households with one or more individuals age 65 or older and annual incomes below 200% of the Federal Poverty Limit.

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

**200% of the Federal Poverty Level is equal to \$21,660 for a one-person household and \$29,140 for a two-person household.

Demographics of Home Health Users*

Chart 2.8: Average Annual Living Expenses**, as a Percentage of Income, for One- and Two-Person Households at 200%** of the Federal Poverty Limit with at Least One Individual 65 Years or Older, 2010



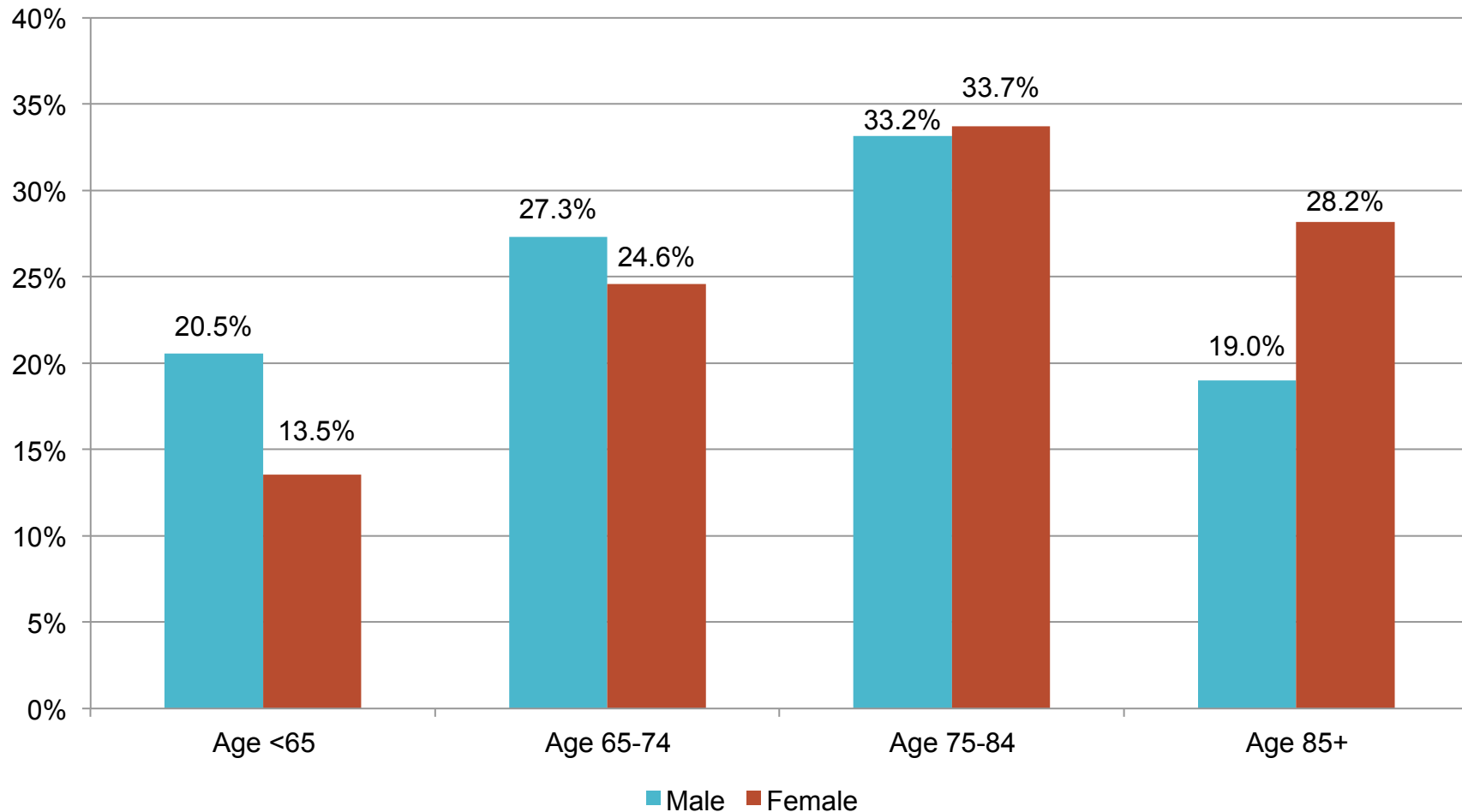
Source: Avalere analysis of the 2010 Bureau of Labor Statistics Consumer Expenditure Survey. 2010 average annual living expenses are for one-person or two-person households, respectively, under 200 percent of the Federal Poverty Limit with at least one individual 65 years or older.

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

**\$21,660 for a one-person household; \$29,140 for a two-person household.

Demographics of Home Health Users by Sex

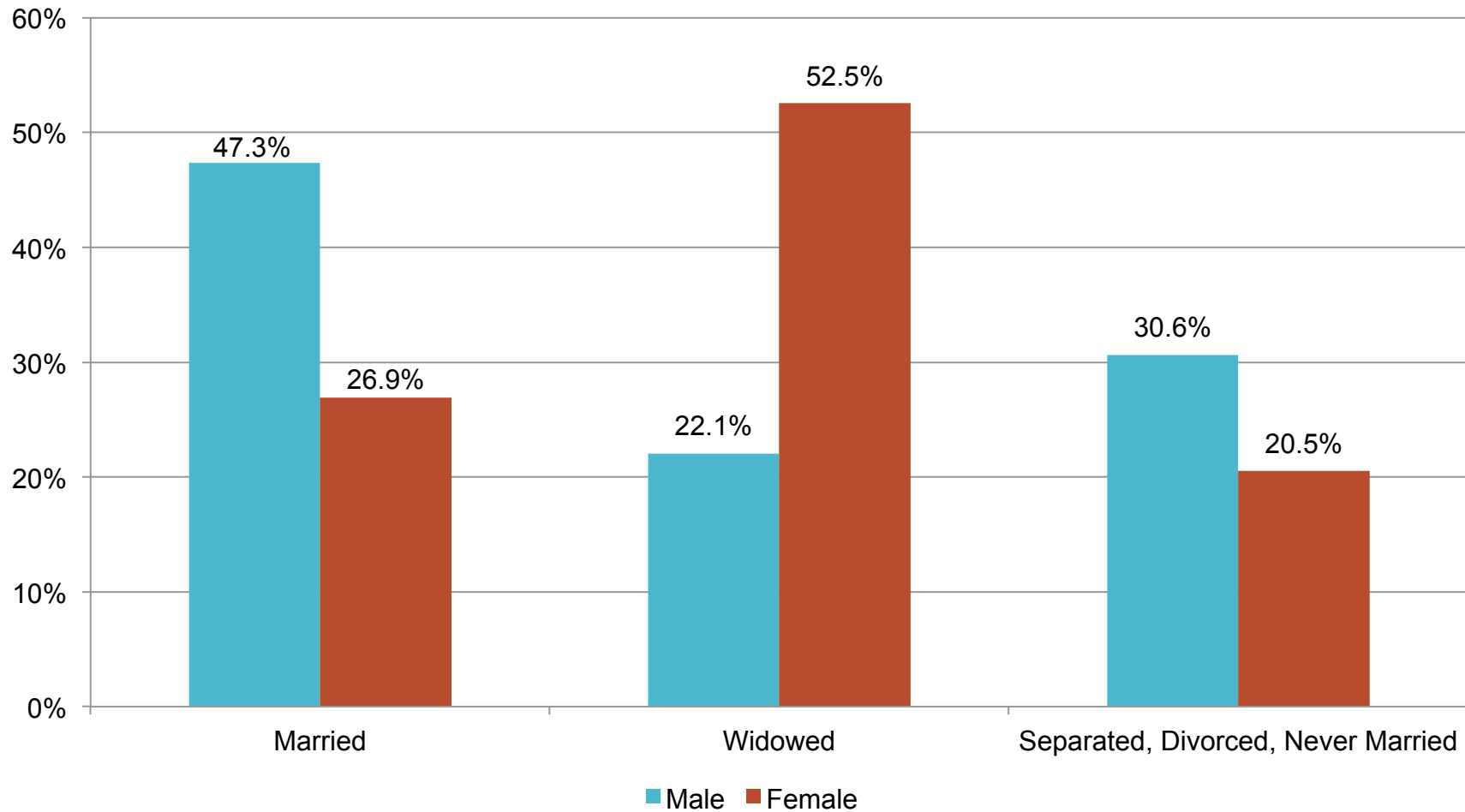
Chart 2.9: Age Distribution of Home Health Users by Sex, 2010



Source: Avalere analysis of the Medicare Current Beneficiary Survey, Access to Care file 2010

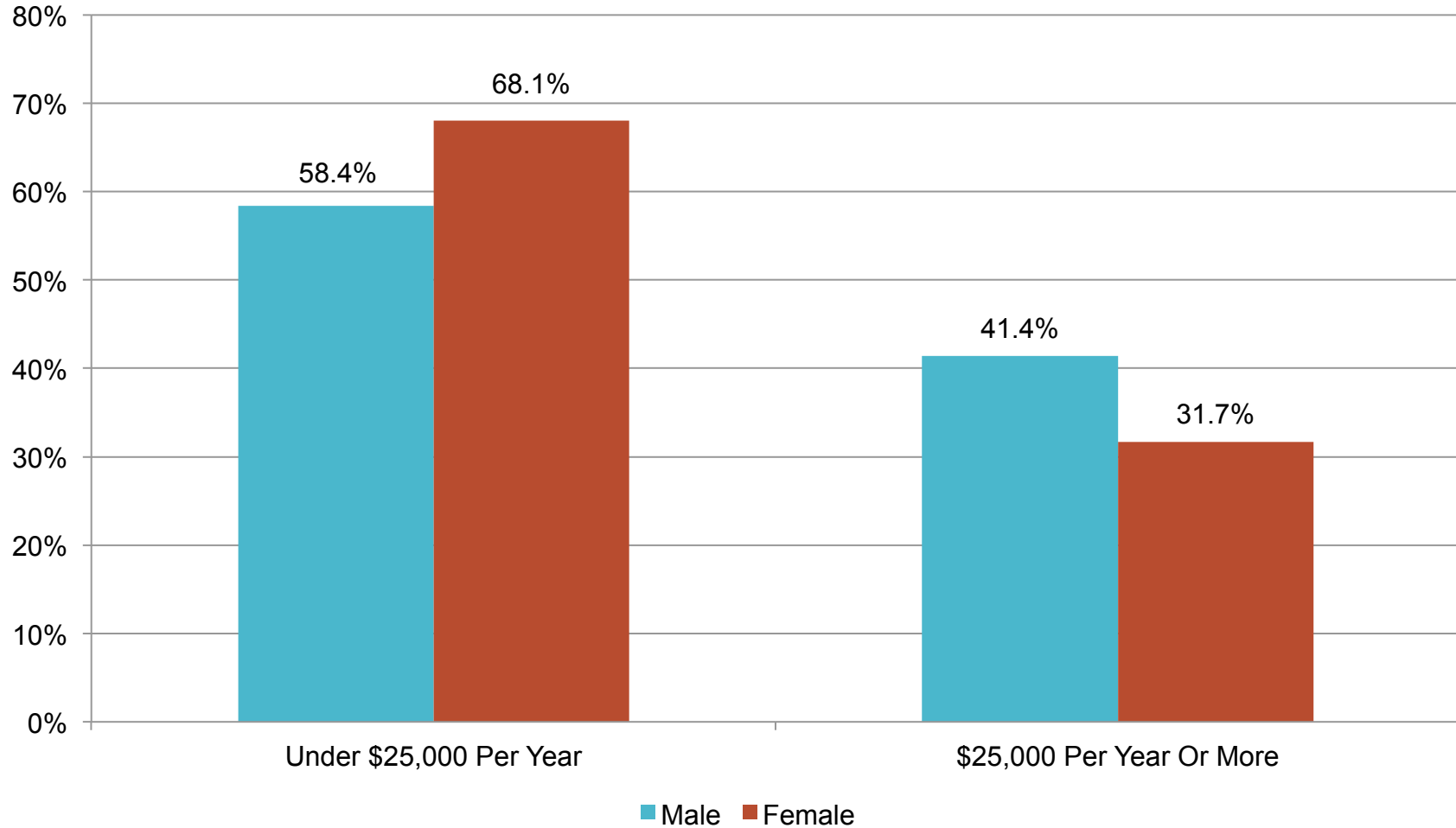
Demographics of Home Health Users by Sex

Chart 2.10: Marital Status of Home Health Users by Sex, 2010



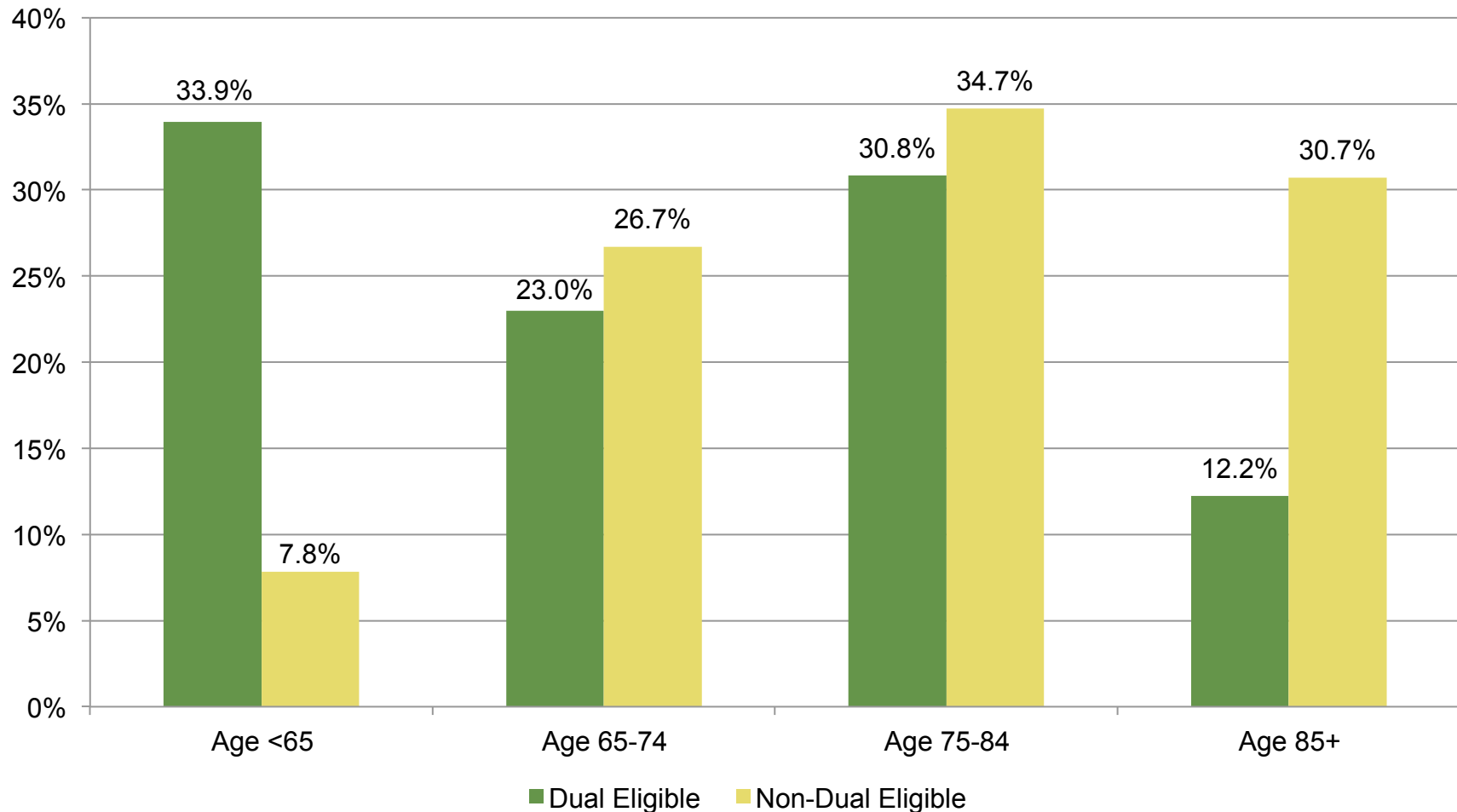
Demographics of Home Health Users by Sex

Chart 2.11: Income Distribution of Home Health Users by Sex, 2010



Demographics of Home Health Users by Dual Eligible Status

Chart 2.12: Age Distribution of Home Health Users by Dual Eligible Status, 2010

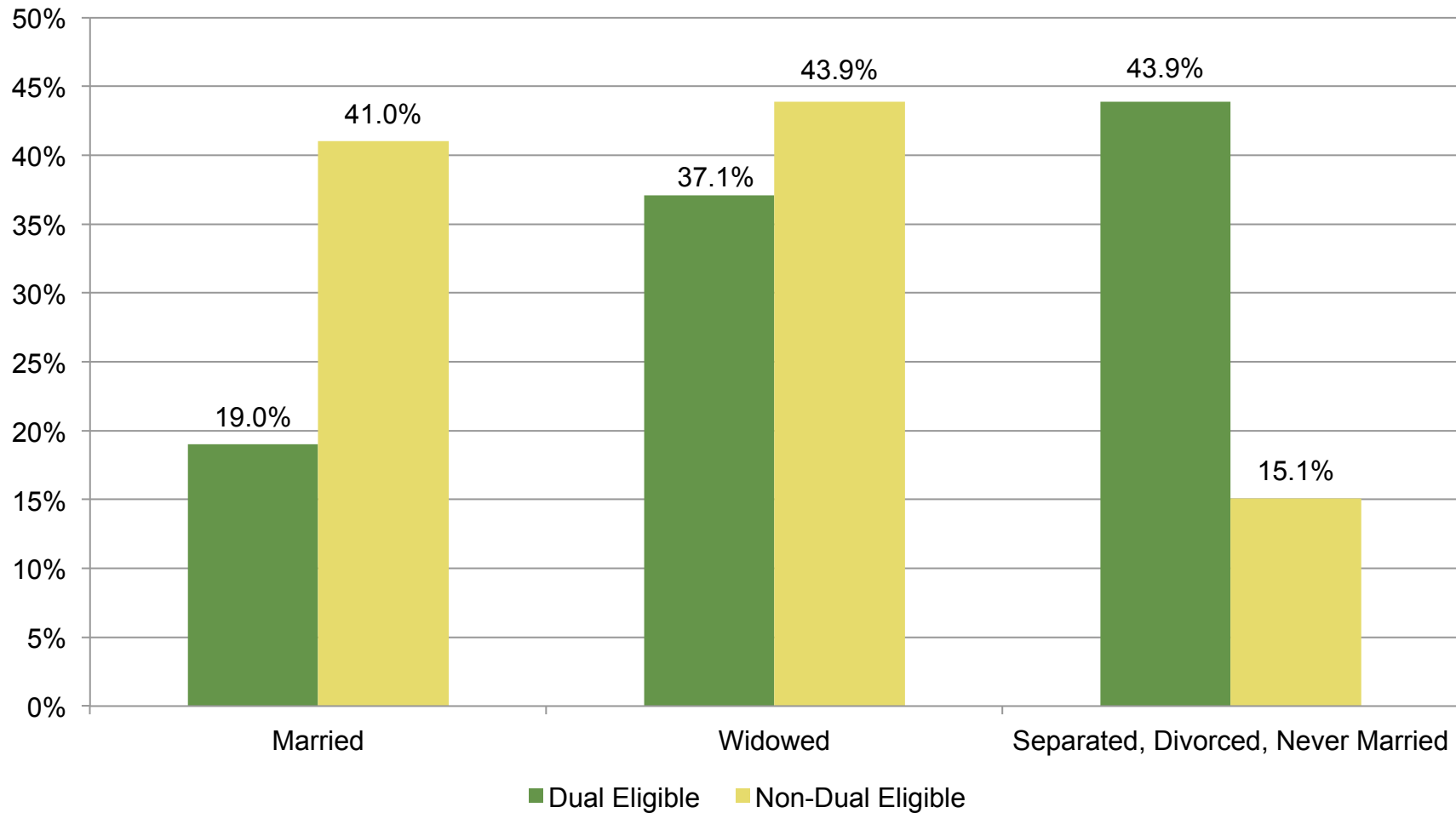


Source: Avalere analysis of the Medicare Current Beneficiary Survey, Access to Care file 2010

Dual eligibles are defined as individuals with any state buy-in at any point during the year.

Demographics of Home Health Users by Dual Eligible Status

Chart 2.13: Marital Status of Home Health Users by Dual Eligible Status, 2010

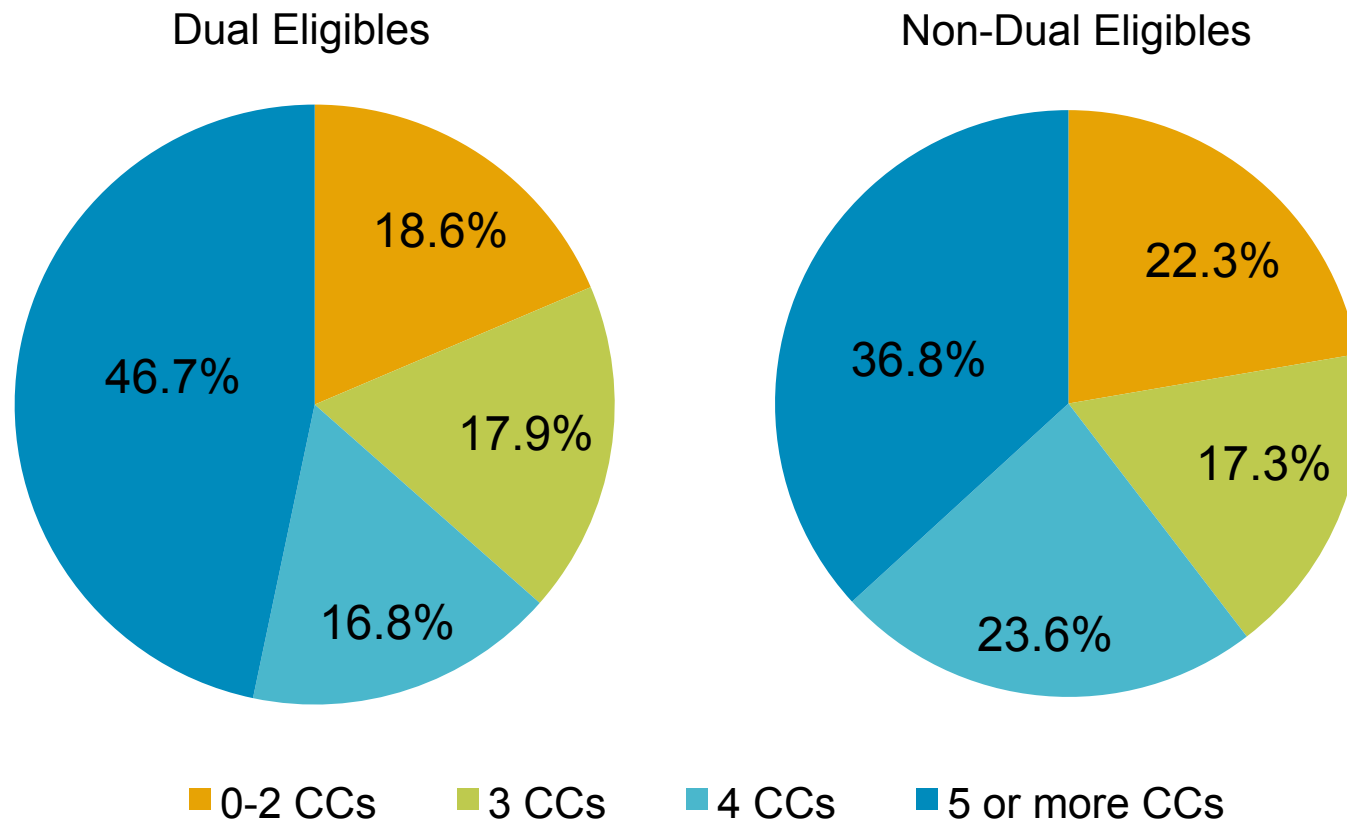


Source: Avalere analysis of the Medicare Current Beneficiary Survey, Access to Care file 2010

Dual eligibles are defined as individuals with any state buy-in at any point during the year.

Demographics of Home Health Users by Dual Eligible Status

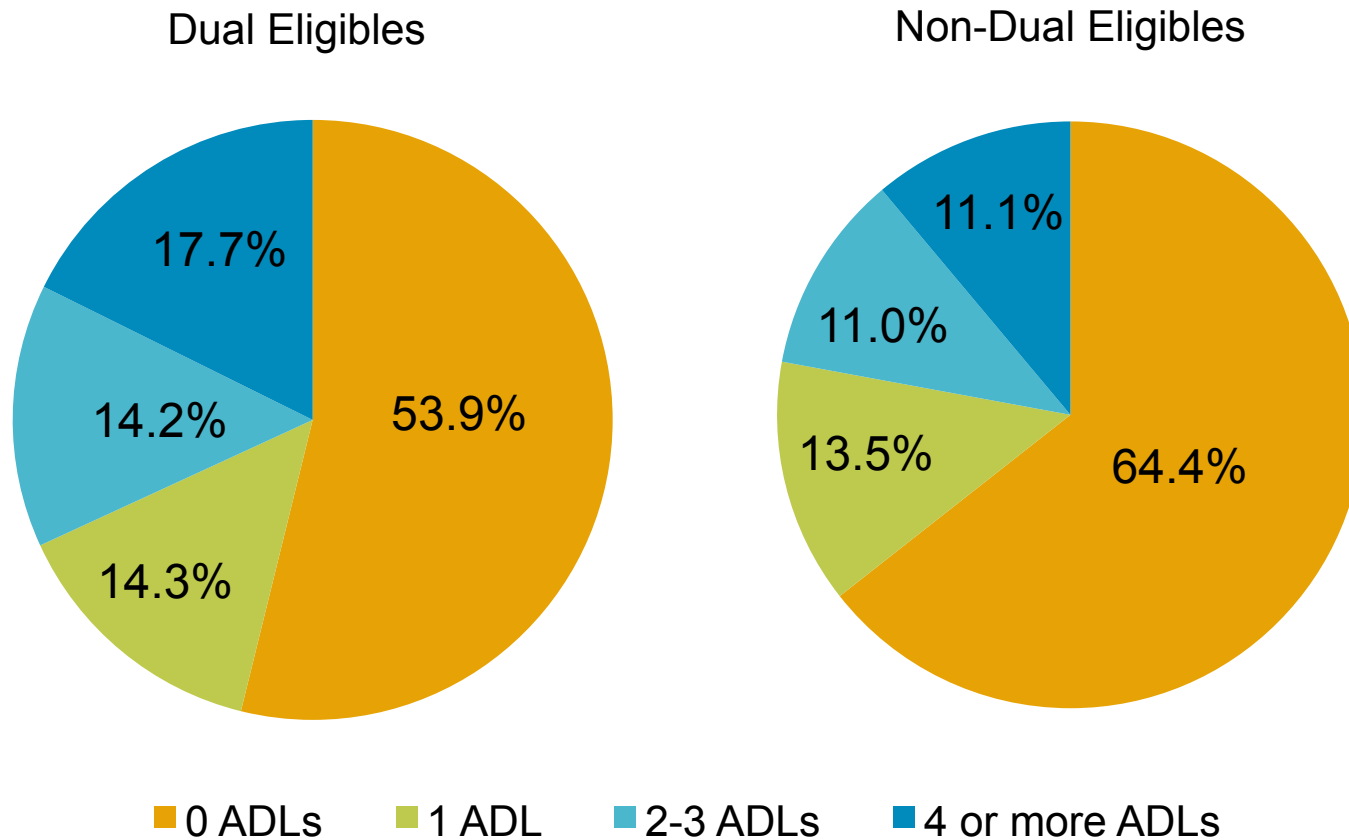
Chart 2.14: Percentage of Home Health Users by Dual Eligible Status and Number of Chronic Conditions (CCs), 2010



Source: Avalere analysis of the Medicare Current Beneficiary Survey, Access to Care file 2010
Dual eligibles are defined as individuals with any state buy-in at any point during the year.

Demographics of Home Health Users by Dual Eligible Status

Chart 2.15: Percentage of Home Health Users by Dual Eligible Status and Number of Activities of Daily Living (ADLs) with Which They Require Assistance, 2010



Source: Avalere analysis of the Medicare Current Beneficiary Survey, Access to Care file 2010

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.



Section 3: Clinical Profile of Home Health Users



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Clinical Profile of Home Health Users

Chart 3.1: Top 20 Most Common Diagnosis Related Groups (DRGs) for Beneficiaries Discharged from Hospital to Part A Home Health Episodes, 2010

MS-DRG	Number of Home Health Part A Claims, 2010	Percent of Total Home Health Part A Claims, 2010
Major Joint Replacement or Reattachment of Lower Extremity w/o MCC	211,779	10.77%
Heart Failure & Shock w MCC	46,134	2.35%
Septicemia or Severe Sepsis w/o MV 96+ Hours w MCC	44,685	2.27%
Heart Failure & Shock w CC	36,375	1.85%
Hip & Femur Procedures except Major Joint w CC	31,145	1.58%
Kidney & Urinary Tract Infections w/o MCC	29,279	1.49%
Intracranial Hemorrhage or Cerebral Infarction w CC	29,052	1.48%
Simple Pneumonia & Pleurisy w CC	27,884	1.42%
Chronic Obstructive Pulmonary Disease w MCC	27,569	1.40%
Cellulitis w/o MCC	26,490	1.35%
Simple Pneumonia & Pleurisy w MCC	26,015	1.32%
Syncope & Collapse	22,047	1.12%
Esophagitis, Gastroenteritis & Miscellaneous Digestive Disorders w/o MCC	21,776	1.11%
Chronic Obstructive Pulmonary Disease w CC	21,486	1.09%
Nutritional & Misc Metabolic Disorders w/o MCC	20,694	1.05%
Spinal Fusion except Cervical w/o MCC	18,669	0.95%
Renal Failure w CC	18,617	0.95%
Major Small & Large Bowel Procedures w CC	17,963	0.91%
Major Small & Large Bowel Procedures w MCC	17,687	0.90%
Medical Back Problems w/o MCC	16,926	0.86%
Total for Top 20 MS-DRGs	712,272	36.23%

Source: Avalere Health, LLC analysis of Medicare Standard Analytic Files, 2010

Data for beneficiaries with a Part A home health episode and a prior short-term acute care hospital stay in 2010.

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

Clinical Profile of Home Health Users

Chart 3.2: Top 20 Primary International Classification of Diseases, Version 9 (ICD-9) Diagnoses for Home Health Claims, 2010

ICD-9 Diagnosis	Number of Home Health Claims, 2010	Percent of Total Home Health Claims, 2010
Diabetes Mellitus	728,297	10.44%
Essential Hypertension	515,637	7.39%
Care Involving Use of Rehabilitation Procedures	458,550	6.57%
Other Orthopedic Aftercare	451,057	6.47%
Other and Unspecified Aftercare	429,673	6.16%
Heart Failure	379,612	5.44%
Chronic Ulcer of Skin	260,700	3.74%
Chronic Bronchitis	195,723	2.81%
Late Effects of Cerebrovascular Disease	191,813	2.75%
Osteoarthritis and Allied Disorders	184,325	2.64%
Cardiac Dysrhythmias	130,038	1.86%
Disorders of Muscle, Ligament, and Fascia	126,698	1.82%
Symptoms Involving Nervous and Musculoskeletal Systems	123,612	1.77%
Other Deficiency Anemias	101,513	1.46%
Other Complications of Procedures, Not Elsewhere Classified	92,919	1.33%
Other Forms of Chronic Ischemic Heart Disease	90,136	1.29%
Fitting and Adjustment of Other Device	83,509	1.20%
Other Cellulitis and Abscess	80,269	1.15%
Other Disorders of Urethra and Urinary Tract	71,650	1.03%
Other Cerebral Degenerations	71,222	1.02%
Total for Top 20 Primary ICD-9 Diagnoses	4,766,953	68.33%

Source: Avalere Health, LLC analysis of Medicare Standard Analytic Files, 2010



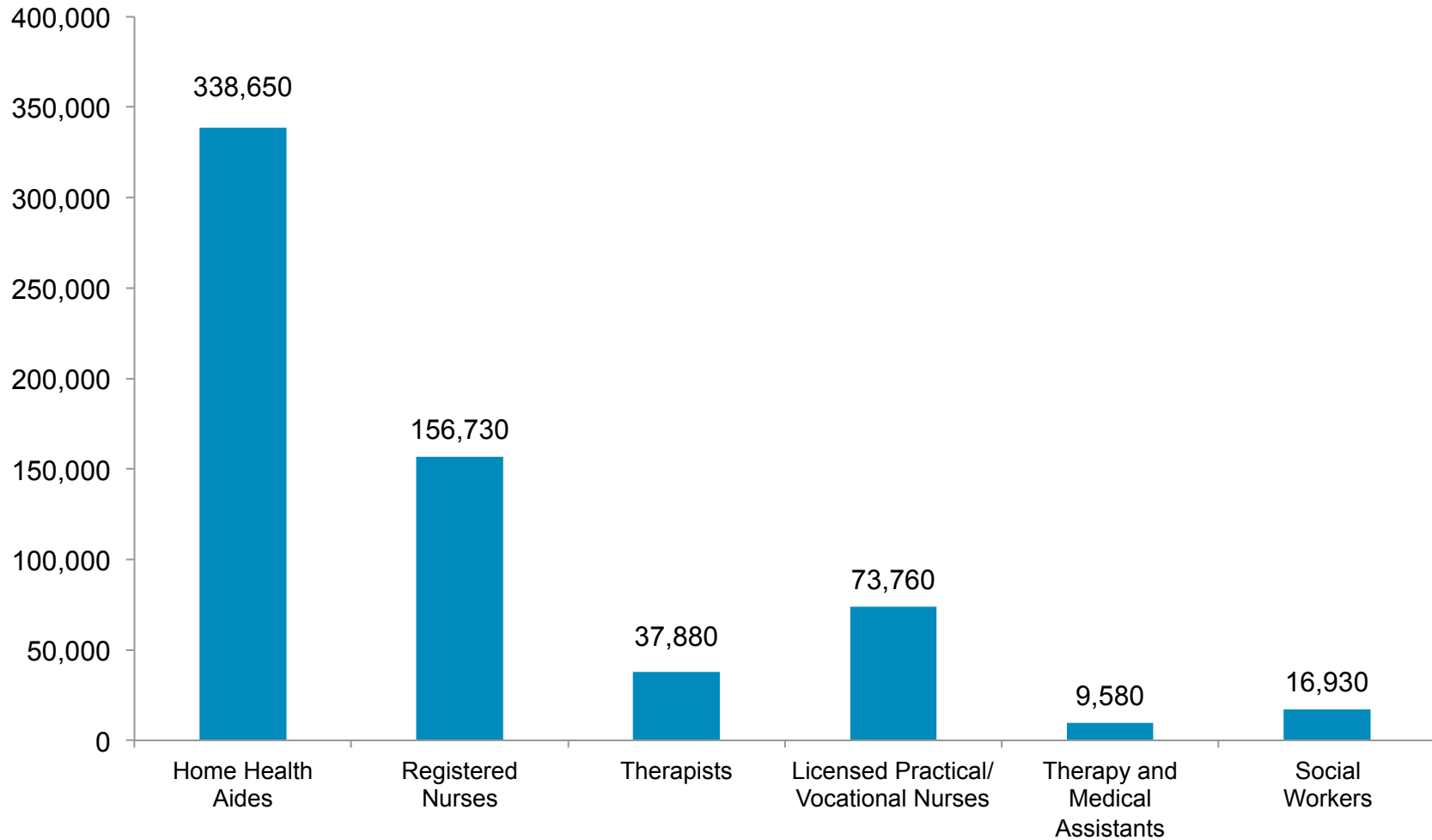
Section 4: Home Health Care Services Industry Workforce



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Home Health Care Services Industry Workforce

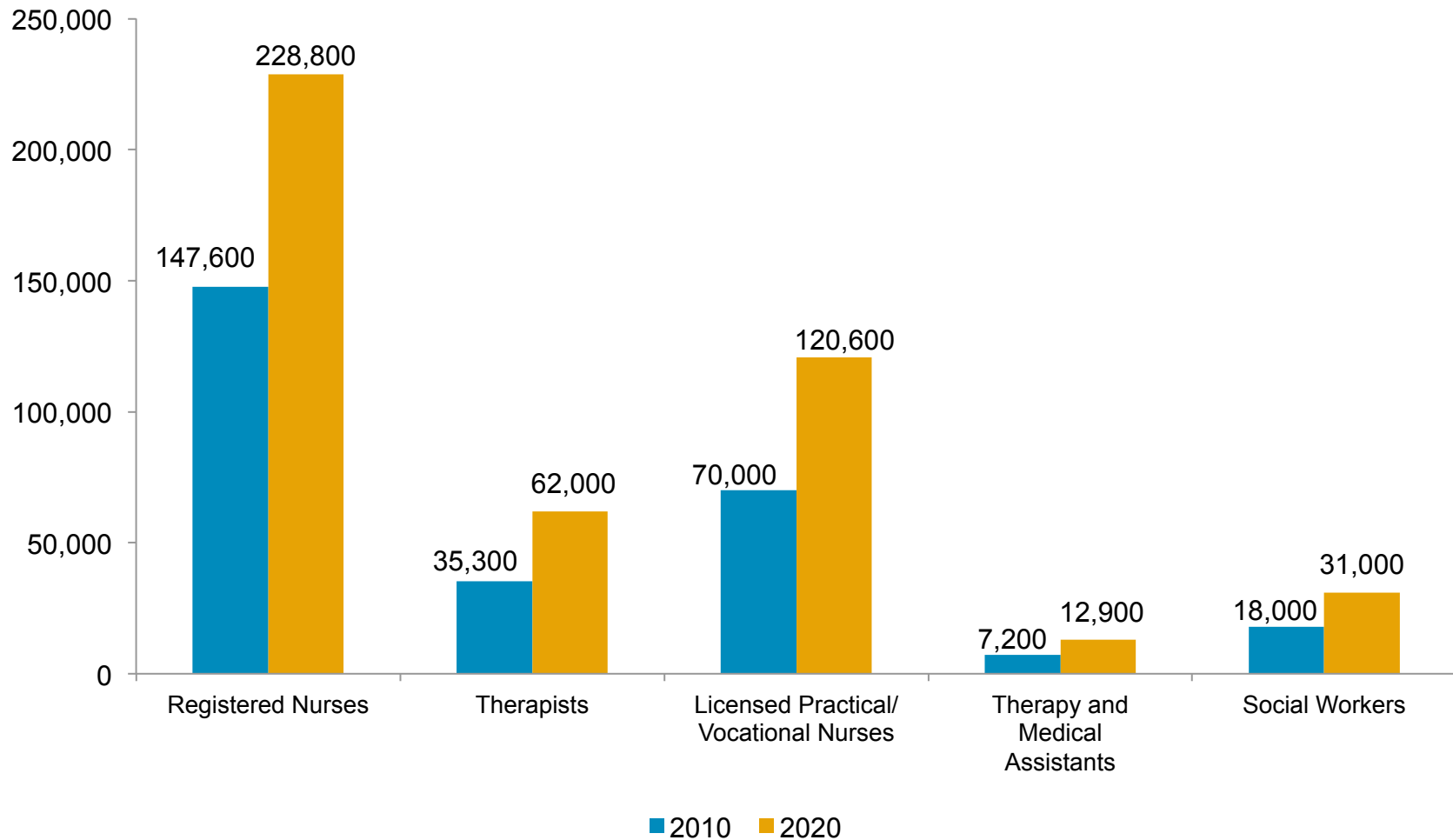
Chart 4.1: Number of Workers in Specified Occupations Employed in the Home Health Care Services Industry, 2011



Source: Bureau of Labor Statistics, U.S. Department of Commerce. May 2011.

Home Health Care Services Industry Workforce

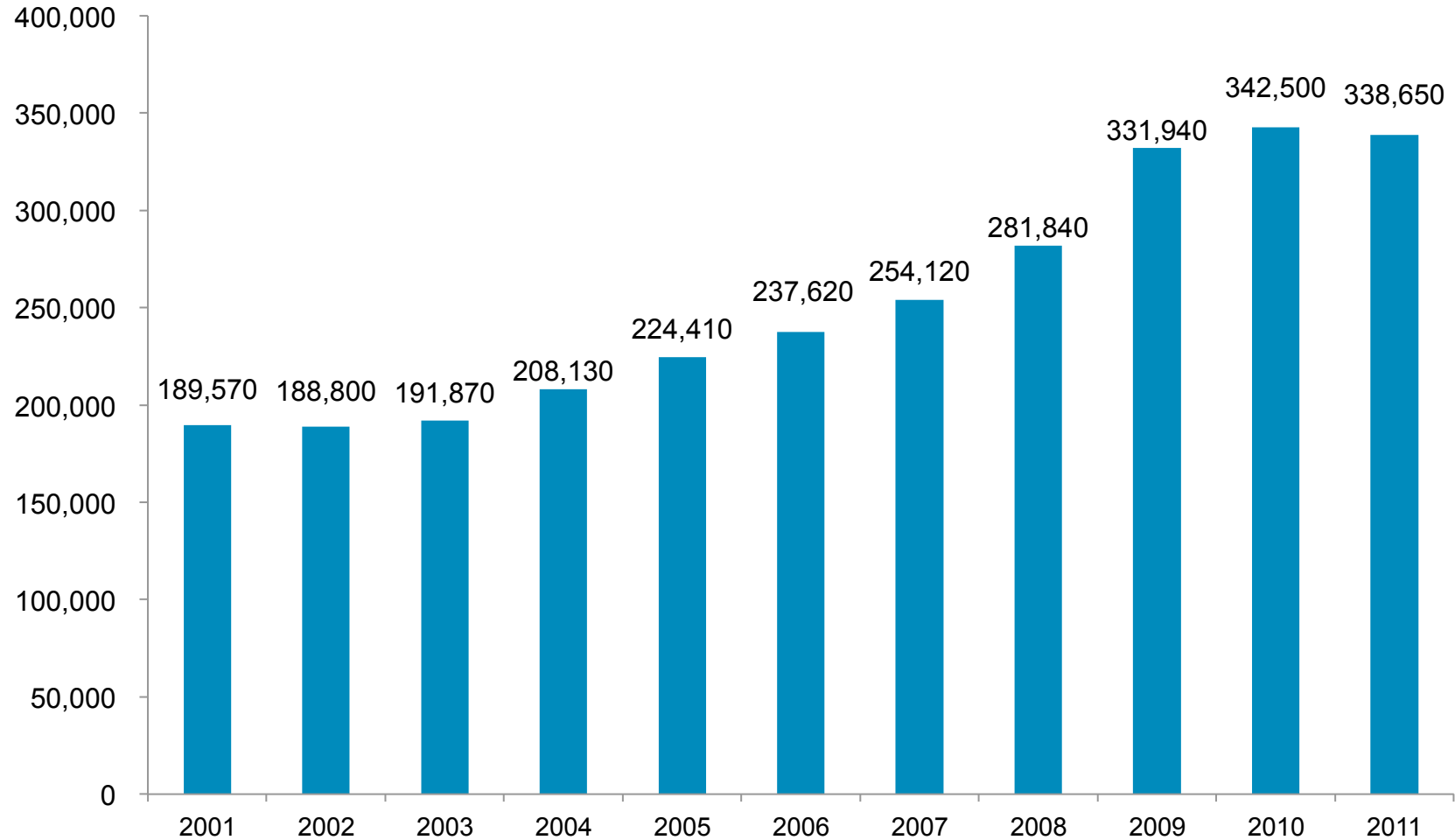
Chart 4.2: Number of Workers in Specified Occupations Employed in the Home Health Care Services Industry, 2010 and 2020 (projected)



Source: Bureau of Labor Statistics, U.S. Department of Commerce

Home Health Care Services Industry Workforce

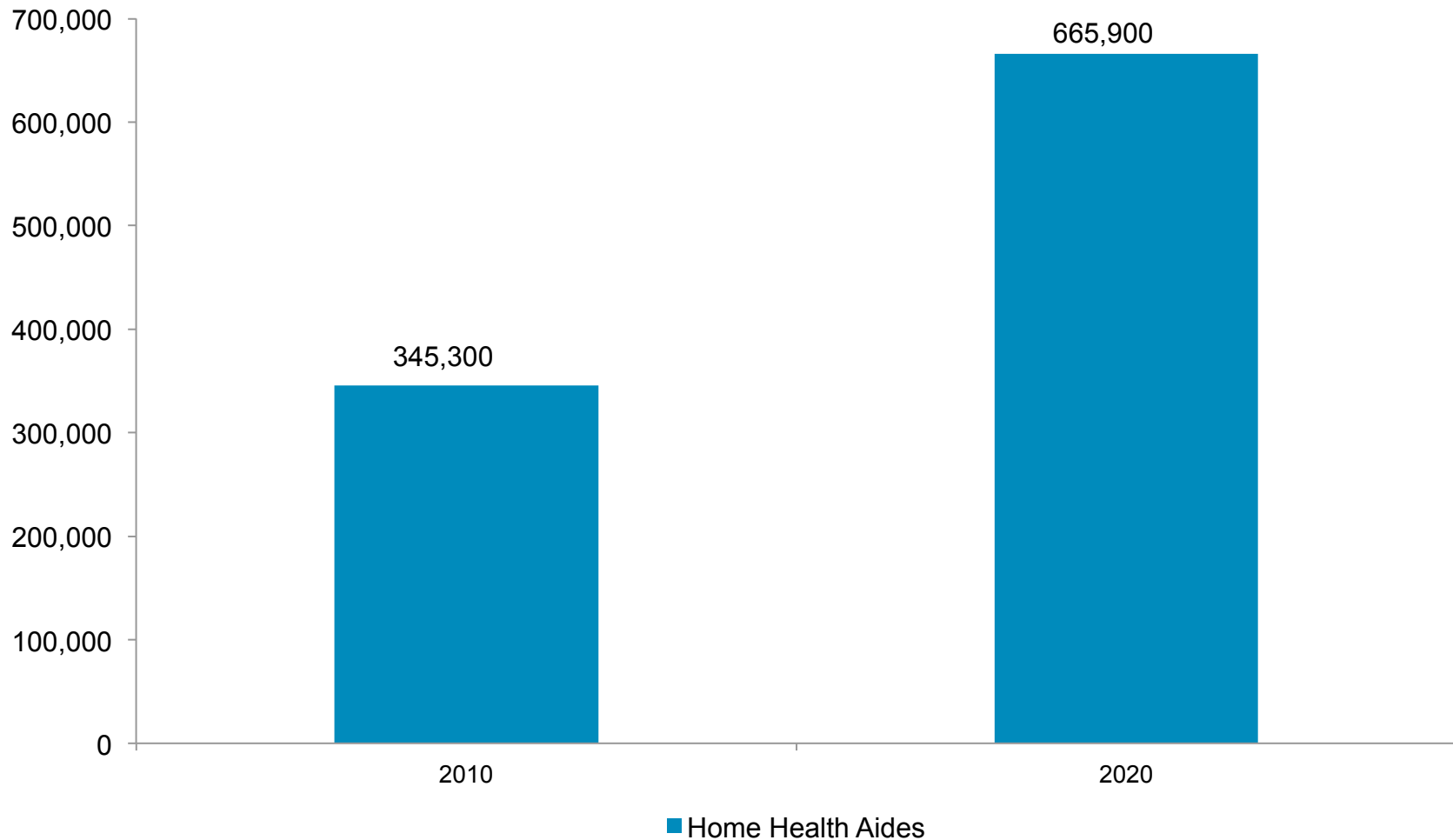
Chart 4.3: Total Number of Home Health Aides Employed in the Home Health Care Services Industry, 2001-2011



Source: Bureau of Labor Statistics, U.S. Department of Commerce

Home Health Care Services Industry Workforce

Chart 4.4: Number of Home Health Aides Employed in the Home Health Care Services Industry, 2010 and 2020 (projected)



Source: Bureau of Labor Statistics Employment Projections program, U.S. Department of Commerce



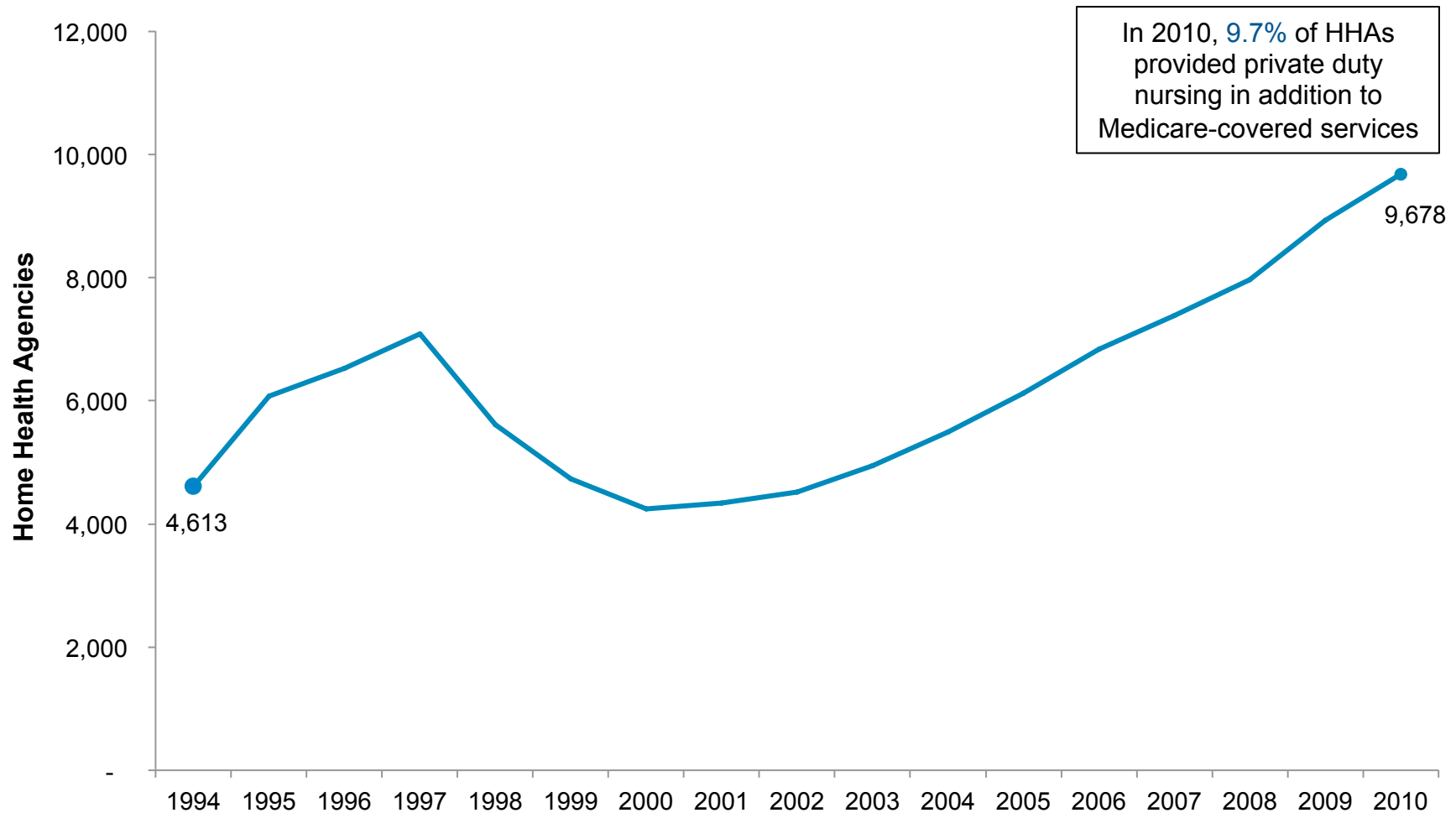
Section 5: Organizational Trends in Home Health



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Organizational Trends in Home Health

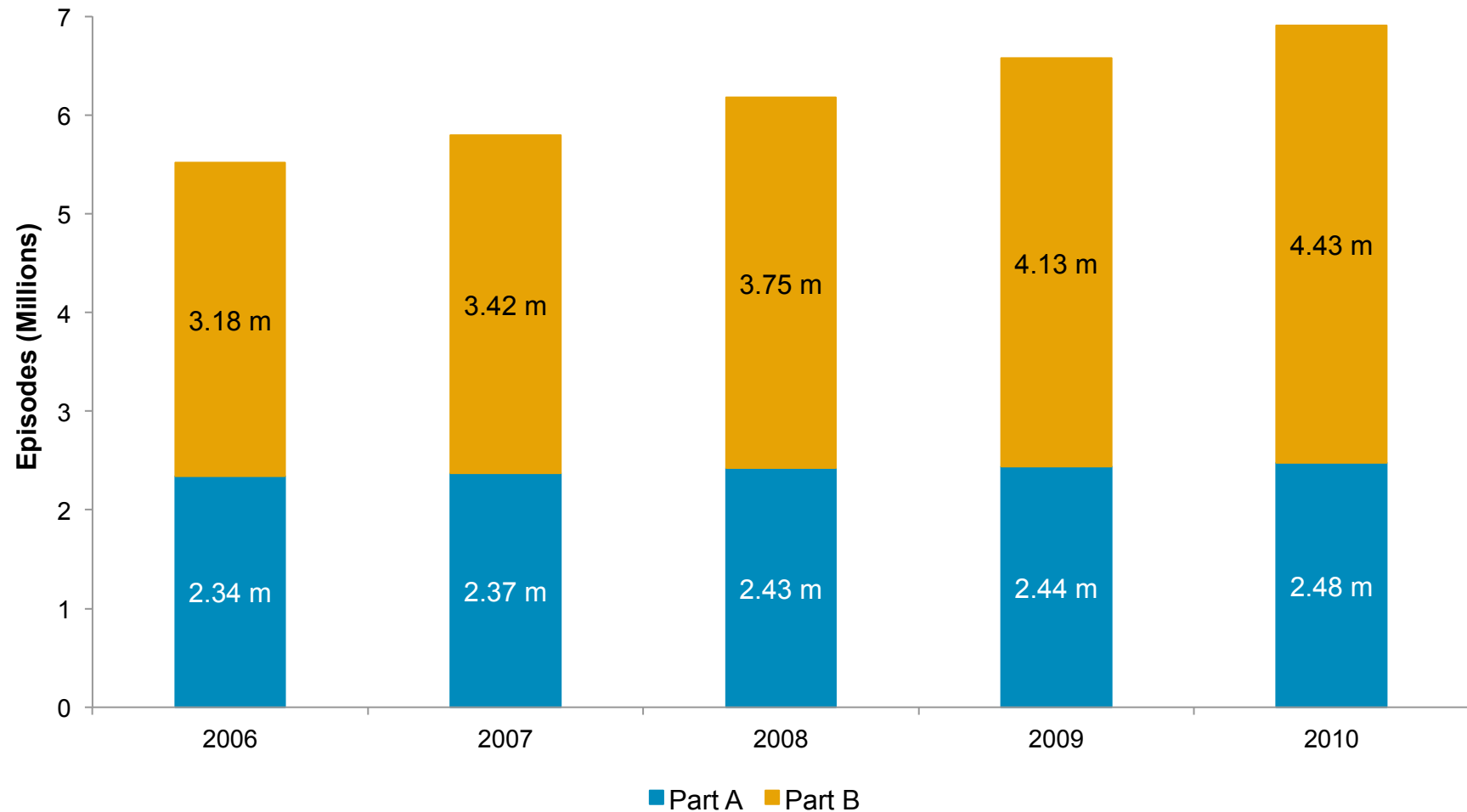
Chart 5.1: Number of Medicare-Certified Home Health Agencies (HHAs), 1997-2010



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

Organizational Trends in Home Health

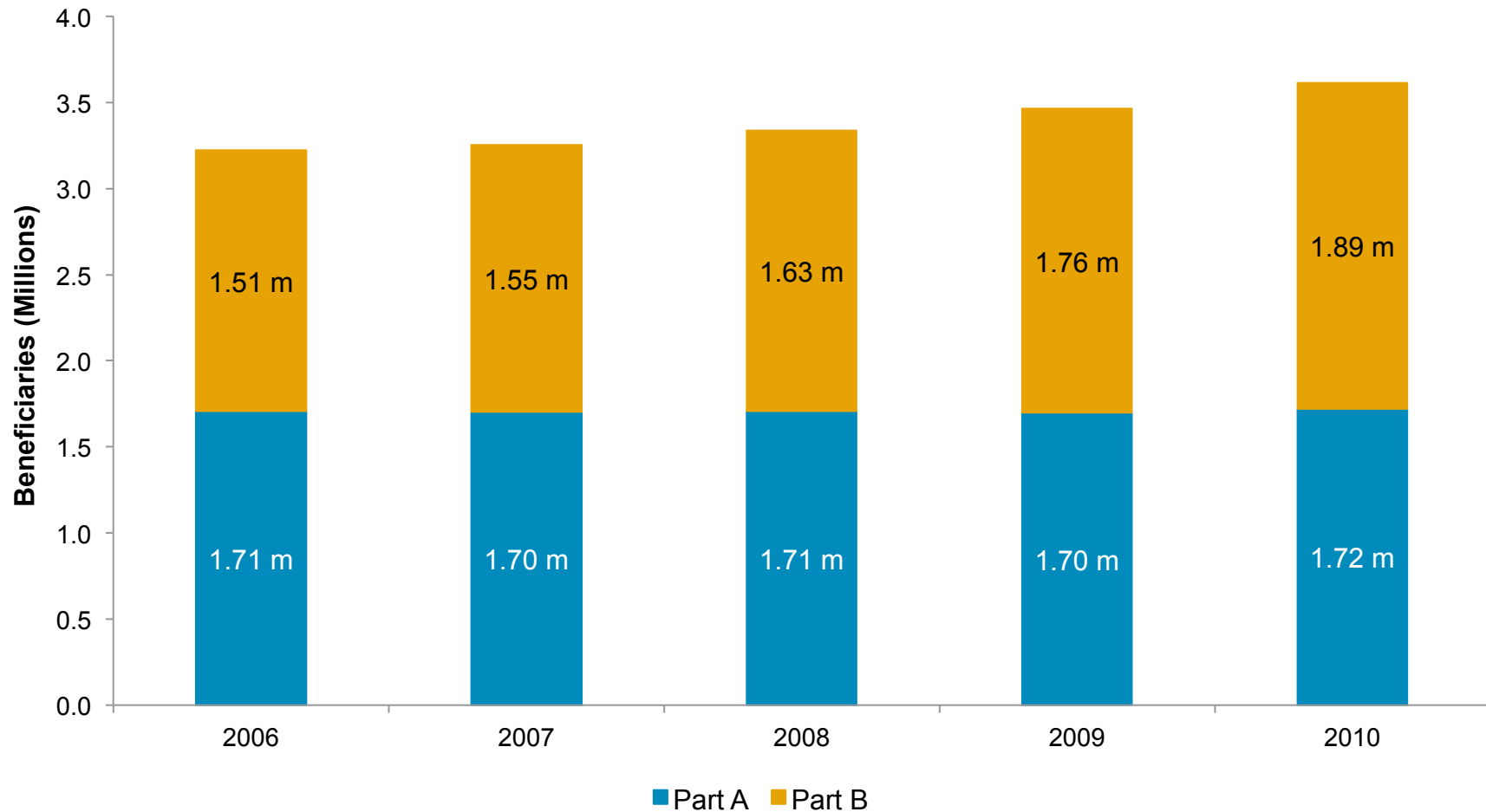
Chart 5.2: Number of Medicare Part A and Part B Home Health Episodes, in Millions, 2006-2010



Source: Avalere Health, LLC analysis of Medicare Standard Analytic Files, 2006 - 2010

Organizational Trends in Home Health

Chart 5.3: Number of Medicare Part A and Part B Beneficiaries with a Home Health Episode, in Millions, 2006-2010



Source: Avalere Health, LLC analysis of Medicare Standard Analytic Files, 2006 - 2010

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

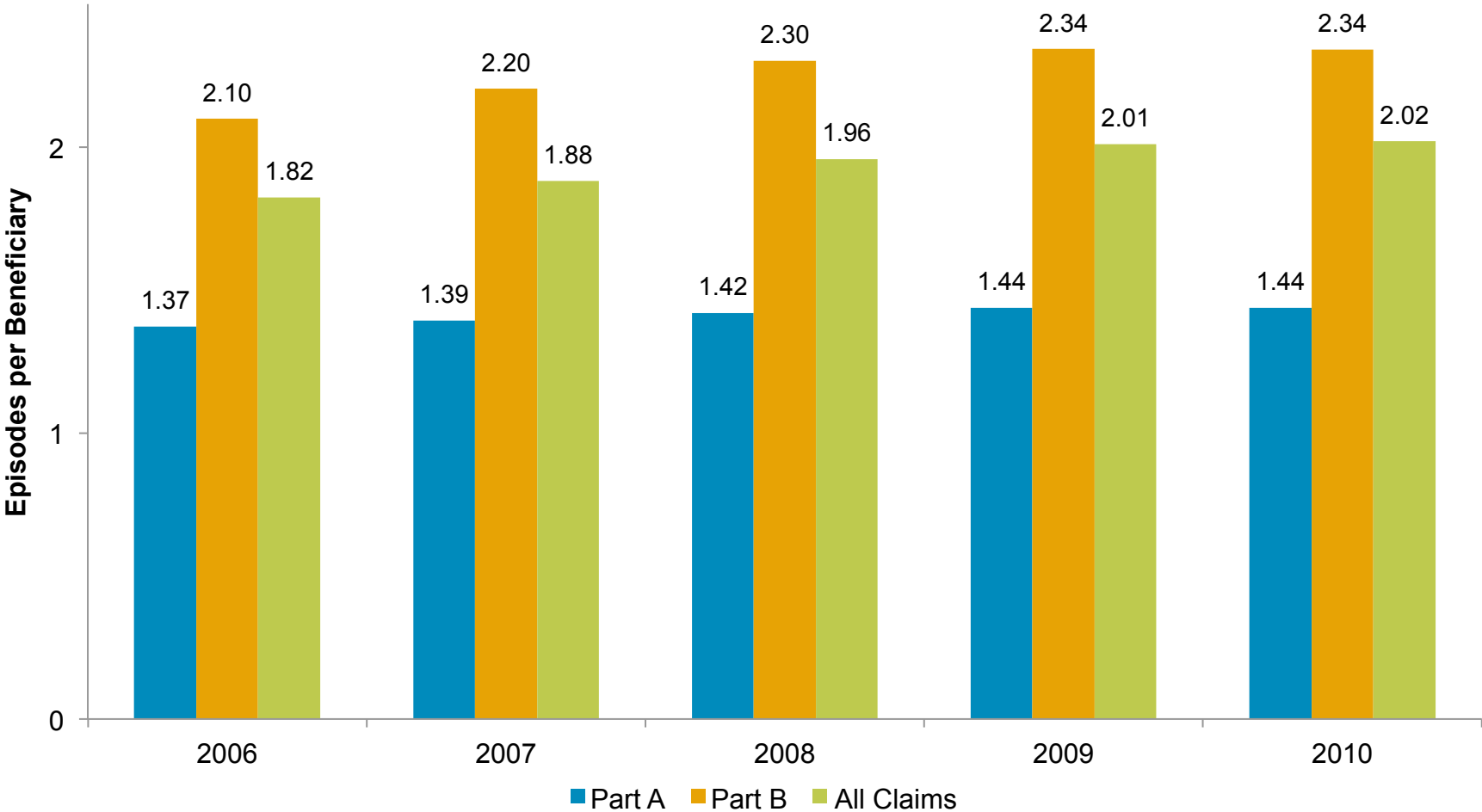
Chart 5.4: Number of Medicare Beneficiaries with a Home Health Episode, by State, 2010

State	Number of Beneficiaries	State	Number of Beneficiaries
Alabama	68,931	Montana	6,822
Alaska	2,299	Nebraska	14,377
Arizona	34,946	Nevada	23,221
Arkansas	36,047	New Hampshire	19,264
California	260,369	New Jersey	96,660
Colorado	32,820	New Mexico	16,611
Connecticut	52,082	New York	178,679
Delaware	11,767	North Carolina	103,889
D.C.	6,139	North Dakota	4,372
Florida	342,570	Ohio	117,082
Georgia	85,196	Oklahoma	68,143
Hawaii	2,953	Oregon	21,161
Idaho	11,090	Pennsylvania	143,160
Illinois	193,664	Rhode Island	12,259
Indiana	61,655	South Carolina	51,368
Iowa	24,122	South Dakota	4,644
Kansas	23,119	Tennessee	84,688
Kentucky	59,564	Texas	366,306
Louisiana	77,969	Utah	18,255
Maine	19,617	Vermont	9,824
Maryland	55,803	Virginia	84,676
Massachusetts	106,650	Washington	40,973
Michigan	169,975	West Virginia	21,044
Minnesota	31,668	Wisconsin	34,621
Mississippi	55,929	Wyoming	3,416
Missouri	67,061	Total U.S.	3,453,971

Source: Avalere Health, LLC analysis of Medicare Standard Analytic Files, 2006 - 2010

Organizational Trends in Home Health

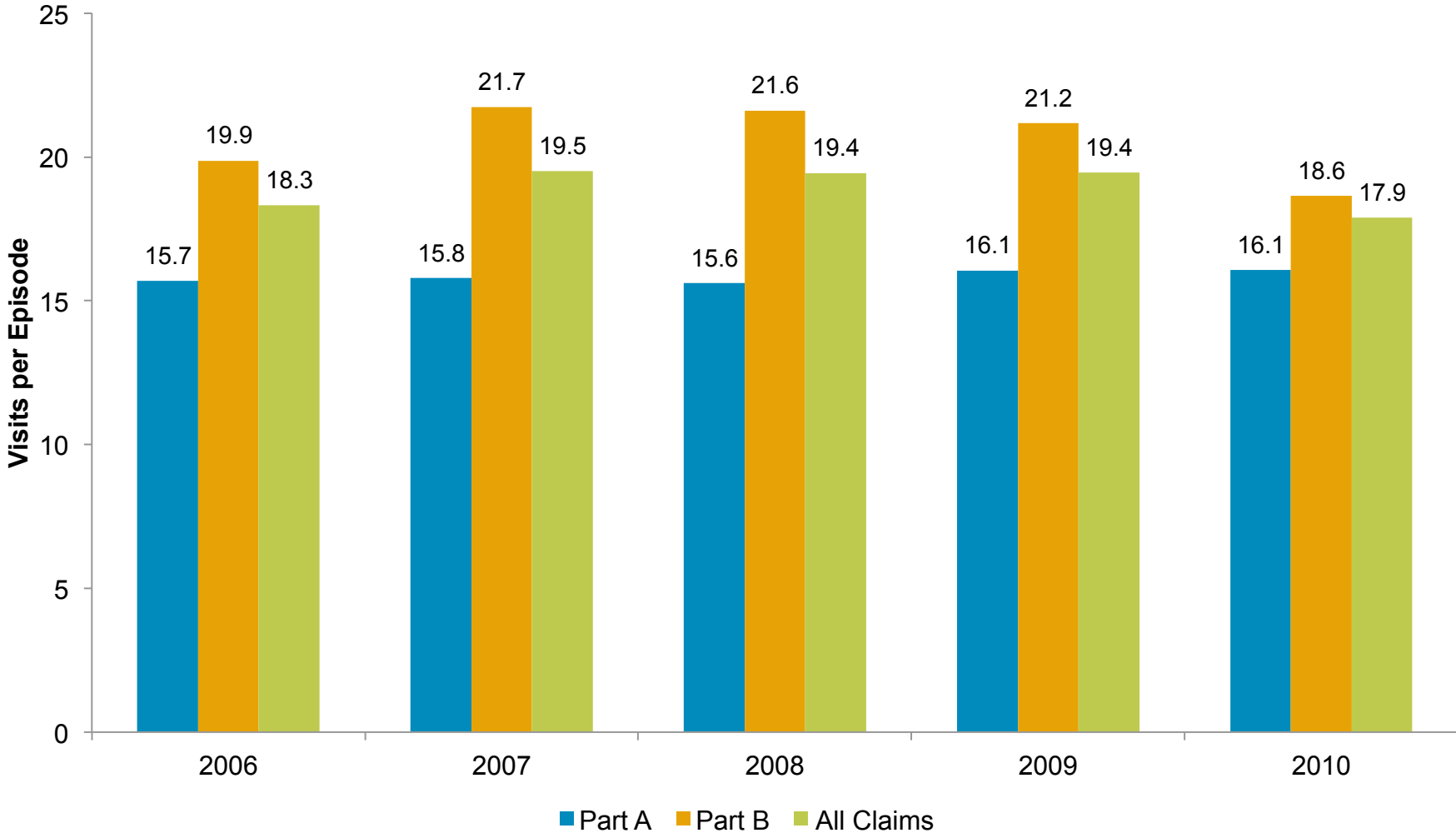
Chart 5.5: Number of Home Health Episodes per Medicare Home Health User by Part A, Part B, and All Claims, 2006-2010



Source: Avalere Health, LLC analysis of Medicare Standard Analytic Files, 2006 – 2010
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 5.6: Number of Home Health Visits per Episode by Part A, Part B, and All Claims, 2006-2010



Source: Avalere Health, LLC analysis of Medicare Standard Analytic Files, 2006 – 2010



Section 6: Economic Contribution of Home Health Agencies



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Economic Contribution of Home Health Agencies

Chart 6.1: Impact of Home Health on Jobs, by State, 2010

State	Number of Home Health Jobs	Multiplier for Employment	Total Jobs Created by Home Health Industry	State	Number of Home Health Jobs	Multiplier for Employment	Total Jobs Created by Home Health Industry
Alabama	11,611	1.5758	18,297	Montana	2,261	1.3255	2,997
Alaska	1,837	1.2714	2,336	Nebraska	2,774	1.3295	3,688
Arizona	18,870	1.4602	27,554	Nevada	4,709	1.4888	7,011
Arkansas	6,556	1.3294	8,716	New Hampshire	3,985	1.4294	5,696
California	62,726	1.5408	96,648	New Jersey	34,686	1.4508	50,322
Colorado	13,767	1.4562	20,048	New Mexico	11,036	1.3438	14,830
Connecticut	13,296	1.456	19,359	New York	113,195	1.3322	150,798
Delaware	2,681	1.4387	3,857	North Carolina	42,873	1.3976	59,919
D.C.	3,836	1.1203	4,297	North Dakota	468	1.2414	581
Florida	64,249	1.5751	101,199	Ohio	53,764	1.4507	77,995
Georgia	18,999	1.6012	30,421	Oklahoma	19,141	1.4179	27,140
Hawaii	2,705	1.352	3,657	Oregon	3,550	1.5062	5,347
Idaho	5,864	1.3063	7,660	Pennsylvania	36,615	1.585	58,035
Illinois	34,354	1.5291	52,531	Rhode Island	4,512	1.4056	6,342
Indiana	16,451	1.4961	24,612	South Carolina	9,434	1.4864	14,023
Iowa	6,630	1.3107	8,690	South Dakota	885	1.2678	1,122
Kansas	7,116	1.3046	9,284	Tennessee	15,939	1.6487	26,279
Kentucky	8,543	1.623	13,865	Texas	225,014	1.4329	322,423
Louisiana	21,710	1.5042	32,656	Utah	5,804	1.699	9,861
Maine	3,612	1.4697	5,309	Vermont	2,206	1.3777	3,039
Maryland	12,481	1.4979	18,695	Virginia	22,535	1.3806	31,112
Massachusetts	28,172	1.4697	41,404	Washington	9,411	1.4956	14,075
Michigan	34,469	1.4907	51,383	West Virginia	6,248	1.3576	8,482
Minnesota	19,054	1.3687	26,079	Wisconsin	11,269	1.4386	16,212
Mississippi	7,124	1.5404	10,974	Wyoming	533	1.248	665
Missouri	17,788	1.4655	26,068	Total U.S.	1,986,905	N/A	2,860,808

Note: This economic impact analysis conducted by Avalere Health used U.S. Bureau of Economic Analysis multipliers in conjunction with employment and wage data from the U.S. Bureau of Labor Statistics and revenue data from CMS Medicare cost reports to determine the indirect effects of home health industry expenditures, including the number of jobs in other sectors supported by the home health industry.

Economic Contribution of Home Health Agencies

Chart 6.2: Impact of Home Health on Labor Income, by State, 2010

State	Home Health Total Wages (in 000s)	Multiplier for Earnings	Total Impact of Home Health Payroll on Labor Income
Alabama	\$411,476	1.4976	\$616,226,458
Alaska	\$42,283	1.3612	\$57,555,620
Arizona	\$156,631	1.5487	\$242,574,430
Arkansas	\$156,949	1.4152	\$222,114,225
California	\$2,015,514	1.6564	\$3,338,497,390
Colorado	\$376,519	1.6464	\$619,900,882
Connecticut	\$489,163	1.514	\$740,592,782
Delaware	\$101,312	1.4384	\$145,727,181
D.C.	\$96,973	1.1791	\$114,340,864
Florida	\$2,268,745	1.5891	\$3,605,262,680
Georgia	\$617,452	1.6395	\$1,012,312,554
Hawaii	\$66,070	1.4941	\$98,715,187
Idaho	\$113,667	1.3768	\$156,496,726
Illinois	\$1,067,331	1.6761	\$1,788,953,489
Indiana	\$434,657	1.5254	\$663,025,788
Iowa	\$187,723	1.3409	\$251,717,771
Kansas	\$169,984	1.386	\$235,597,824
Kentucky	\$324,020	1.5047	\$487,552,894
Louisiana	\$658,879	1.488	\$980,411,952
Maine	\$103,826	1.4983	\$155,562,496
Maryland	\$477,636	1.5333	\$732,359,279
Massachusetts	\$998,967	1.5785	\$1,576,869,410
Michigan	\$1,044,183	1.5865	\$1,656,596,330
Minnesota	\$444,166	1.5479	\$687,524,551
Mississippi	\$268,050	1.4144	\$379,129,920
Missouri	\$504,547	1.5621	\$788,152,869

State	Home Health Total Wages (in 000s)	Multiplier for Earnings	Total Impact of Home Health Payroll on Labor Income
Montana	\$48,708	1.3767	\$67,056,304
Nebraska	\$91,476	1.3416	\$122,724,202
Nevada	\$180,850	1.4475	\$261,780,375
New Hampshire	\$127,130	1.5193	\$193,148,609
New Jersey	\$939,652	1.6183	\$1,520,638,832
New Mexico	\$232,062	1.4287	\$331,546,979
New York	\$3,234,944	1.472	\$4,761,837,568
North Carolina	\$932,644	1.5437	\$1,439,722,543
North Dakota	\$13,972	1.2979	\$18,134,259
Ohio	\$1,271,053	1.6122	\$2,049,191,647
Oklahoma	\$471,061	1.5035	\$708,240,214
Oregon	\$107,920	1.5214	\$164,189,488
Pennsylvania	\$1,295,918	1.6321	\$2,115,067,768
Rhode Island	\$127,125	1.4989	\$190,547,663
South Carolina	\$257,027	1.547	\$397,620,769
South Dakota	\$17,114	1.2896	\$22,070,214
Tennessee	\$594,614	1.605	\$954,355,470
Texas	\$4,291,072	1.6628	\$7,135,194,522
Utah	\$180,263	1.618	\$291,665,534
Vermont	\$61,828	1.3971	\$86,379,899
Virginia	\$580,621	1.5392	\$893,691,843
Washington	\$291,849	1.552	\$452,949,648
West Virginia	\$153,695	1.3927	\$214,051,027
Wisconsin	\$290,186	1.5256	\$442,707,762
Wyoming	\$14,471	1.2794	\$18,514,197
Total U.S.	\$28,759,820	N/A	\$45,206,596,259

Note: This economic impact analysis conducted by Avalere Health used U.S. Bureau of Economic Analysis multipliers in conjunction with employment and wage data from the U.S. Bureau of Labor Statistics and revenue data from CMS Medicare cost reports to determine the indirect effects of home health industry expenditures, including the number of jobs in other sectors supported by the home health industry.

Economic Contribution of Home Health Agencies

Chart 6.3: Impact of Home Health on Output, by State, 2010

State	Home Health Expenditures	Multiplier for Output	Total Impact of Home Health Spending on Output	State	Home Health Expenditures	Multiplier for Output	Total Impact of Home Health Spending on Output
Alabama	\$569,455,490	2.0235	\$1,152,293,184	Montana	\$75,339,439	1.7735	\$133,614,495
Alaska	\$1,605,521,434	1.7605	\$2,826,520,485	Nebraska	\$109,050,471	1.7135	\$186,857,982
Arizona	\$447,178,798	2.0914	\$935,229,738	Nevada	\$1,569,417,687	1.9147	\$3,004,964,045
Arkansas	\$296,305,266	1.8683	\$553,587,128	New Hampshire	\$172,719,184	2.0366	\$351,759,890
California	\$3,114,722,424	2.3434	\$7,299,040,528	New Jersey	\$410,487,707	2.2832	\$937,225,533
Colorado	\$3,217,641,799	2.3077	\$7,425,351,980	New Mexico	\$1,519,105,727	1.8549	\$2,817,789,213
Connecticut	\$568,264,660	2.071	\$1,176,876,111	New York	\$2,711,920,934	2.0241	\$5,489,199,163
Delaware	\$138,208,689	1.9025	\$262,942,031	North Carolina	\$675,565,452	2.1121	\$1,426,861,791
D.C.	\$101,292,466	1.2846	\$130,120,302	North Dakota	\$3,467,651	1.6213	\$5,622,103
Florida	\$3,056,380,253	2.1718	\$6,637,846,633	Ohio	\$2,634,112,847	2.2534	\$5,935,709,889
Georgia	\$373,490,977	2.2989	\$858,618,407	Oklahoma	\$493,129,198	2.015	\$993,655,334
Hawaii	\$21,762,056	1.9948	\$43,410,949	Oregon	\$97,230,090	2.0595	\$200,245,370
Idaho	\$69,097,171	1.7576	\$121,445,188	Pennsylvania	\$1,209,772,013	2.2965	\$2,778,241,428
Illinois	\$1,667,604,168	2.3806	\$3,969,898,482	Rhode Island	\$100,373,901	2.0129	\$202,042,625
Indiana	\$413,616,844	2.0914	\$865,038,268	South Carolina	\$145,104,676	2.1414	\$310,727,153
Iowa	\$331,636,488	1.7258	\$572,338,251	South Dakota	\$15,820,742	1.6239	\$25,691,303
Kansas	\$156,666,090	1.8239	\$285,743,282	Tennessee	\$597,579,273	2.2537	\$1,346,764,408
Kentucky	\$147,680,185	2.0441	\$301,873,066	Texas	\$4,254,548,784	2.368	\$10,074,771,521
Louisiana	\$2,474,339,845	1.9632	\$4,857,623,984	Utah	\$1,654,605,090	2.27	\$3,755,953,554
Maine	\$188,084,331	2.0059	\$377,278,360	Vermont	\$103,112,427	1.8162	\$187,272,790
Maryland	\$492,507,247	2.061	\$1,015,057,436	Virginia	\$506,251,391	2.1116	\$1,069,000,437
Massachusetts	\$2,341,731,739	2.1685	\$5,078,045,276	Washington	\$222,736,007	2.1384	\$476,298,677
Michigan	\$1,381,201,667	2.1816	\$3,013,229,557	West Virginia	\$58,056,458	1.8084	\$104,989,299
Minnesota	\$318,918,950	2.1281	\$678,691,417	Wisconsin	\$315,807,811	2.0666	\$652,648,422
Mississippi	\$638,886,446	1.8568	\$1,186,284,353	Wyoming	\$18,051,412	1.5947	\$28,786,587
Missouri	\$495,024,218	2.1577	\$1,068,113,755	Total U.S.	\$44,300,586,073	N/A	\$95,189,191,162

Note: This economic impact analysis conducted by Avalere Health used U.S. Bureau of Economic Analysis multipliers in conjunction with employment and wage data from the U.S. Bureau of Labor Statistics and revenue data from CMS Medicare cost reports to determine the indirect effects of home health industry expenditures, including the number of jobs in other sectors supported by the home health industry.



Section 7: Outcomes



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Outcomes: Rehospitalization Among Post-Acute Care Users

Chart 7.1: 30-Day Rehospitalization Rates for Top 20 Most Common DRGs Discharged from Hospital to Selected Post Acute Care (PAC) Settings, by Setting, 2010

MS-DRG	Percent of Home Health Users Rehospitalized Within 30 Days	Percent of Skilled Nursing Facility Users Rehospitalized Within 30 Days
Major Joint Replacement or Reattachment of Lower Extremity w/o MCC	4.33%	8.29%
Septicemia or Severe Sepsis w/o MV 96+ Hours w MCC	24.01%	25.79%
Heart Failure & Shock w MCC	29.18%	29.76%
Kidney & Urinary Tract Infections w/o MCC	19.83%	16.42%
Heart Failure & Shock w CC	26.73%	25.25%
Hip & Femur Procedures except Major Joint w CC	9.67%	12.99%
Intracranial Hemorrhage or Cerebral Infarction w CC	15.35%	17.79%
Simple Pneumonia & Pleurisy w CC	18.78%	19.21%
Simple Pneumonia & Pleurisy w MCC	22.54%	24.85%
Nutritional & Miscellaneous Metabolic Disorders w/o MCC	22.89%	17.85%
Chronic Obstructive Pulmonary Disease w MCC	24.69%	26.54%
Kidney & Urinary Tract Infections w MCC	23.99%	20.86%
Cellulitis w/o MCC	14.78%	16.02%
Renal Failure w CC	25.17%	23.19%
Syncope & Collapse	16.27%	15.70%
Esophagitis, Gastroenteritis & Misc. Digestive Disorders w/o MCC	21.86%	18.21%
Chronic Obstructive Pulmonary Disease w CC	25.44%	24.13%
Renal Failure w MCC	30.03%	27.72%
Respiratory Infections & Inflammations w MCC	27.32%	26.18%
Septicemia or Severe Sepsis w/o MV 96+ hours w/o MCC	19.84%	18.77%
Average Rate Across All MS-DRGs	19.21%	20.27%

Source: Avalere Health, LLC, analysis of Medicare Standard Analytic Files, 2010
 Note: CC is complication or comorbidity. MCC is major complication or comorbidity.

Outcomes: Quality of Home Health Care

Chart 7.2: National Averages for How Often Home Health Team Met Quality Measures Related to Patient Care, 2012

Measure	Percent
Checked patients for pain	98
Treated heart failure symptoms	98
Checked patients for the risk of developing pressure sores (bed sores)	98
Checked patients for depression	97
Treated patients' pain	97
Checked patients' risk of falling	95
Included treatments to prevent pressure sores (bed sores) in the plan of care	95
Took doctor-ordered action to prevent pressure sores (bed sores)	94
For diabetic patients, got doctor's orders, gave and educated about foot care	91
Began care in timely manner	90
Taught patients (or their family caregivers) about their drugs	89
Determined whether patients received a flu shot for the current flu season	67
Determined whether patients received a pneumococcal vaccine (pneumonia shot)	65

Source: Medicare Home Health Compare. April 19, 2012.

Outcomes: Quality of Home Health Care

Chart 7.3: National Averages for Patient Outcomes while in Home Health Care, 2012

Measure	Percent
Wounds improved or healed after operation	88
Had less pain when moving around	66
Got better at bathing	65
Breathing improved	63
Got better at walking or moving around	56
Got better at getting in and out of bed	54
Got better at taking drugs correctly by mouth	47
Had to be admitted to hospital	27

Source: Medicare Home Health Compare. April 19, 2012.



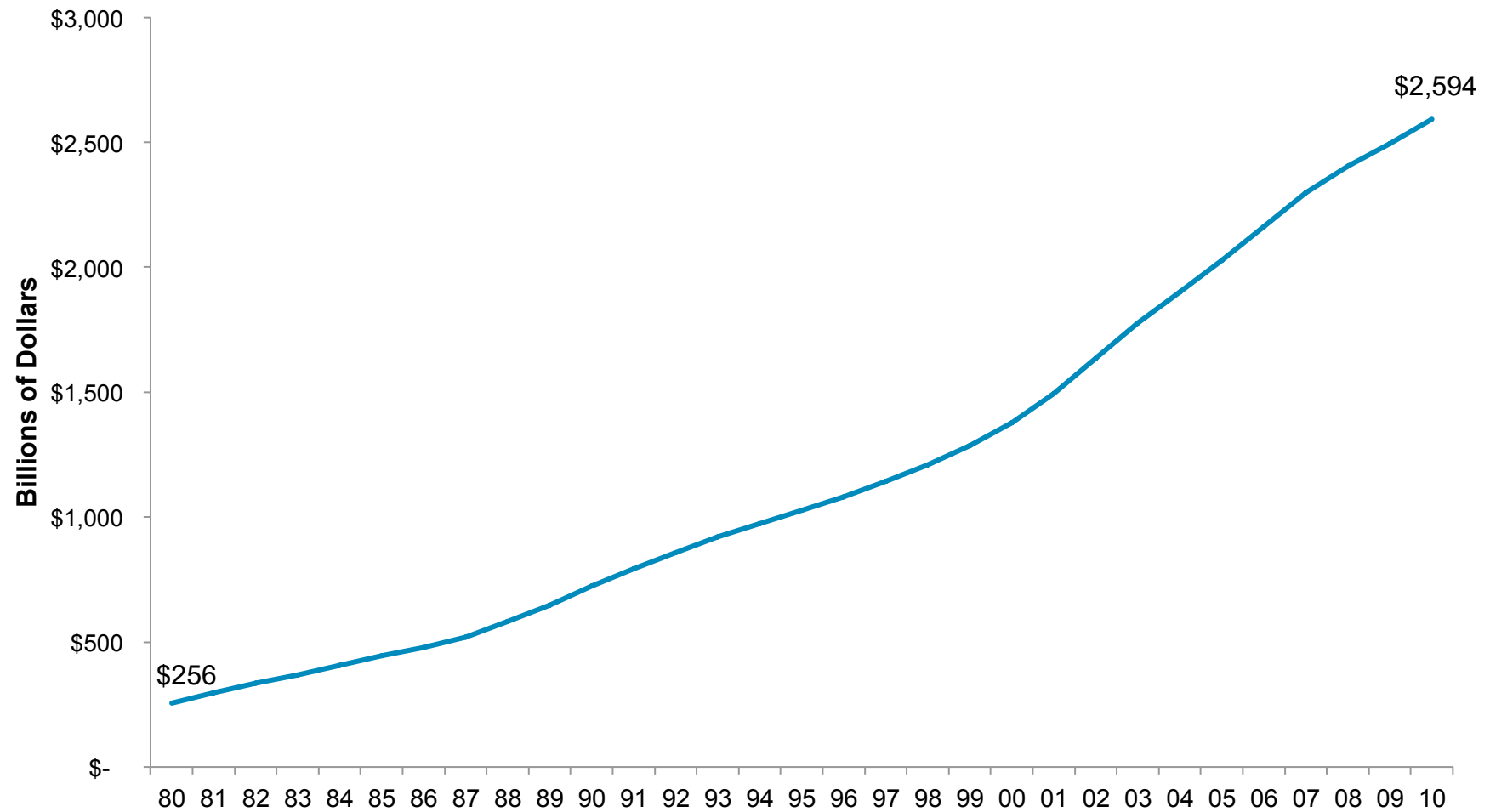
Section 8: National Trends



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National Trends

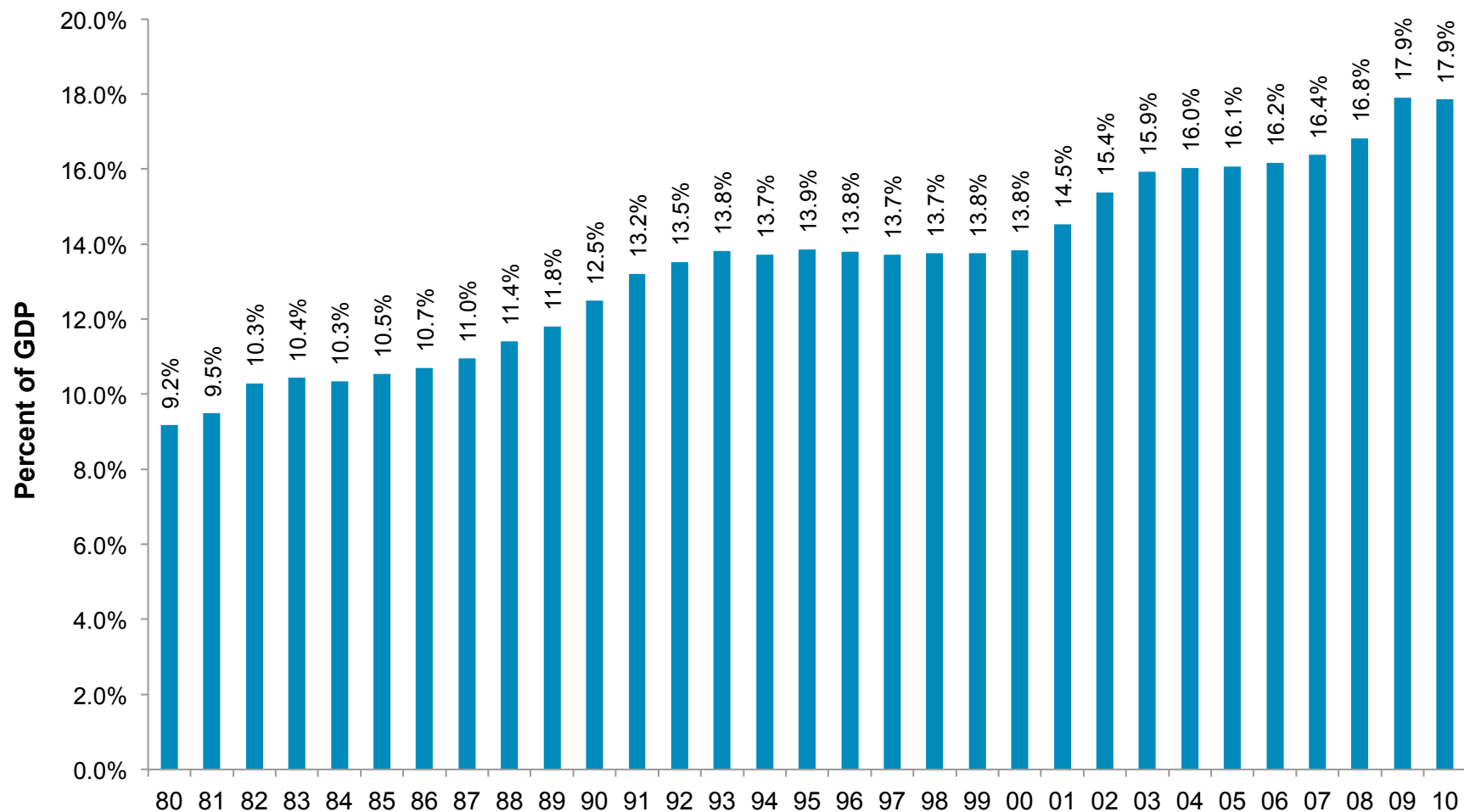
Chart 8.1: National Healthcare Expenditures, Billions of Dollars, 1980-2010



Source: Centers for Medicare and Medicaid Services, National Healthcare Expenditures Accounts, 2012

National Trends

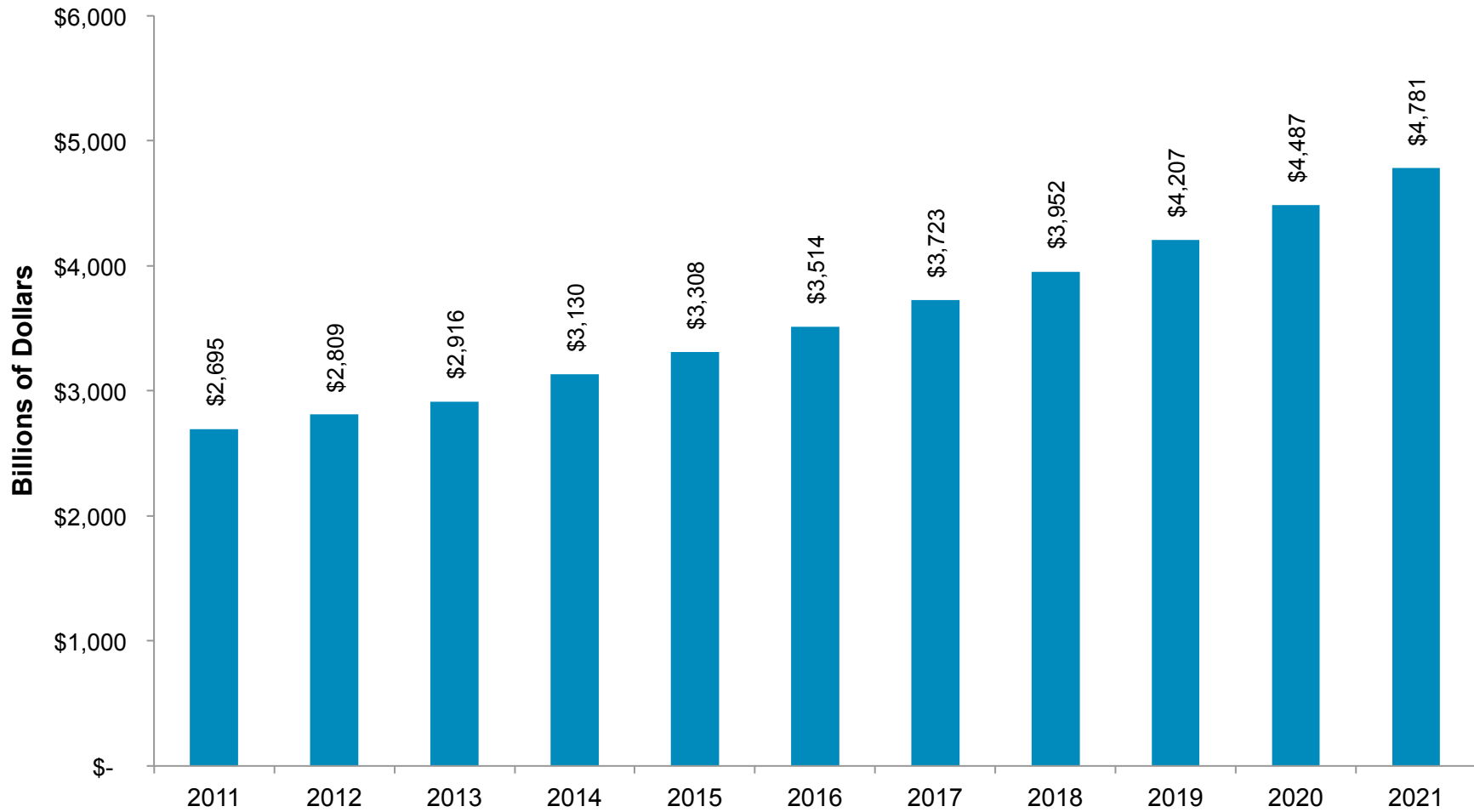
Chart 8.2: National Healthcare Expenditures, as a Percentage of Gross Domestic Product, 1980-2010



Source: Centers for Medicare and Medicaid Services, National Healthcare Expenditures Accounts, 2012

National Trends

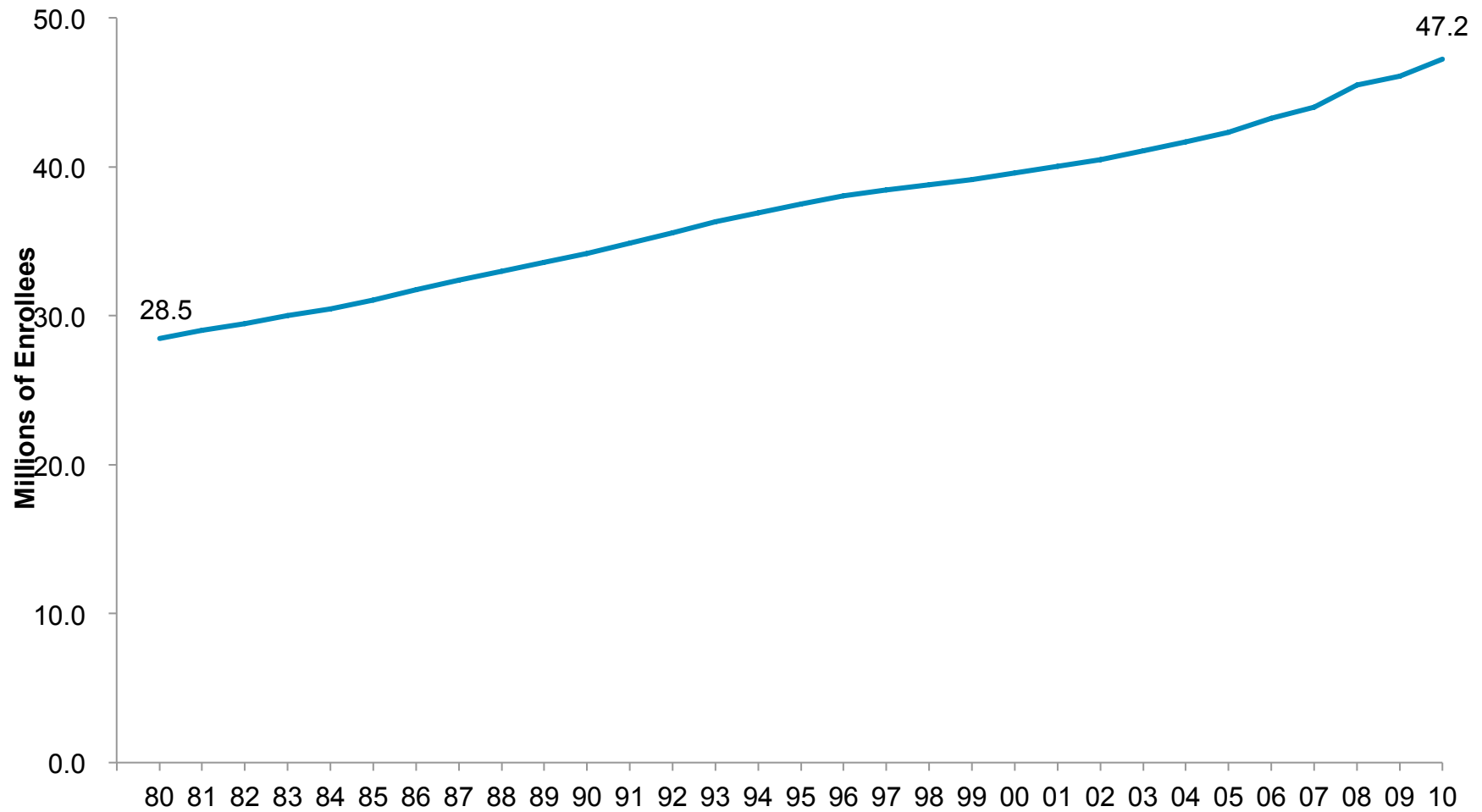
Chart 8.3: Projected National Healthcare Expenditures, Billions of Dollars, 2011-2021



Source: Centers for Medicare and Medicaid Services, National Healthcare Expenditures Projections, 2012

National Trends

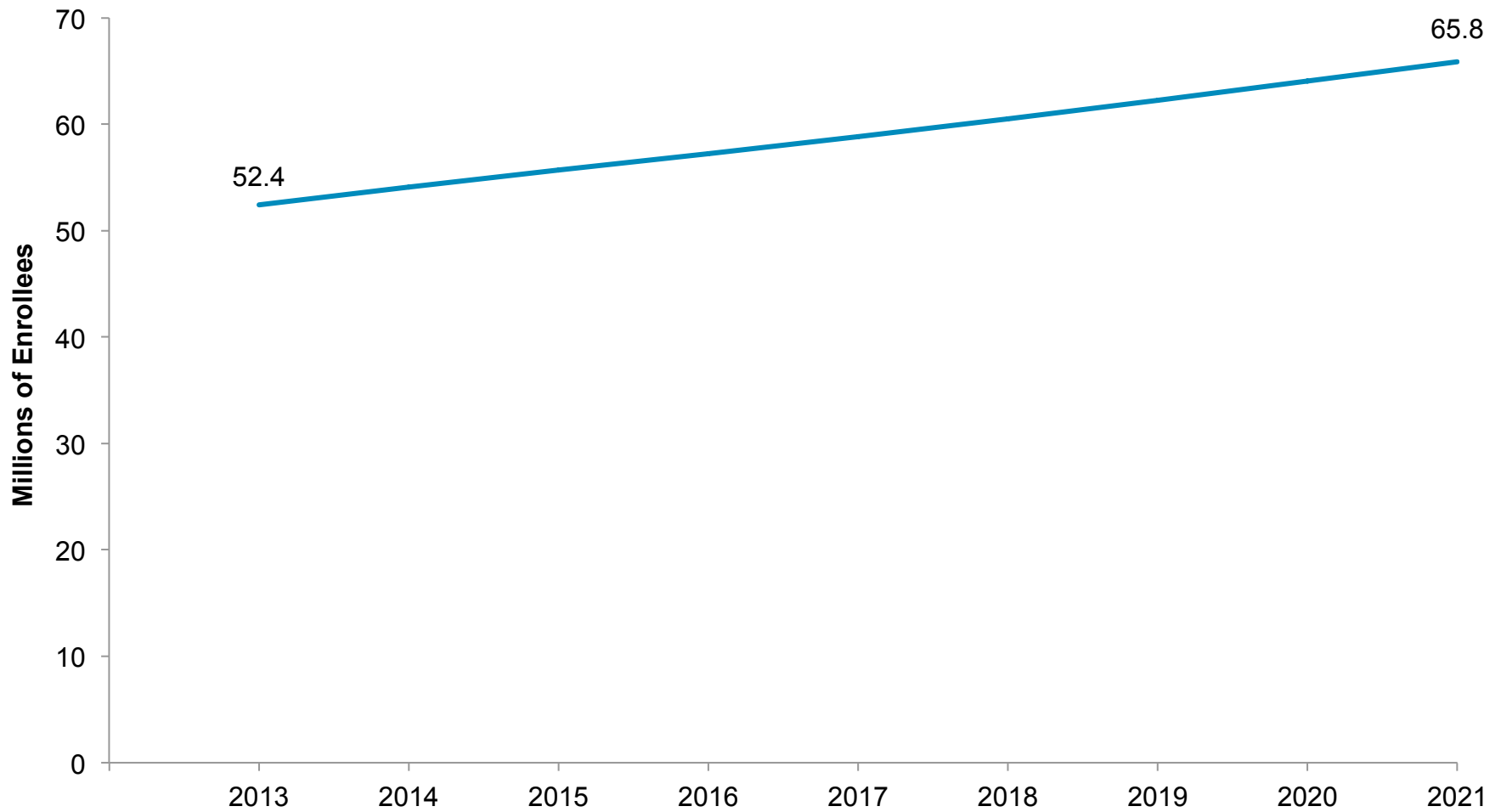
Chart 8.4: Total Medicare Enrollees, in Millions, 1980-2010



Source: Centers for Medicare & Medicaid Services. Medicare Enrollment: National Trends, 1966 – 2010

National Trends

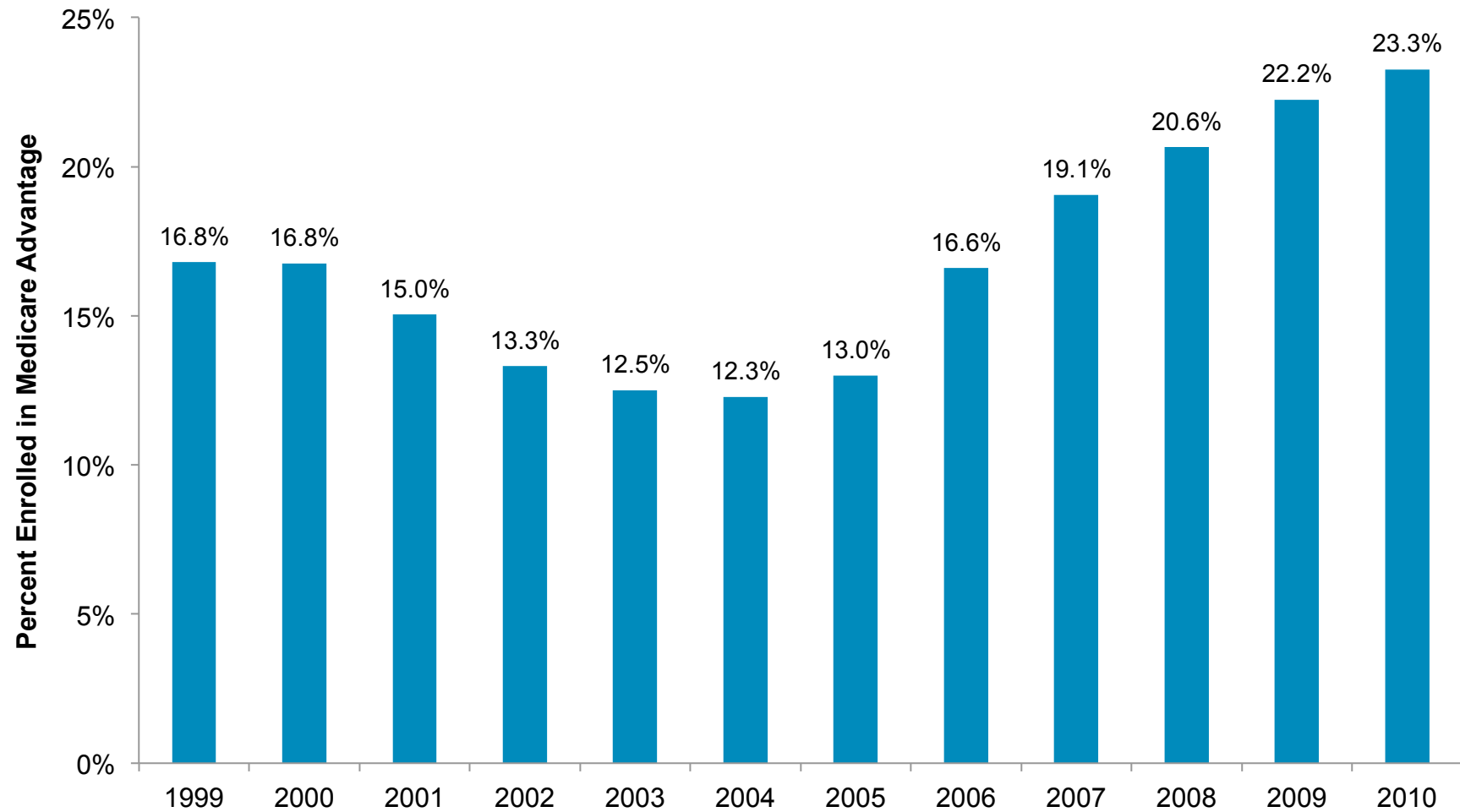
Chart 8.5: Projected Medicare Enrollees, in Millions, 2013-2021



Source: Centers for Medicare & Medicaid Services, Office of the Actuary. Medicare Enrollment, 1970 – 2085. Data released April 23, 2012.

National Trends

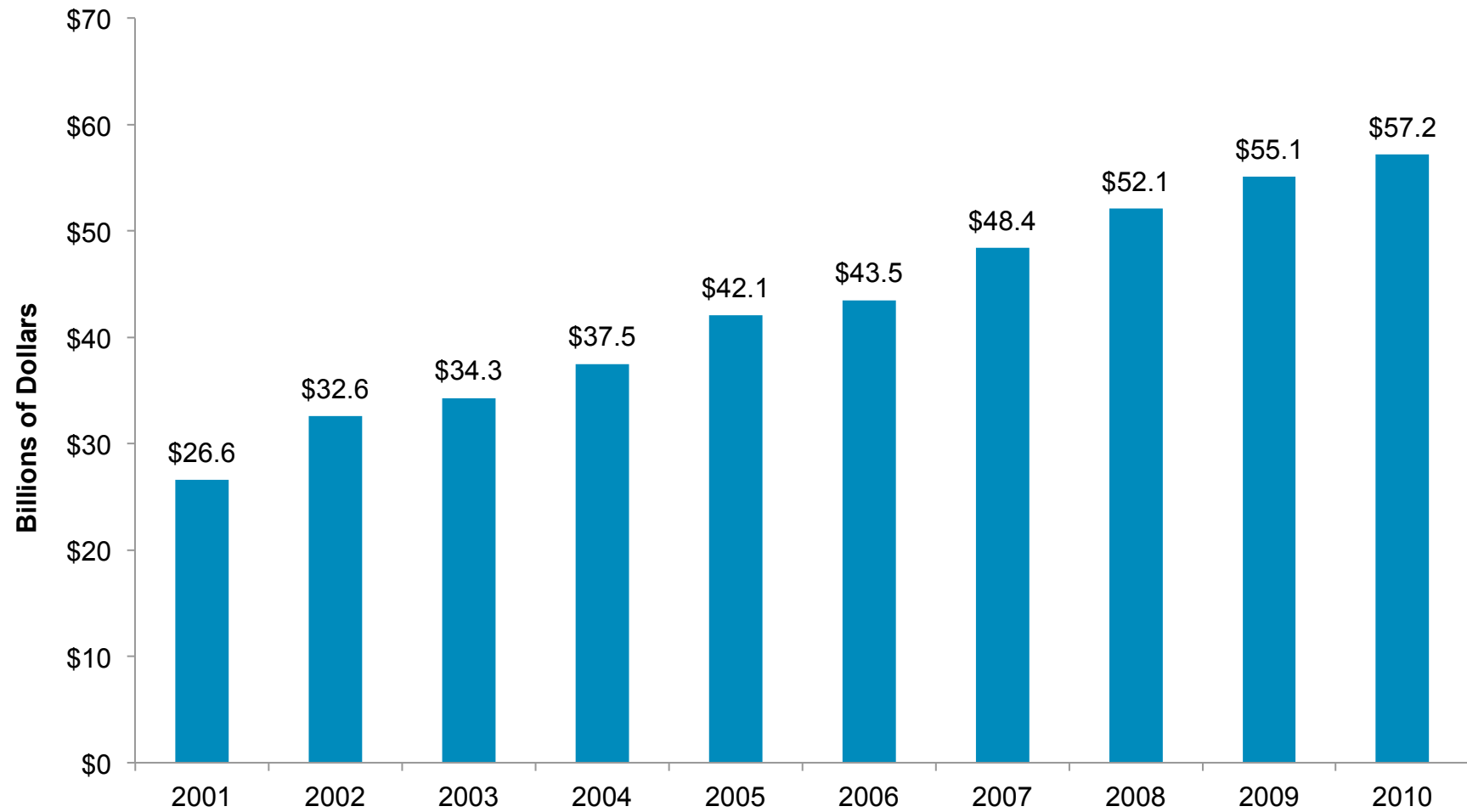
Chart 8.6: Percentage of Medicare Beneficiaries Enrolled in Medicare Advantage, 1999-2010



Source: Kaiser State Health Facts. Total Medicare Advantage Enrollment, 1999-2011.

National Trends

Chart 8.7: Total Medicare Post-acute Care Expenditures, Billions of Dollars, 2001-2010



Source: Medicare Payment Advisory Commission. A Data Book: Health Care Spending and the Medicare Program. June 2011.

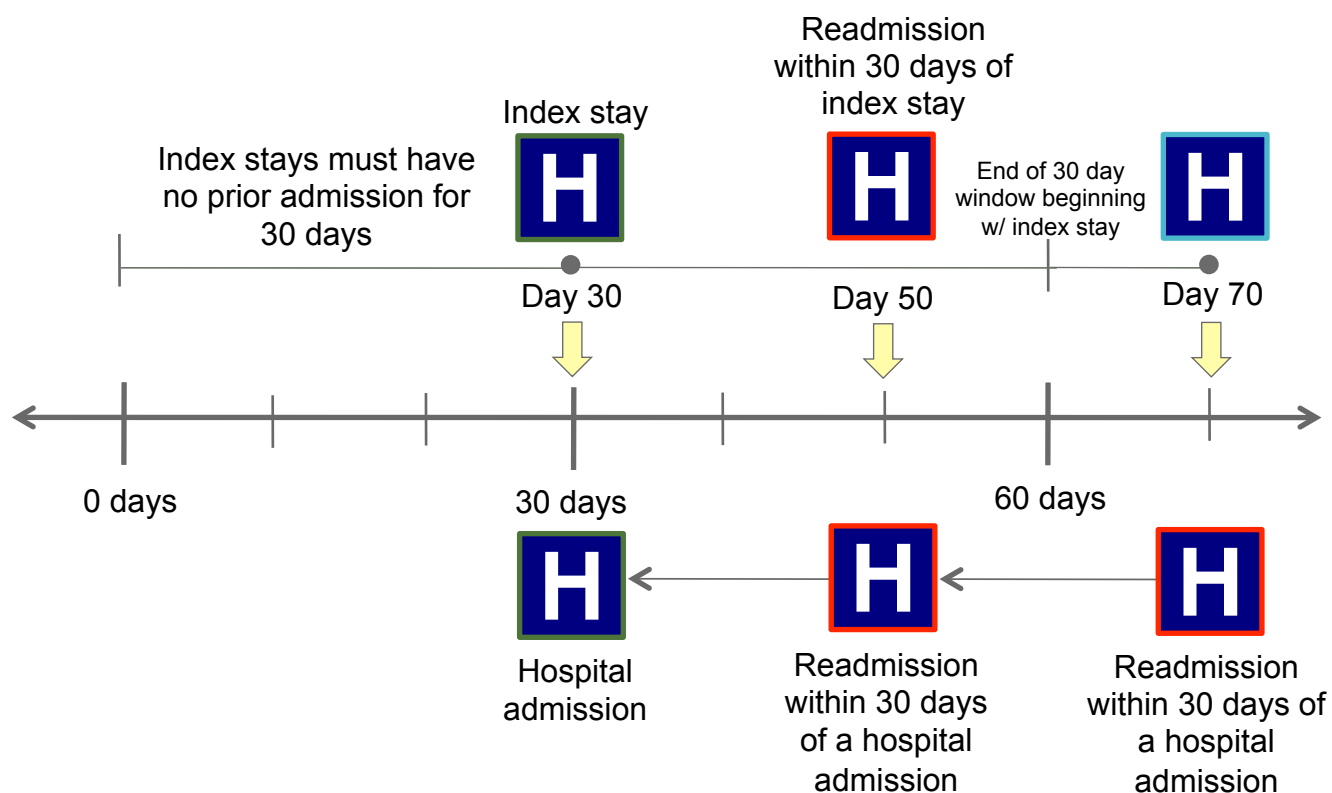


Appendix A: Readmission Rate Methodology



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Methodology: Calculating Readmission Rates



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

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.



Appendix B: Dobson/DaVanzo Clinically Appropriate and Cost- Effective Placement (CACEP) Study



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MS-DRGs Ranked by Medicare Episode Payment Show Considerable Overlap by First Setting

Overall Top 9 MS-DRGs Ranked by Medicare Episode Payment for Post-Acute Care Episodes by Select First Setting (2007-2009)

MS-DRG	Med/Surg	Overall	HHA	SNF	IRF	LTCH
470: Major joint replacement or reattachment of lower extremity w/o MCC	Surgical	1	1	1	1	34
871: Septicemia or severe sepsis w/o MV 96+ hours w MCC	Medical	2	6	3	20	3
291: Heart failure & shock w MCC	Medical	3	2	7	29	9
003: ECMO or trach w MV 96+ hrs or PDX exc face, mouth & neck w maj O.R.	Surgical	4	91	31	10	1
194: Simple pneumonia & pleurisy w CC	Medical	5	9	5	65	22
481: Hip & femur procedures except major joint w CC	Surgical	6	73	2	3	53
292: Heart failure & shock w CC	Medical	7	3	14	63	37
065: Intracranial hemorrhage or cerebral infarction w CC	Medical	8	29	6	2	30
392: Esophagitis, gastroent & misc digest disorders w/o MCC	Medical	9	20	35	125	80

Source: Dobson | DaVanzo analysis of research-identifiable 5% SAF for all sites of service, 2007-2009, wage index adjusted by setting and geographic region, and standardized to 2009 dollars. Medicare Episode Payment includes care from all facility-based and ambulatory care settings and excludes beneficiary co-payments, DME, and Part D payments.

First Setting Selection has a Material Impact on Medicare Program Expenditures

Example: MS-DRG 470

Medicare Episode Payment for MS-DRG 470 (major joint replacement w/o MCC) for Post-Acute Care Episodes by Select First Setting (2007-2009)

First Setting	Number of Episodes	Average Medicare Episode Payment	Difference from Overall Payment
HHA	366,140	\$18,068	\$5,411
SNF	430,240	\$26,861	(\$3,382)
IRF	128,680	\$33,538	(\$10,059)
LTCH	1,080	\$57,896	(\$34,417)
STACH	2,580	\$30,302	(\$6,823)
Community	134,240	\$17,340	\$6,140
Overall	1,062,960	\$23,479	\$0

Source: Dobson | DaVanzo analysis of research-identifiable 5% SAF for all sites of service, 2007-2009, wage index adjusted by setting and geographic region, and standardized to 2009 dollars. All episodes have been extrapolated to reflect the universe of Medicare beneficiaries. Medicare Episode Payment includes care from all facility-based and ambulatory care settings and excludes beneficiary co-payments, DME, and Part D payments.

Note: ER, OP, OP Therapy, Hospice and Other IP first setting episodes are not included in the overall.