



# The Hilltop Institute

*analysis to advance the health of vulnerable populations*

## Maryland Dual-Eligible Beneficiaries: CY 2010 to CY 2012

### A Chart Book

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*Prepared for  
Maryland Department of Health and Mental Hygiene*

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# **Chapter 1.**

## **Overview of Maryland Dual-Eligible Beneficiaries**

# Chapter 1. Overview of Maryland Dual-Eligible Beneficiaries

## Maryland Dual-Eligible Beneficiaries

*The Maryland Dual-Eligible Beneficiaries Chart Book* explores service utilization and expenditures for individuals who are eligible to receive both Medicare and Medicaid services. This chart book provides information about Maryland’s dual-eligible beneficiaries—with a focus on full-benefit dual-eligible beneficiaries—aged 16 and older who received services in calendar years (CYs) 2010 through 2012.

By definition, dual-eligible beneficiaries qualify for both Medicare and Medicaid services. In CY 2012, 19% of Maryland’s Medicaid beneficiaries aged 16 and older were dually eligible for Medicare services. Most (64%) Maryland dual-eligible beneficiaries qualify for full Medicaid benefits (full-benefit dual-eligible beneficiaries), which include services not traditionally covered by Medicare. In CY 2012, Maryland’s partial-benefit dual-eligible beneficiaries—dual-eligible beneficiaries who did not qualify for full Medicaid benefits but did receive assistance with Medicare premiums and cost-sharing through Maryland’s Medicare Savings Program (MSP)—composed 36% of all Maryland dual-eligible beneficiaries. See Table 1 for MSP eligibility criteria and benefits.

## Pathways to Dual Eligibility

Medicare beneficiaries can become Medicaid-eligible through different eligibility pathways. People typically become dual-eligible beneficiaries by first being enrolled in one program and later becoming eligible for the other program.

For example, an elderly person with Medicare may “spend down” his or her income by paying for long-term care services and then meet the income cut-off to qualify for Medicaid benefits due to low income, high medical expenses, or the need for institutional care (Medicare-to-Medicaid pathway). Alternatively, a Medicaid beneficiary may age into Medicare when he or she turns 65; people receiving Medicaid as a result of a disability may also qualify for Medicare after fulfilling the two-year waiting period (Medicaid-to-Medicare pathways). Exhibit 1 illustrates pathways to dual eligibility.

## Role of Medicare and Medicaid for Dual-Eligible Beneficiaries

Medicaid provides supplementary coverage for nearly one in five Medicare beneficiaries. For dual-eligible beneficiaries, Medicare-covered services are paid first by Medicare, and then by Medicaid. Medicare-covered services include primary, acute, and post-acute care services such as physician, hospital, pharmacy, short-term skilled nursing facility care, and home health services. Medicaid covers mostly long-term services and supports (LTSS). If established income and assets criteria are met, Medicaid will also pay Medicare Part A and Medicare Part B deductibles, coinsurance, and copayments for dual-eligible beneficiaries.

# Chapter 1. Overview of Maryland Dual-Eligible Beneficiaries continued

Both Medicare and Medicaid cover home health services, durable medical equipment, nursing facility services, and hospice care; however, the conditions under which these services are covered vary. For example, under certain circumstances, Medicare will pay for short-term post-acute skilled nursing facility care, while Medicaid will pay for longer-term custodial care. Because Medicare does not cover non-medical LTSS such as personal care assistance and home and community-based services (HCBS), Medicaid is the primary payer for these services.

## Chart Book Organization

The data in this chart book are presented in three sections:

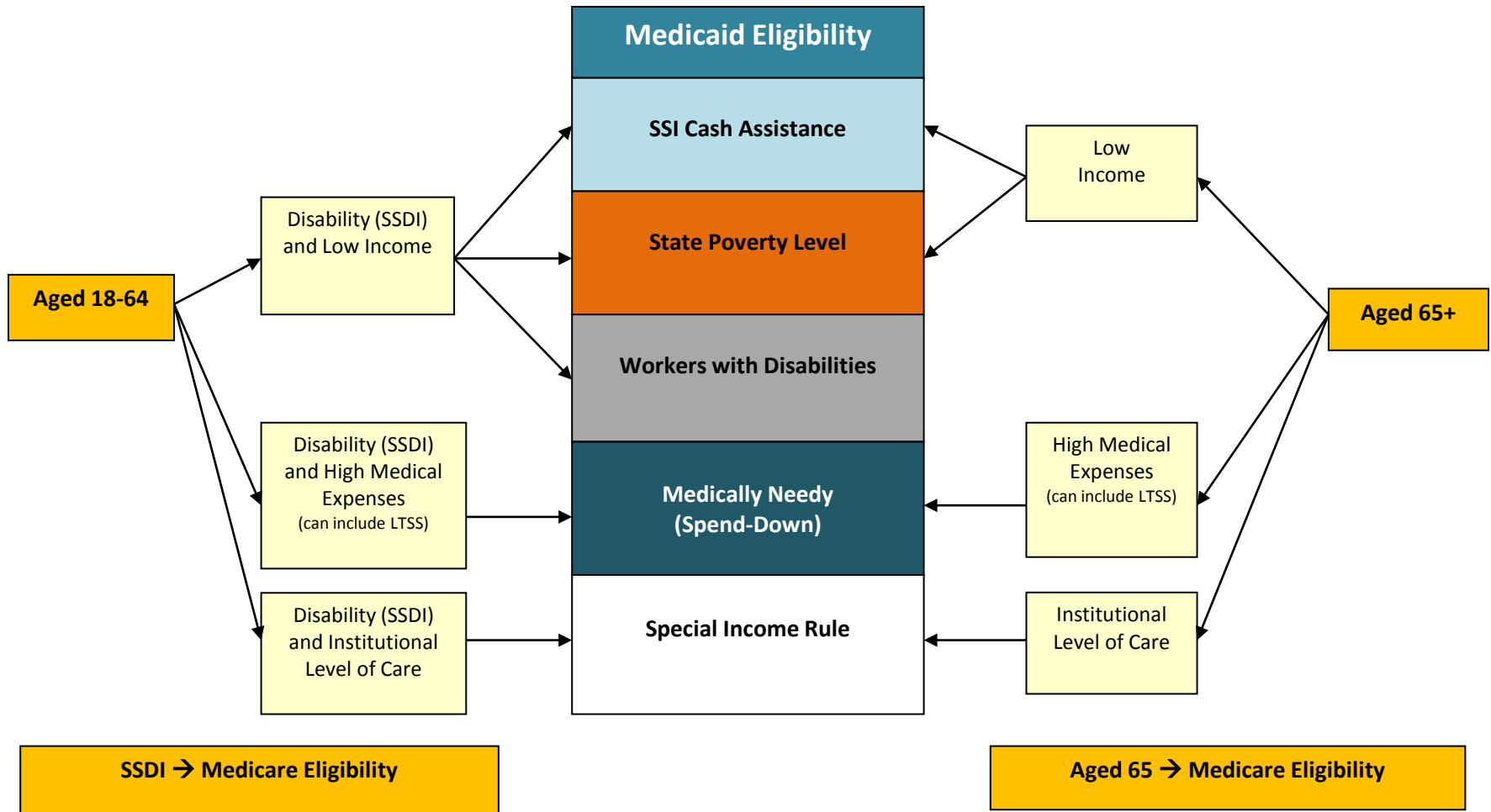
- **Dual-Eligible Beneficiaries:** This section includes data on the number of dual-eligible beneficiaries with breakdowns by benefit category, age, race, gender, and county of residence.
- **Expenditures and Service Utilization:** This section provides data on the cost to Medicare and Medicaid of providing care to Maryland's dual-eligible beneficiaries.
- **Chronic Conditions:** This section provides data on the prevalence and costs of chronic health conditions among Maryland's dual-eligible beneficiaries.

## Data Sources

The information in this chart book was derived from the following data sources:

- **Maryland Department of Health and Mental Hygiene (DHMH) Medicaid Management Information System (MMIS2):** This system contains data for all individuals enrolled in Maryland Medicaid during the relevant fiscal year, including Medicaid eligibility category and fee-for-service claims. All MMIS2 data are warehoused and processed monthly by Hilltop.
- **Medicare Modernization Act (MMA) State File:** Also known as the MMA Medicare/Medicaid Dual Eligibility Monthly File, this file is produced on a monthly basis by each state to meet the MMA data collection requirements of the Centers for Medicare and Medicaid Services (CMS). The file contains a list of partial- and full-benefit dual-eligible beneficiaries and is submitted to CMS each month. CMS then appends Medicare Part A, B, C, and D; dates of coverage for end-stage renal disease (ESRD); low-income subsidy status; and assignment to Medicare Part D prescription plans.
- **Medicare Research Identifiable Claims Files (Medicare Claims):** These files contain demographic and Medicare enrollment data for Maryland Medicare beneficiaries in a given calendar year.

# Exhibit 1. Pathways to Medicare-Medicaid Eligibility



Source: Woodcock, C., Cannon-Jones S., Tripp, A., & Holt, B. (2010, June 24). *Pathways to Medicare-Medicaid eligibility: A literature review*. Baltimore, MD: The Hilltop Institute, UMBC.

**Table 1. Medicare Savings Program (MSP) Eligibility Criteria and Medicaid Benefits\***

Medicare Savings Program	Medicare Entitlement	Medicaid Pays	Program Income and Asset Limits
Qualified Medicare Beneficiary (QMB)	Part A	Medicare Part A and Part B premiums, deductibles, coinsurance, and copayments for Medicare services rendered by Medicare providers	Income: ≤ 100% of the Federal Poverty Level (FPL) \$1001/month for one person; \$1,348/month for a couple Asset limit: \$7,280 (individual); \$10,930 (couple)
Specified Low-income Medicare Beneficiary (SLMB)	Part A	Medicare Part B premiums	Income: >100% of FPL but <120% of the FPL \$1,197/month for one person; \$1,613/month for a couple Asset limit: \$7,280 (individual); \$10,930 (couple)
Qualified Individual (QI)	Part A	Medicare Part B premiums	Income: ≥120 % of the FPL but <135% of FPL \$1,345/month for one person; \$1,813/month for a couple Asset limit: \$7,280 (individual); \$10,930 (couple)
Qualified Disabled Working Individual (QDWI)	If Part A loss is due to return to work, the individual is eligible to purchase Part A coverage	Medicare Part A premiums	Income: < 200% of FPL \$1,962/month for one person; \$2,655/month for a couple Asset limit: \$4,000 (individual); \$6,000 (couple)

Medicare beneficiaries may qualify for a MSP by meeting the established income and assets limits for a given program. Information on the income and asset limits, as well as the Medicaid benefits provided under each saving program, is detailed above in Table 1.

\* Based on 2015 Income and Assets limits

Source: <http://www.medicare.gov/your-medicare-costs/help-paying-costs/medicare-savings-program/medicare-savings-programs.html#collapse-2625>

# Key Findings

## Characteristics of Maryland Dual-Eligible Beneficiaries

Of the 138,783 Maryland dual-eligible beneficiaries in CY 2012, 88,150 were eligible to receive full Medicaid benefits (Figure 1).

The majority (55%) of full-benefit dual-eligible beneficiaries were aged 65 and older. Full-benefit dual-eligible beneficiaries were much more likely to be female (62%) than male (38%). Nearly two-thirds of the females were aged 65 and older; over half (57%) of the males were under the age of 65 (Figure 5).

Slightly more of Maryland's full-benefit dual-eligible beneficiaries were white (42%) than black (39%). The distribution of full-benefit dual-eligible white beneficiaries under age 65 and 65 and older was equally split at 50% (Figure 5).

Maryland full-benefit dual-eligible beneficiaries tend to live in urban areas; specifically, 80% resided in the Baltimore/Washington Metropolitan area. Full-benefit dual-eligible beneficiaries in this area were more likely to be aged 65 and older (Figure 5).

The number of full-benefit dual-eligible beneficiaries as a percentage of all Medicaid beneficiaries aged 16 and older in a given county ranged from a low of 10% to a high of 18%, with Allegany, Carroll, Montgomery, and Howard Counties having the highest percentages (Figure 6).

## Dual-Eligible Beneficiaries' Benefit Categories

In CY 2012, 64% of Maryland dual-eligible beneficiaries were full-benefit dual-eligibles, 20% were Qualified Medicare Beneficiaries (QMBs), 11% were Specified Low-income Medicare Beneficiaries (SLMBs), and the remaining 6% were Qualified Individuals (QIs) or Qualified Disabled Working Individuals (QDWIs). Across each of these benefit categories, the majority were aged 65 and older (Figure 4).

## Pathways to Dual Eligibility

The majority (70%) of CY 2012 full-benefit dual-eligible beneficiaries were eligible for Medicare before obtaining Medicaid coverage (Figure 7). Over half (55%) of newly enrolled full-benefit dual-eligible beneficiaries in CY 2012 were under the age of 65, while 56% of those continuously enrolled (meaning there was no break in their dual eligibility benefit determination in CY 2012) were 65 and older. Continuously enrolled beneficiaries were more likely to have been enrolled in Medicare (75%) first before obtaining Medicaid coverage (Figure 8).



## Key Findings continued

### Medicare and Medicaid Expenditures

Combined Medicare and Medicaid expenditures for dual-eligible beneficiaries in CY 2012 totaled \$2.9 billion (Figure 10). Average combined Medicare and Medicaid expenditures were nearly \$39,175 per person in CY 2012, with per member per month (PMPM) expenditures averaging \$3,647 (Figure 14).

Individuals with ESRD accounted for less than 1% of full-benefit dual-eligible beneficiaries in CY 2012 (Figure 15); however, at \$267 million, their expenditures accounted for 9% of total expenditures for full-benefit dual-eligible beneficiaries and 16% of Medicare expenditures (Figure 16).

In CY 2012, the largest percentage (30%) of Medicaid expenditures were for nursing facility services, while the highest percentage (43%) of Medicare expenditures were for inpatient services (Figure 17).

### Chronic Medical Conditions

Over two-fifths of full-benefit dual-eligible beneficiaries in CY 2012 had six or more chronic conditions. Whites, females, and those aged 85 and older were more likely to have six or more chronic conditions than other full-benefit dual-eligible beneficiaries (Figures 19-22).

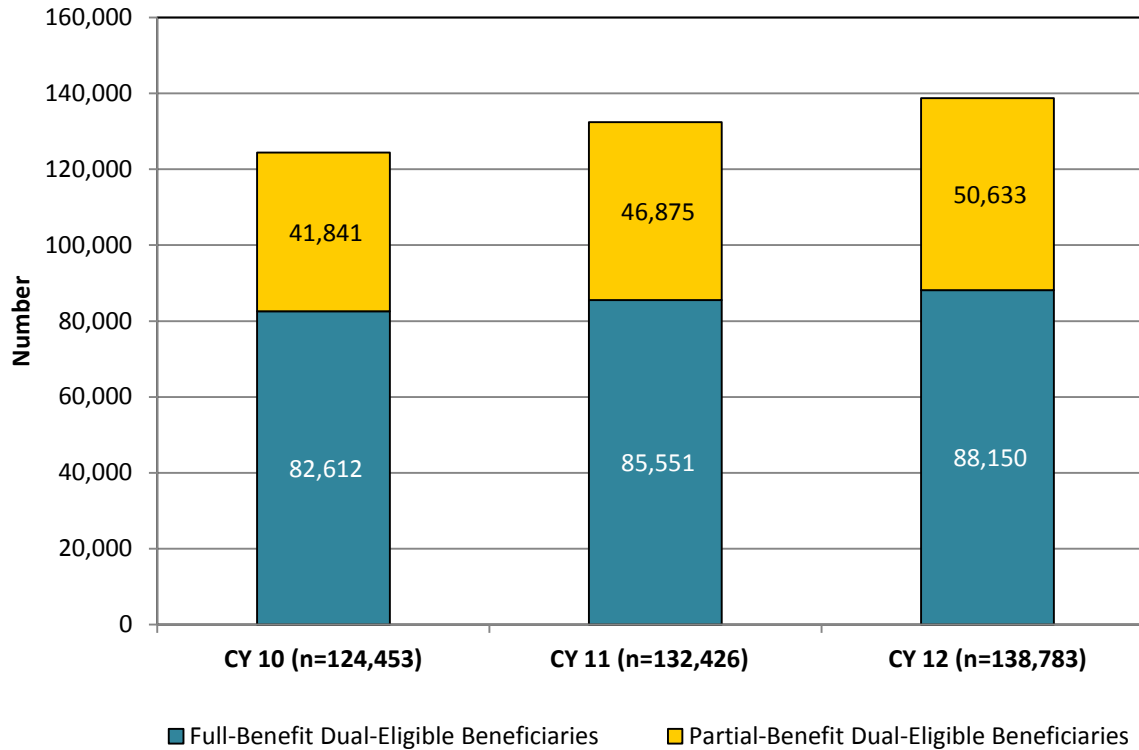
The most prevalent chronic conditions for those aged 65 and older in CY 2012 were high blood pressure, high cholesterol, anemia, diabetes, and Alzheimer's (Figure 25). Female full-benefit dual-eligible beneficiaries were more likely than male beneficiaries to have these conditions (Figures 26).

As the number of chronic conditions increases, the average cost per person increases. On average, full-benefit dual-eligible beneficiaries with six or more chronic conditions incurred costs of \$61,856 per person, while those with only one chronic condition had costs of \$7,431 (Figure 29). Of the chronic conditions analyzed, treatment for stroke/transient ischemic attack was the most costly: \$74,385, on average (Figure 33).

**Chart Book Note:** Unless otherwise noted, Medicare expenditures do not include Medicare Part D claims or Medicare Advantage, and Medicaid expenditures do not include Medicare premium payments.

# **Chapter 2. Maryland Dual-Eligible Beneficiaries**

**Figure 1. Dual-Eligible Beneficiaries, by Benefit Category, CY 2010 – CY 2012**



The number of Maryland dual-eligible beneficiaries increased 11.5% from 124,453 in CY 2010 to 138,783 in CY 2012.

The number of partial-benefit dual-eligible beneficiaries increased at a higher rate in each of the calendar years than full-benefit dual-eligibles.

Source: MMIS2

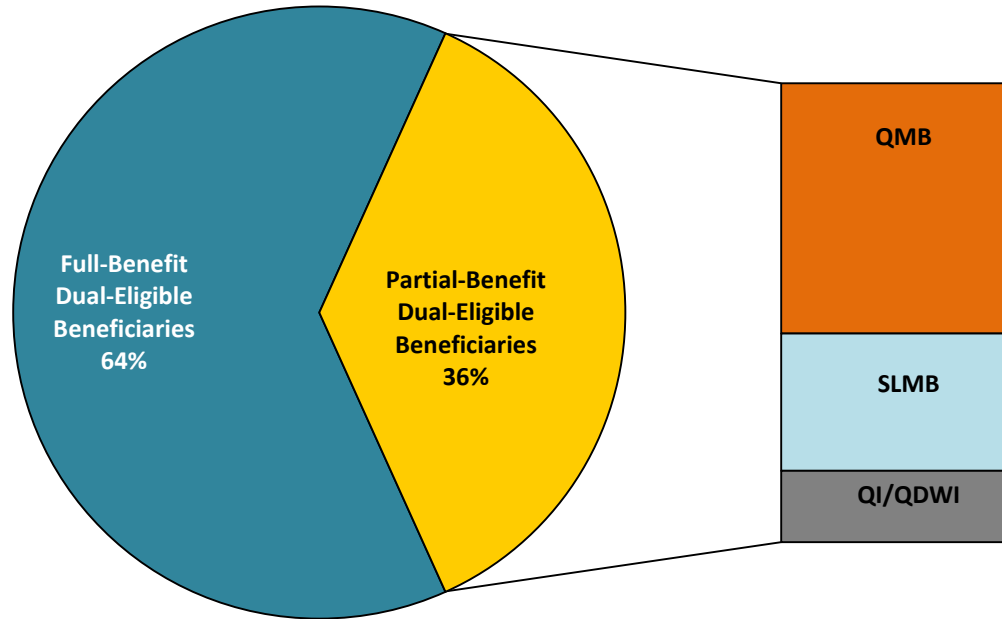
**Figure 2. Full-Benefit Dual-Eligible Beneficiaries as a Percentage of All Medicaid Beneficiaries Aged 16 and Older, CY 2012**

	Medicaid Beneficiaries Aged 16 and Older	Full-Benefit Dual-Eligible Beneficiaries Aged 16 and Older	As a Percentage of All Medicaid Beneficiaries
<b>CY 2010</b>	644,270	82,612	12.8%
<b>CY 2011</b>	700,470	85,551	12.2%
<b>CY 2012</b>	748,194	88,150	11.8%

The percentage of full-benefit dual-eligible beneficiaries as a proportion of all Medicaid beneficiaries remained relatively unchanged in each of the study years.

Source: MMIS2

**Figure 3. Dual-Eligible Beneficiaries, by Benefit Category, CY 2012**



In CY 2012, 64% of dual-eligible beneficiaries were eligible for full Medicaid benefits.

Of the partial-benefit dual-eligibles, which accounted for 36% of all dual-eligible beneficiaries, the majority (55%) were QMBs.

Source: MMIS2

**Figure 4. Dual-Eligible Beneficiaries, by Benefit Category and Age Group, CY 2012**

	All		Under Age 65		Age 65 and Older	
	Number	Percentage	Number	Percentage	Number	Percentage
<b>Full-Benefit</b>	88,150	64%	39,726	45%	48,424	55%
<b>QMB</b>	27,598	20%	12,436	45%	15,162	55%
<b>SLMB</b>	15,173	11%	7,071	47%	8,102	53%
<b>QI/QDWI</b>	7,862	6%	3,107	40%	4,755	60%
<b>Total</b>	<b>138,783</b>	<b>100%</b>	<b>62,340</b>	<b>45%</b>	<b>76,443</b>	<b>55%</b>

Source: MMIS2

In CY 2012, full-benefit dual-eligible beneficiaries made up the largest percentage of Maryland’s dual-eligible population. Over half (55%) of the full-benefit dual-eligibles were aged 65 and older.

**Figure 5. Selected Characteristics of Maryland Full-Benefit Dual-Eligible Beneficiaries, by Age Group, CY 2012**

	All Ages*	Under 65	65 and Older
<b>Total</b>	<b>100%</b>	<b>45%</b>	<b>55%</b>
<b>Gender</b>			
<b>Male</b>	38%	57%	43%
<b>Female</b>	62%	38%	62%
<b>Race</b>			
<b>Asian</b>	7%	8%	92%
<b>Black</b>	39%	53%	47%
<b>White</b>	42%	50%	50%
<b>Hispanic</b>	3%	24%	76%
<b>Native American</b>	<1%	60%	40%
<b>Pacific Islands/Alaskan</b>	<1%	30%	70%
<b>Unknown</b>	9%	25%	75%
<b>Region</b>			
<b>Baltimore/Washington Metro</b>	80%	44%	56%
<b>Eastern Shore</b>	9%	50%	50%
<b>Southern Maryland</b>	4%	48%	52%
<b>Western Maryland</b>	7%	49%	51%
<b>Out of State</b>	<1%	50%	50%

\* Due to rounding, percentages do not equal 100%.

Source: MMIS2

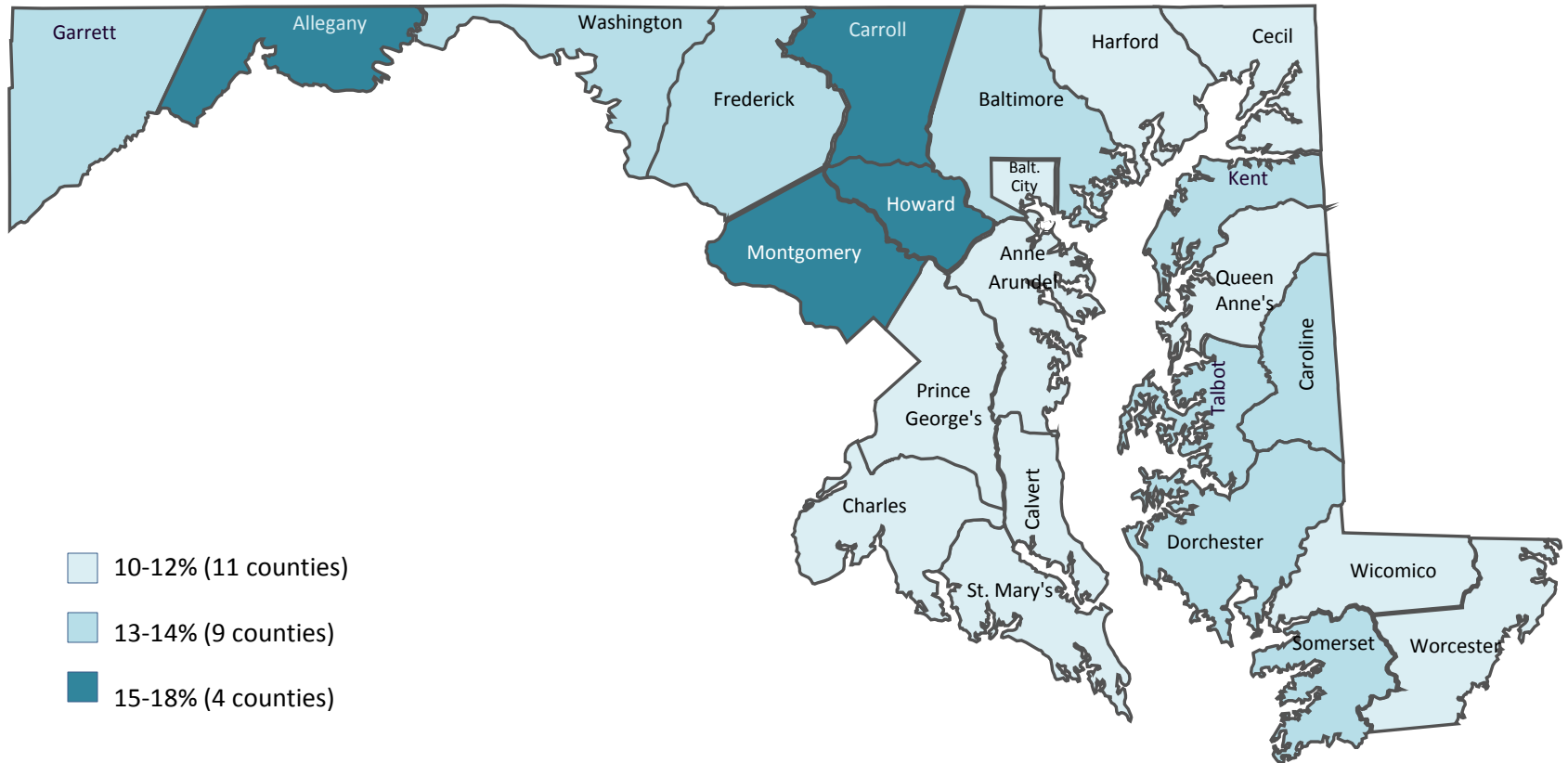
In CY 2012, the majority (55%) of Maryland full-benefit dual-eligible beneficiaries were aged 65 or older.

Sixty-two percent of the full-benefit dual-eligible beneficiaries were female—the largest percentage (62%) of whom were aged 65 and older.

Whites (42%) and Blacks (39%) made up the largest percentage of this population. The distribution of these two groups, when compared by age, was similar.

Eighty percent of Maryland’s full-benefit dual-eligible beneficiaries reside in the Baltimore/Washington metropolitan area. The distribution of full-benefit dual-eligible beneficiaries by age group was relatively similar in each of the regions studied.

**Figure 6. Full-Benefit Dual-Eligible Beneficiaries as a Percentage of Medicaid Beneficiaries Aged 16 and Older, by County, CY 2012**



The percentage of dual-eligible beneficiaries as a proportion of Maryland Medicaid beneficiaries aged 16 and over varied greatly by county. Four counties—Allegany, Carroll, Montgomery, Howard—had the highest percentage (15-18%) of dual-eligible beneficiaries as a proportion of their total Medicaid beneficiaries. The state average is 13%. Percentages for each county — categorized by age group — are available in the appendix.

Sources: DSS



**Figure 7. Pathways to Dual Eligibility for Full-Benefit Dual-Eligible Beneficiaries, CY 2012**

	All	Under Age 65	Age 65 and Older
<b>Medicaid-First</b>	27%	17%	10%
<b>Medicare-First</b>	70%	27%	43%
<b>Simultaneous</b>	2%	<1%	2%

Seventy-percent of CY 2012 full-benefit dual-eligible beneficiaries were eligible first for Medicare and then for Medicaid.

Source: MMIS2

**Figure 8. Characteristics of New and Continuously Enrolled Full-Benefit Dual-Eligible Beneficiaries, CY 2012**

	All		New in CY 2012		Continuously Enrolled	
	Number	Percentage	Number	Percentage	Number	Percentage
<b>Age</b>						
<b>Under 65</b>	39,726	45%	4,128	55%	35,437	44%
<b>65 and Older</b>	48,424	55%	3,374	45%	44,988	56%
<b>Pathway</b>						
<b>Medicare First</b>	61,953	70%	1,450	19%	60,501	75%
<b>Medicaid First</b>	24,198	28%	5,738	76%	18,460	15%
<b>Simultaneous</b>	1,777	2%	314	4%	1,463	2%
<b>Original Reason for Medicare</b>						
<b>Age</b>	40,751	46%	3,347	45%	37,374	46%
<b>Disability</b>	45,566	52%	3,937	52%	41,627	52%
<b>ESRD</b>	968	1%	192	3%	776	1%
<b>Both Age and Disability</b>	674	1%	26	0%	648	1%

**Note:** The Medicare buy-in indicator was used to determine new or continuous enrollment status.

**Source:** MMIS2

In CY 2012, over half (55%) of the newly enrolled full-benefit dual-eligible beneficiaries were under the age of 65. Beneficiaries with continuing dual eligibility were more likely to be aged 65 or older (56%).

Of the newly enrolled full-benefit beneficiaries in CY 2012, 76% followed the Medicaid-to-Medicare pathway to dual eligibility. Of the continuously enrolled beneficiaries, 75% followed the Medicare-to-Medicaid pathway.

**Figure 9. Selected Characteristics of Medicaid Full-Benefit Dual-Eligible and Non-Dual-Eligible Beneficiaries, CY 2012**

	Full-Benefit Dual-Eligible Beneficiaries	Non-Dual-Eligible Beneficiaries
	n=88,150	n=556,838
<b>Age</b>		
16-21	1%	25%
22-49	21%	59%
50-64	23%	14%
65-74	24%	1%
75-84	18%	1%
85 and older	12%	1%
<b>Gender</b>		
Male	38%	37%
Female	62%	63%
<b>Eligibility Coverage Group</b>		
F01: Temporary Case Assistance (TAC)	<1%	4%
F02: Transitional Medical Assistance	<1%	8%
F05: Children and Families	6%	39%
H01: Home and Community-Based Services (HCBS)	6%	<1%
L98: Aged/Blind/Disabled (ABD) Long-Term Care	22%	1%
P10: Medicaid Family Planning Program (MFFP)	<1%	4%
S02: Supplemental Security Income (SSI)	52%	11%
S03: Qualified Medicare Beneficiaries (QMB)	<1%	<1%
S07: Specified Low-Income Medicare Beneficiaries (SLMB)	<1%	<1%
S09: Primary Adult Care (PAC)	<1%	16%
S14: Specified Low-Income Medicare Beneficiaries (SLMB II - QI)	<1%	<1%
S98: ABD Medically Needy – Non-Spend-Down	6%	2%
Other	8%	18%

Maryland’s full-benefit dual-eligible and non-dual-eligible beneficiaries (aged 16 and older) varied by key demographics. Over three-fourths (78%) of full-benefit dual-eligibles in CY 2012 were aged 50 and older. Conversely, 84% of the non-dual-eligible beneficiaries were 16 to 49 years old.

The gender distribution of the two groups was similar: females composed 62% of the full-benefit dual-eligible beneficiaries and 63% of the non-dual-eligible beneficiaries.

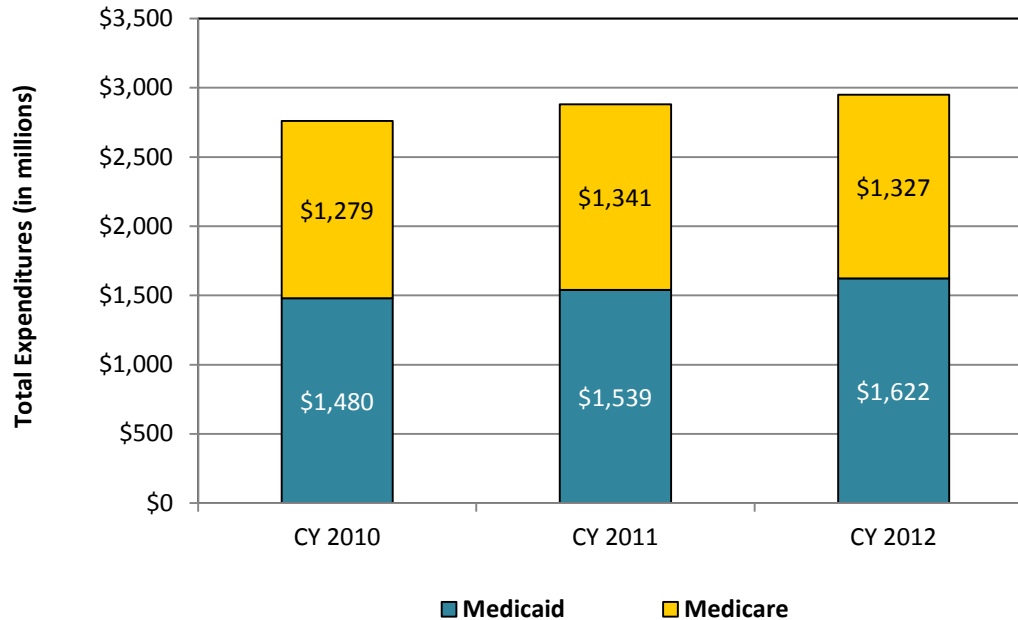
Over half (52%) of full-benefit dual-eligible beneficiaries were in the SSI coverage group, and 22% fell into the Aged/Blind/Disabled (ABD) long-term care coverage group. The largest percentage (39%) of non-dual-eligible beneficiaries were in the Children and Families coverage group.

Source: MMIS2

# **Chapter 3.**

## **Maryland Dual-Eligible Beneficiary Expenditures and Service Utilization**

**Figure 10. Total Medicare and Medicaid Expenditures for Full-Benefit Dual-Eligible Beneficiaries, by Payer, CY 2010 – CY 2012**



Combined fee-for-service Medicare and Medicaid expenditures for Maryland’s full-benefit dual-eligible beneficiaries totaled \$2.9 billion in CY 2012. The share of Medicare and Medicaid expenditures was relatively consistent in each of the three reporting periods: Medicaid expenditures accounted for 54% in CY 2010, 53% in CY 2011, and 55% in CY 2012.

**Note:** All dual-eligible Medicare and Medicaid expenditure charts include fee-for-service expenditures only (i.e., excludes HealthChoice, Medicare Part D, and Medicare Advantage expenditures). Non-dual-eligible expenditure include Medicaid fee-for-service expenditures and managed care organization capitation payments (Medicare premium payments are not included in MMIS2 data).

**Source:** MMIS2

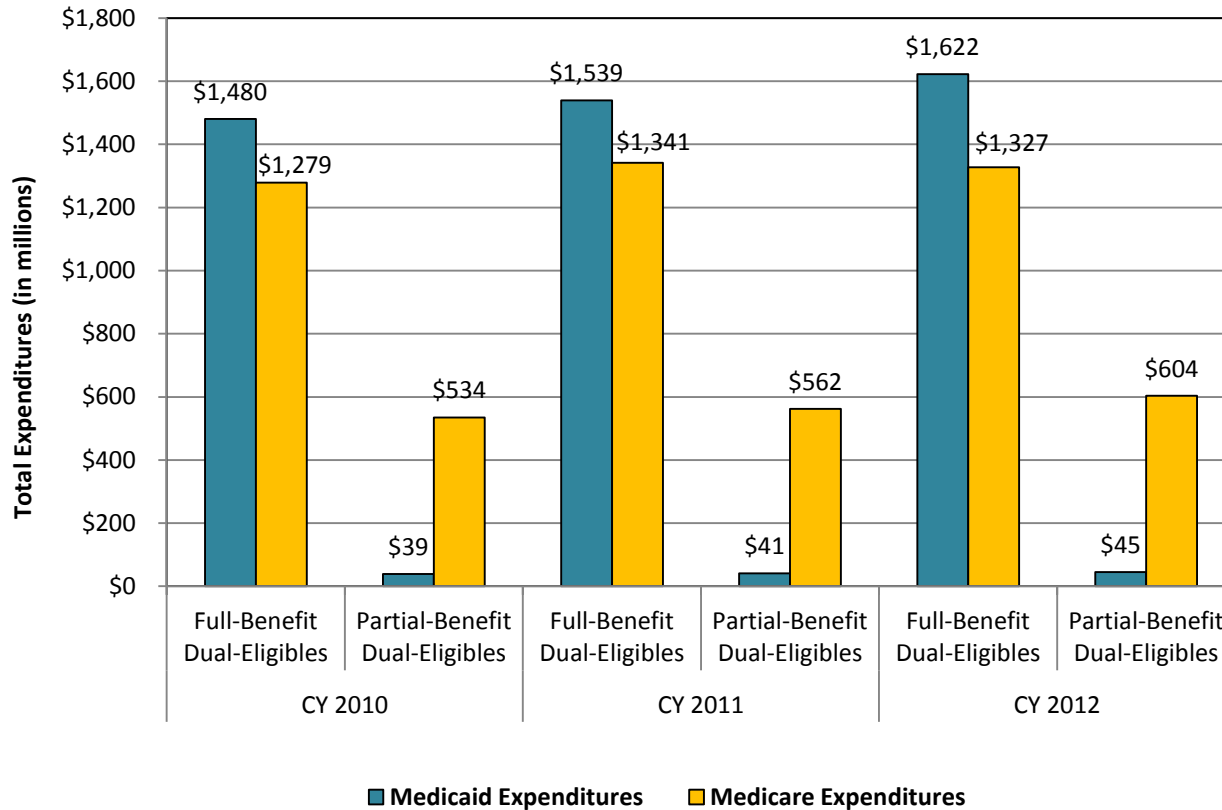
**Figure 11. Total, Average Annual and PMPM Expenditures for Full-Benefit Dual-Eligible Beneficiaries, by Payer, CY 2010 – CY 2012**

CY	Payer	Under Age 65			Age 65 and Older			All Ages		
		Total Expenditures	Average Cost Per Person	PMPM	Total Expenditures	Average Cost Per Person	PMPM	Total Expenditures	Average Cost Per Person	PMPM
2010	Medicare	\$536,496,882	\$16,725	\$1,520	\$742,451,630	\$19,755	\$1,878	\$1,278,948,512	\$18,360	\$1,709
	Medicaid	\$621,101,255	\$19,362	\$1,759	\$859,260,024	\$22,864	\$2,173	\$1,480,361,279	\$21,251	\$1,978
2011	Medicare	\$535,071,364	\$15,648	\$1,429	\$806,128,899	\$21,041	\$2,026	\$1,341,200,263	\$18,497	\$1,736
	Medicaid	\$657,657,119	\$19,232	\$1,757	\$881,283,126	\$23,003	\$2,214	\$1,538,940,244	\$21,225	\$1,993
2012	Medicare	\$539,274,694	\$15,505	\$1,408	\$787,660,940	\$19,445	\$1,850	\$1,326,935,634	\$17,625	\$1,641
	Medicaid	\$683,211,716	\$19,643	\$1,784	\$939,232,443	\$23,187	\$2,207	\$1,622,444,159	\$21,550	\$2,006

Source: MMIS2

Total Medicaid expenditures for full-benefit dual-eligible beneficiaries increased 10%, from \$1.48 billion in CY 2010 to \$1.62 billion in CY 2012. Medicare expenditures grew at a slower rate of 4% during this period. In each of the reporting periods, on average, Medicaid paid slightly more per person per year than did Medicare.

**Figure 12. Medicare and Medicaid Expenditures, by Benefit Category and Payer, CY 2010 – CY 2012**



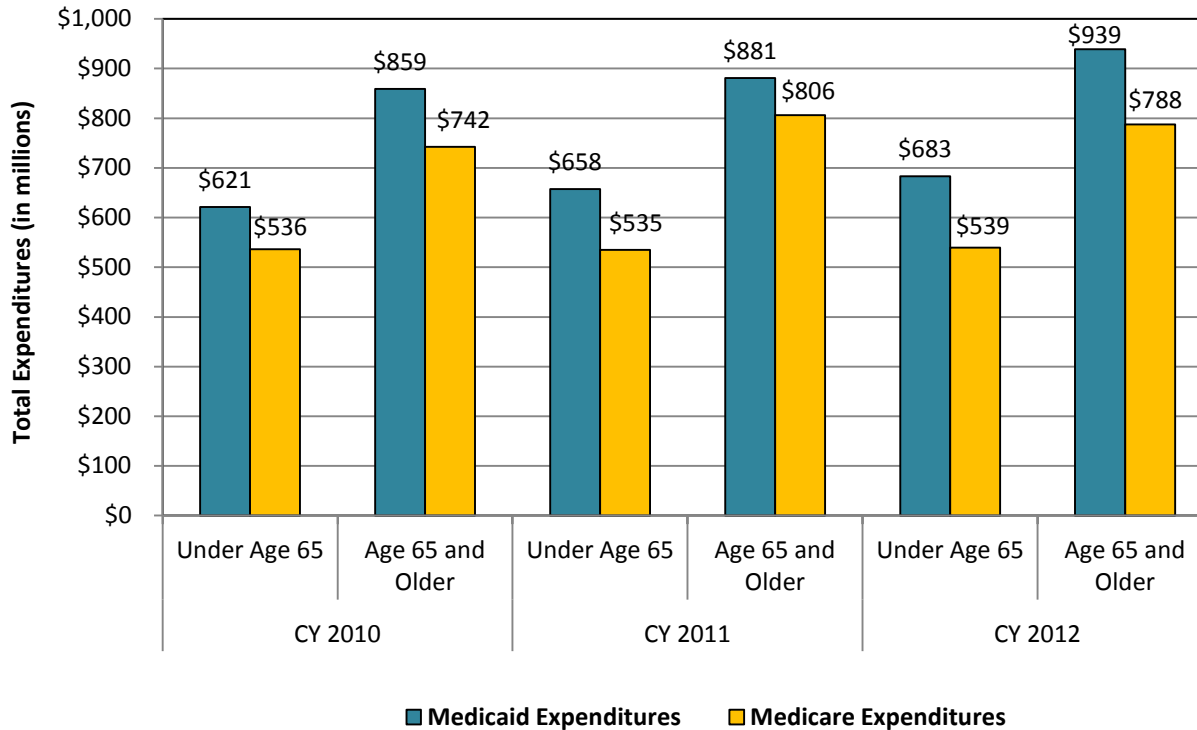
Source: DSS

Medicaid expenditures for full-benefit dual-eligible beneficiaries far outpaced those for partial-benefit dual-eligibles due to the limited Medicaid benefits available to the latter group.

In CY 2012, Medicaid expenditures for full-benefit dual-eligible beneficiaries totaled over \$1.6 billion, while Medicare expenditures totaled \$1.3 billion.

Medicaid coverage for partial-benefit dual-eligible beneficiaries is limited to Medicare premiums, copayments, deductibles, and coinsurance. CY 2012 Medicaid expenditures for this group totaled \$45 million, while Medicare expenditures totaled \$604 million.

**Figure 13. Medicare and Medicaid Expenditures, by Payer and Age Group, CY 2010 – CY 2012**



In each of the study years, both Medicare and Medicaid expenditures were higher for beneficiaries aged 65 and over than they were for those under 65. For full-benefit dual-eligible beneficiaries aged 65 and over, CY 2012 Medicaid expenditures totaled \$939 million, and Medicare expenditures totaled \$788 million.

CY 2012 combined Medicare and Medicaid expenditures for full-benefit dual-eligible beneficiaries under the age of 65 totaled \$1.2 million.

Source: DSS



**Figure 14. Average Annual and PMPM Medicare and Medicaid Expenditures, by Age Group, CY 2010 – CY 2012**

	CY 2010		CY 2011		CY 2012	
	Average Annual Expenditures Per Person	Total Expenditures PMPM	Average Annual Expenditures Per Person	Total Expenditures PMPM	Average Annual Expenditures Per Person	Total Expenditures PMPM
<b>Under Age 65</b>	\$36,087	\$3,279	\$34,880	\$3,186	\$35,148	\$3,192
<b>Age 65 and Older</b>	\$42,619	\$4,051	\$44,044	\$4,240	\$42,632	\$4,057
<b>Total</b>	\$39,611	\$3,687	\$39,722	\$3,729	\$39,175	\$3,647

Source: MMIS2

Overall, average annual and PMPM expenditures for full-benefit dual-eligible beneficiaries remained relatively stable from CY 2010 to CY 2012.

Compared by age group, average annual and PMPM expenditures for full-benefit dual-eligible beneficiaries aged 65 and over were consistently higher than those of their younger counterparts.

**Figure 15. Full-Benefit Dual-Eligible Beneficiaries with ESRD, CY 2012**

Dual-Eligible Beneficiaries with ESRD	Percentage of All Dual-Eligible Beneficiaries*	ESRD Full-Benefit Dual-Eligible Beneficiaries' Total Medicare and Medicaid Expenditures	Percentage of All Medicare and Medicaid Expenditures
968	1.1%	\$267,291,722	9.1%

\*Aged 16 and older.

Source: MMIS2

Just over 1% of the CY 2012 full-benefit dual-eligible beneficiaries were eligible due to ESRD. Total expenditures for this population totaled \$267 million in CY 2012, or 9.1% of all full-benefit dual-eligible expenditures.

**Figure 16. Medicare and Medicaid Expenditures for Full-Benefit Dual-Eligible Beneficiaries with ESRD, by Payer, CY 2012**

	ESRD Expenditures	Expenditures for All Full-Benefit Dual-Eligible Beneficiaries	Percentage of All Expenditures
<b>Medicaid</b>	\$55,728,283	\$1,622,444,159	3.4%
<b>Medicare</b>	\$211,563,439	\$1,326,935,634	15.9%
<b>Total Expenditures</b>	\$267,291,722	\$2,949,379,793	9.1%

Source: MMIS2

When compared by payer, ESRD total expenditures composed nearly 16% of CY 2012 Medicare expenditures and 3% of Medicaid full-benefit dual-eligible expenditures.

**Figure 17. Distribution of Full-Benefit Dual-Eligible Medicare and Medicaid Expenditures, by Service Category, CY 2012**

	Medicaid Expenditures	Percentage of Medicaid Expenditures	Medicare Expenditures	Percentage of Medicare Expenditures	Total Expenditures	Percentage of Total Expenditures
Dental	\$121,004	<1%	\$0	<1%	\$121,004	<1%
Durable Medical Equipment	\$385,725	<1%	\$32,917,711	2%	\$33,303,437	1%
Home Health Services*	\$642,478,730	40%	\$28,625,905	2%	\$671,104,636	23%
Hospice	\$21,928,227	1%	\$30,334,906	2%	\$52,263,133	2%
Inpatient	\$49,440,570	3%	\$574,994,940	43%	\$624,435,510	21%
Outpatient/Carrier	\$136,000,050	8%	\$502,592,047	38%	\$638,592,097	22%
Pharmacy	\$8,025,303	<1%	\$0	<1%	\$8,025,303	<1%
Nursing Facility	\$734,315,146	45%	\$157,470,123	12%	\$891,785,270	30%
Special Programs	\$29,749,404	2%	\$0	<1%	\$29,749,404	1%
<b>Total</b>	<b>\$1,622,444,159</b>	<b>100%</b>	<b>\$1,326,935,634</b>	<b>100%</b>	<b>\$2,949,379,794</b>	<b>100%</b>

\* Includes Medicare home health services and Medicaid state plan and home and community-based waiver personal care services.

**Notes:** Medicare pharmacy expenditures do not include Medicare Part D claims. Medicaid may cover some prescription costs. Medicare does not cover most dental care, dental procedures, or supplies. Medicare Part A (Hospital Insurance) will pay for certain dental services performed while in the hospital.

Source: MMIS2

Nursing facility, home health agency, outpatient, and inpatient expenditures accounted for 96% of CY 2012 total expenditures.

Because Medicare and Medicaid are designed to cover specific services, expenditures varied by payer. Nursing facility services and home health agency services made up 45% and 40% of total Medicaid expenditures, respectively. Inpatient services and outpatient/carrier services made up 43% and 38% of total Medicare expenditures, respectively.

**Figure 18. Distribution of Full-Benefit Dual-Eligible Medicare and Medicaid Expenditures, by Service Category and Age Group,\* CY 2012**

	Under Age 65		Age 65 and Older		All Ages
	Medicaid	Medicare	Medicaid	Medicare	Total
Dental	\$120,256	\$0	\$748	\$0	\$121,004
Durable Medical Equipment	\$194,972	\$17,805,105	\$190,753	\$15,112,607	\$33,303,437
Home Health Services**	\$431,582,678	\$8,531,164	\$210,896,052	\$20,094,741	\$671,104,636
Hospice	\$2,527,648	\$3,568,189	\$19,400,579	\$26,766,718	\$52,263,133
Inpatient	\$28,233,306	\$234,660,400	\$21,207,264	\$340,334,541	\$624,435,510
Outpatient/Carrier	\$97,896,334	\$242,550,983	\$38,103,716	\$260,041,064	\$638,592,097
Pharmacy	\$3,075,722	\$0	\$4,949,582	\$0	\$8,025,303
Nursing Facility	\$109,014,507	\$32,158,854	\$625,300,640	\$125,311,270	\$891,785,270
Special Programs	\$10,566,295	\$0	\$19,183,108	\$0	\$29,749,404
<b>Total</b>	<b>\$683,211,716</b>	<b>\$539,274,694</b>	<b>\$939,232,443</b>	<b>\$787,660,940</b>	<b>\$2,949,379,794</b>

Expenditures by payer varied by age group. CY 2012 Medicaid expenditures for full-benefit dual-eligible beneficiaries aged 65 and older were \$256 million higher than those for beneficiaries under the age of 65.

\*Expenditures for dual-eligible beneficiaries with no available age are excluded from this analysis.

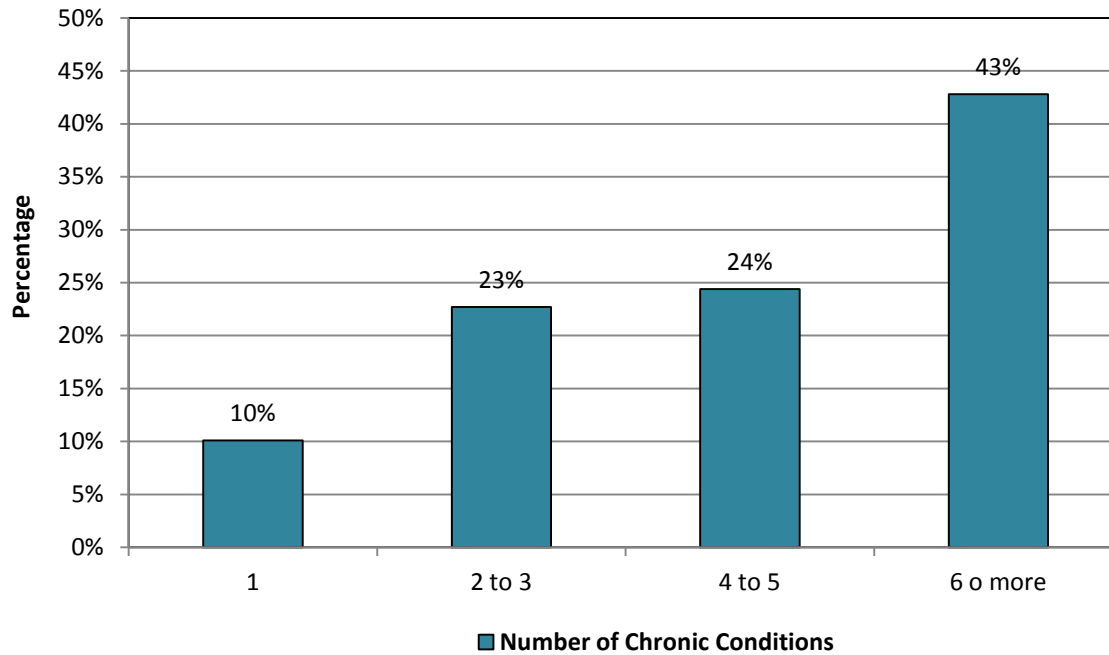
\*\* Includes Medicare home health services and Medicaid state plan and home and community-based waiver personal care services.

**Note:** Pharmacy expenditures do not include Medicare Part D claims. Medicaid may cover prescription costs. Medicare does not cover most dental care, dental procedures, or supplies. Medicare Part A (Hospital Insurance) will pay for certain dental services performed while in the hospital.

Source: MMIS2

# **Chapter 4. Chronic Conditions among Maryland Dual-Eligible Beneficiaries**

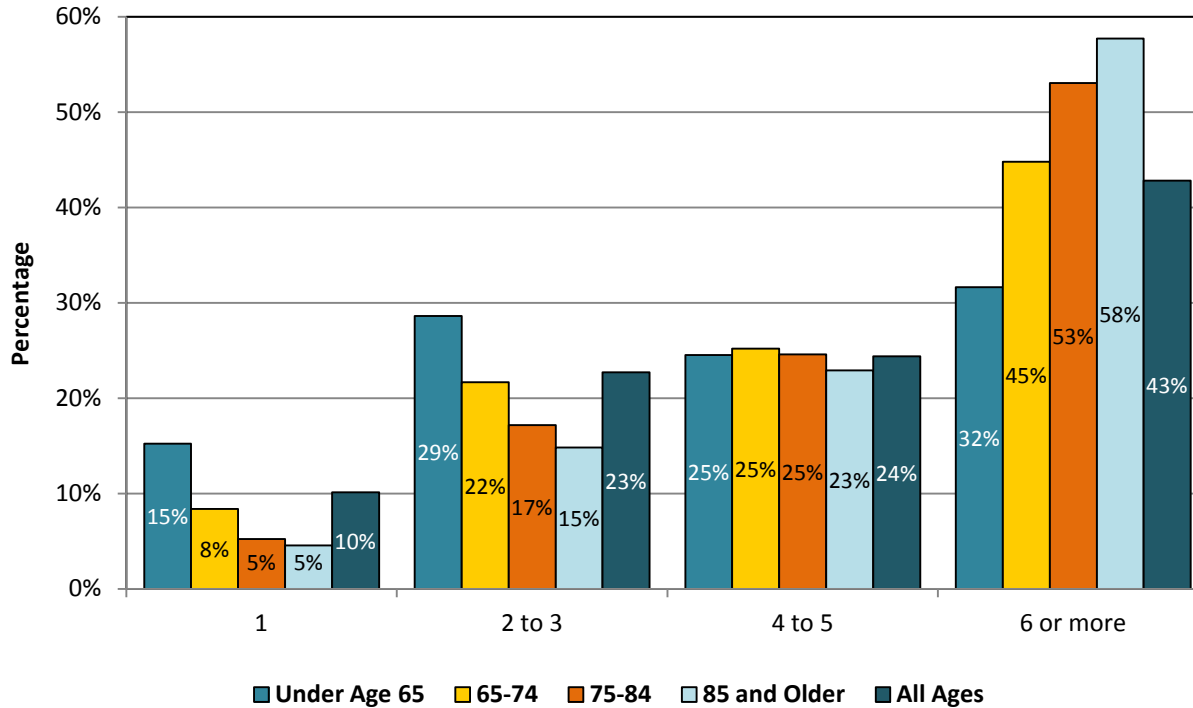
**Figure 19. Percentage of Full-Benefit Dual-Eligible Beneficiaries, by Number of Chronic Conditions, CY 2012**



The largest percentage (43%) of full-benefit dual-eligibles had six or more chronic conditions in CY 2012, while one-tenth of this population had one chronic condition.

Sources: MMIS2, Medicare claims

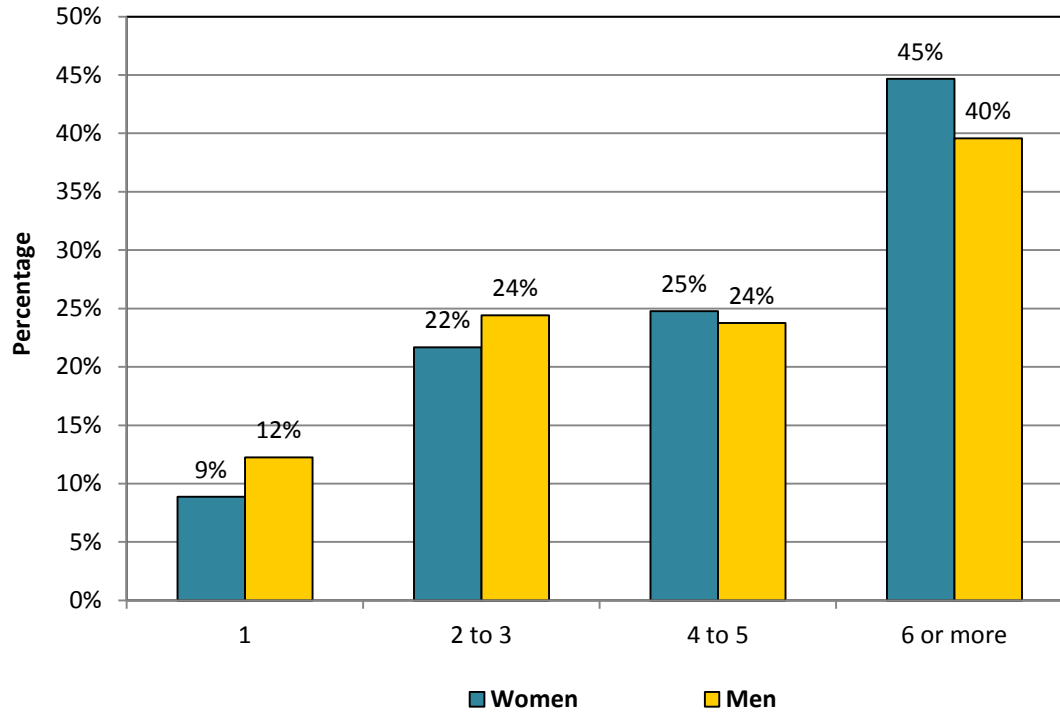
**Figure 20. Percentage of Full-Benefit Dual-Eligible Beneficiaries, by Number of Chronic Conditions and Age Group, CY 2012**



The number of chronic conditions among full-benefit dual-eligible beneficiaries increased with age. Over half (58%) of dual-eligibles aged 85 and older had six or more conditions in CY 2012. Full-benefit dual-eligibles under the age of 65 were more likely than their older counterparts to have just one chronic condition.

Sources: MMIS2, Medicare claims

**Figure 21. Percentage of Full-Benefit Dual-Eligible Beneficiaries, by Number of Chronic Conditions and Gender, CY 2012**

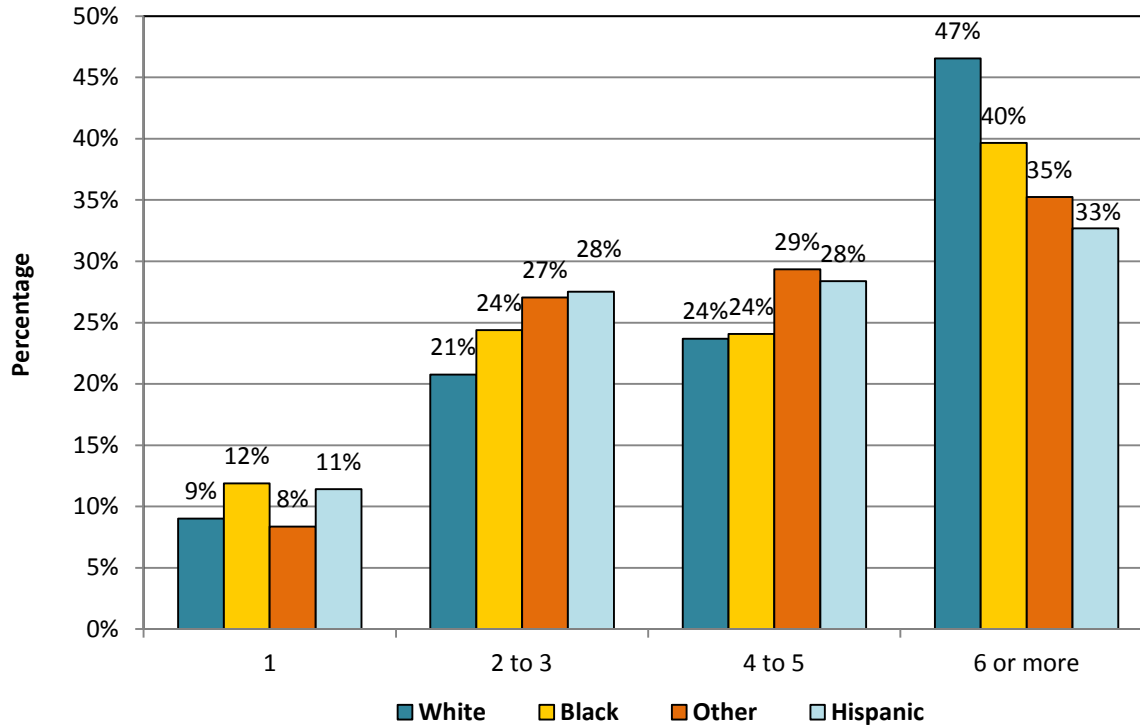


In CY 2012, female full-benefit dual-eligible beneficiaries were more likely than males to have a higher number (4 or more) of chronic conditions. The largest disparity was noted between the percentage of the women (45%) and the men (40%) with six or more chronic conditions.

Sources: MMIS2, Medicare claims



**Figure 22. Percentage of Full-Benefit Dual-Eligible Beneficiaries, by Number of Chronic Conditions and Race, CY 2012**

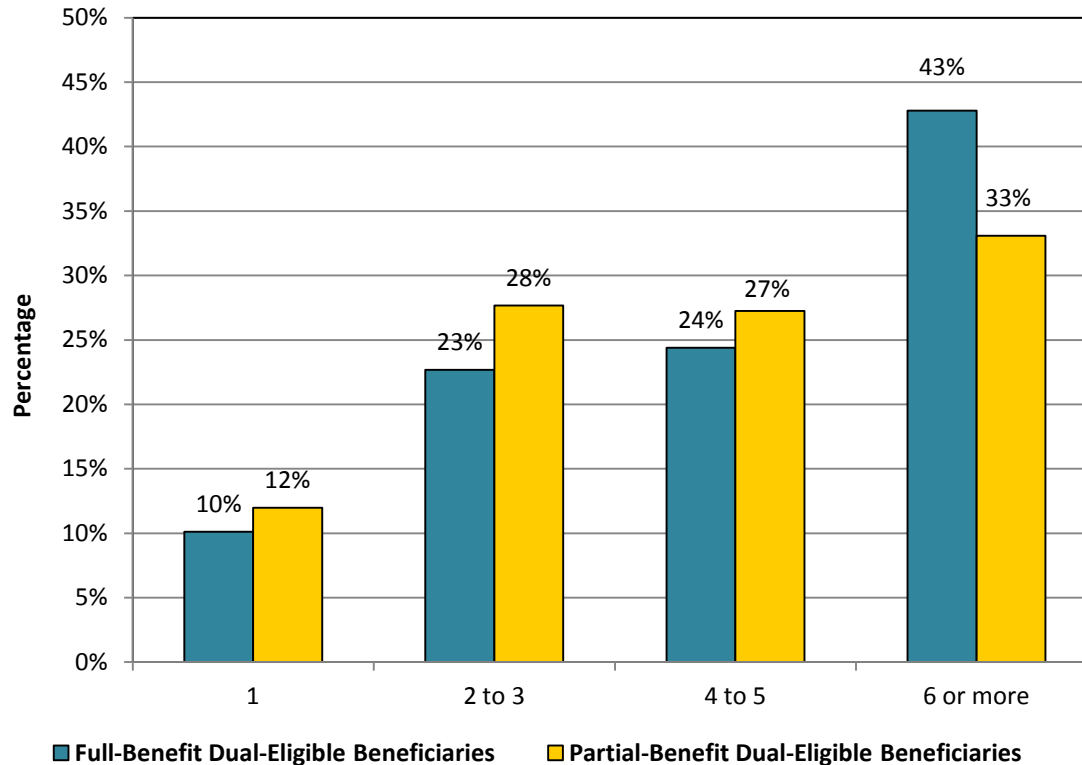


Full-benefit dual-eligible beneficiaries who are White had more chronic conditions than those of other races. In CY 2012, 47% of Whites had six or more chronic conditions. Hispanics were less likely than their counterparts to have six or more conditions.

\* Other includes Asian, Pacific Islander, and Native American

Sources: MMIS2, Medicare Claims

**Figure 23. Percentage of Full-Benefit Dual-Eligible Beneficiaries, by Number of Chronic Conditions and Benefit Category, CY 2012**

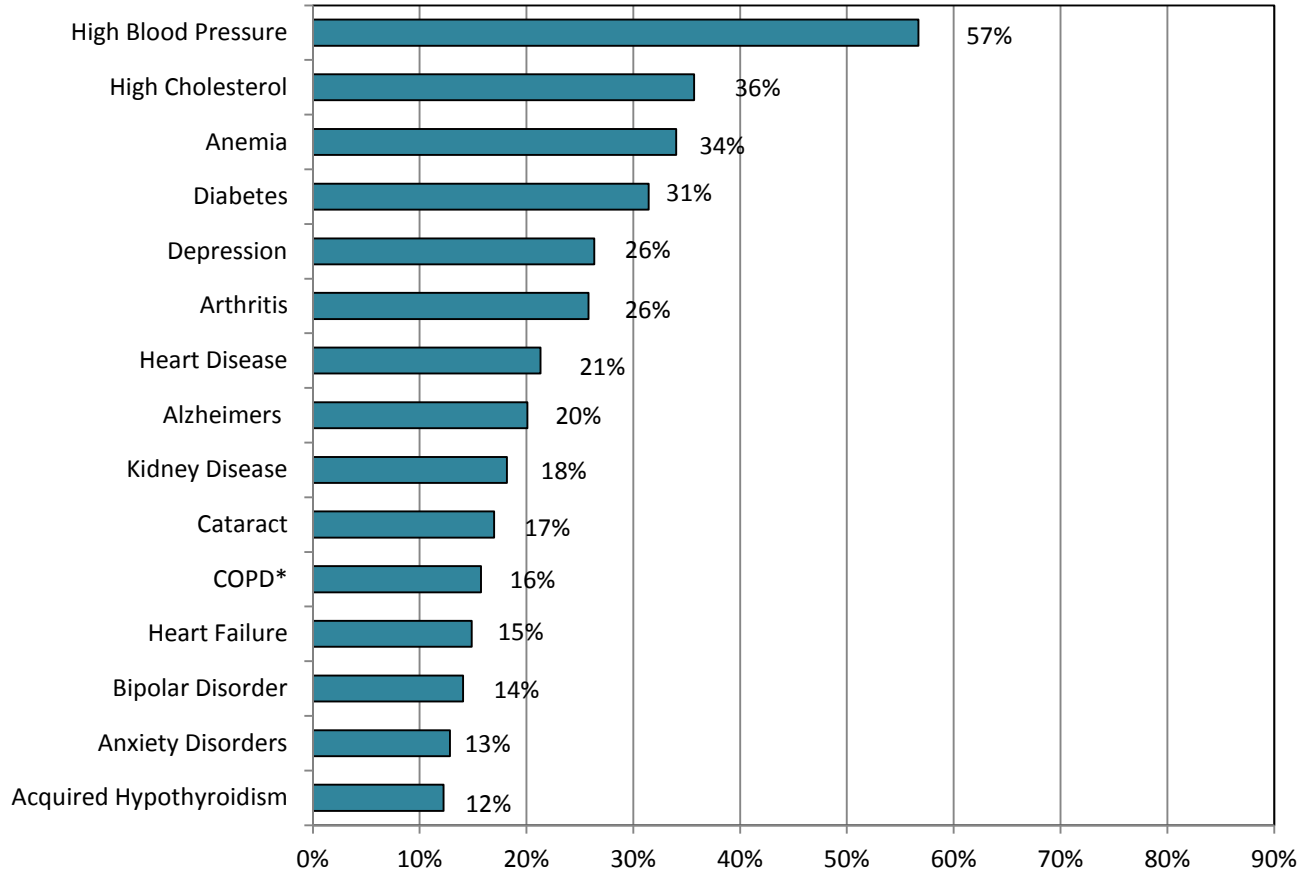


In CY 2012, full-benefit dual-eligible beneficiaries had more chronic conditions than did partial-benefit dual-eligibles.

There was little variation in the percentage of full-benefit and partial-benefit dual-eligibles with fewer than six chronic conditions; however, those with full benefits were more likely than those with partial benefits to have six or more chronic conditions.

Sources: MMIS2, Medicare Claims

**Figure 24. Percentage of Full-Benefit Dual-Eligible Beneficiaries with Selected Chronic Conditions, CY 2012**

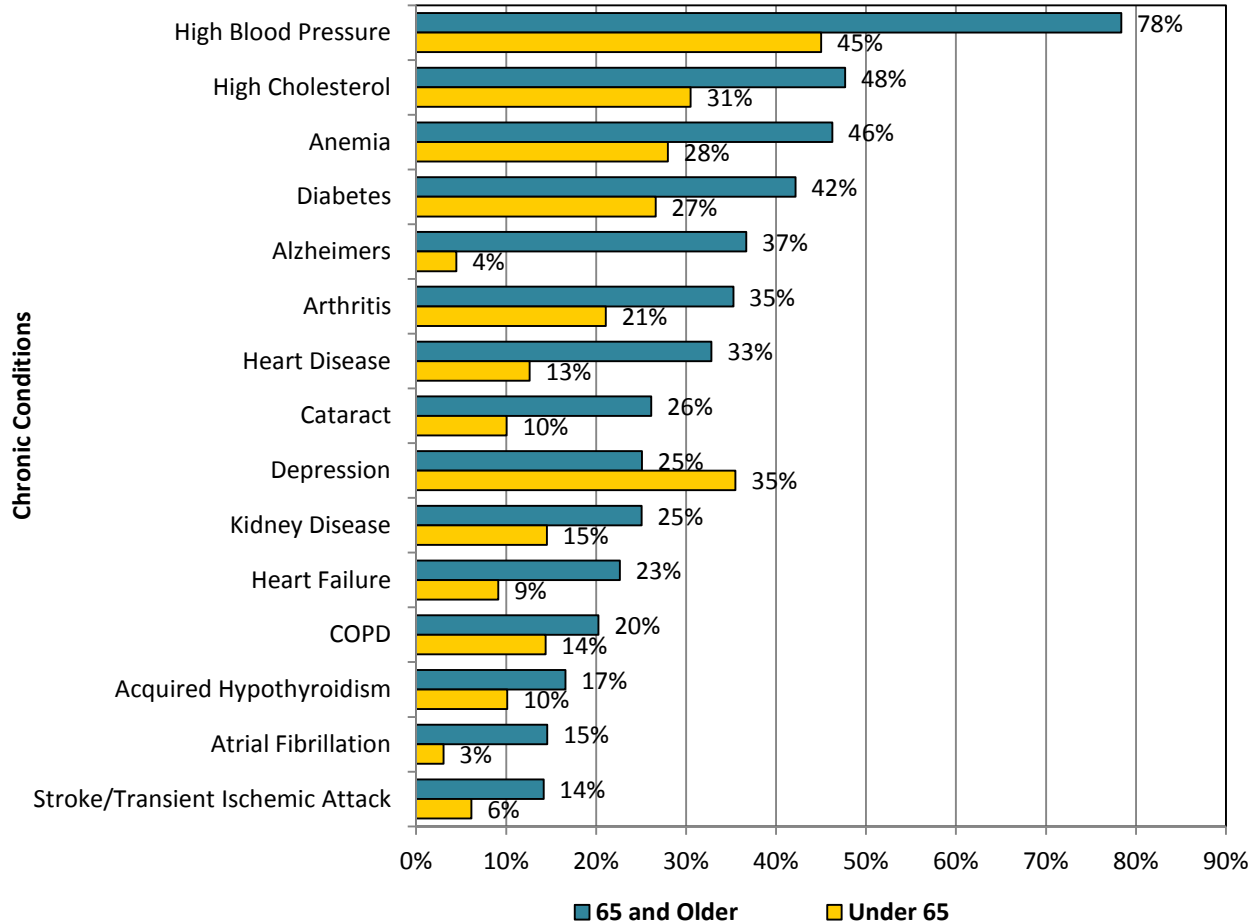


Over half (57%) of all full-benefit dual-eligible beneficiaries in CY 2012 had high blood pressure. High cholesterol, anemia, and diabetes were also among the most prevalent chronic conditions.

\* Chronic Obstructive Pulmonary Disease and Bronchiectasis

Sources: MMIS2, Medicare Claims

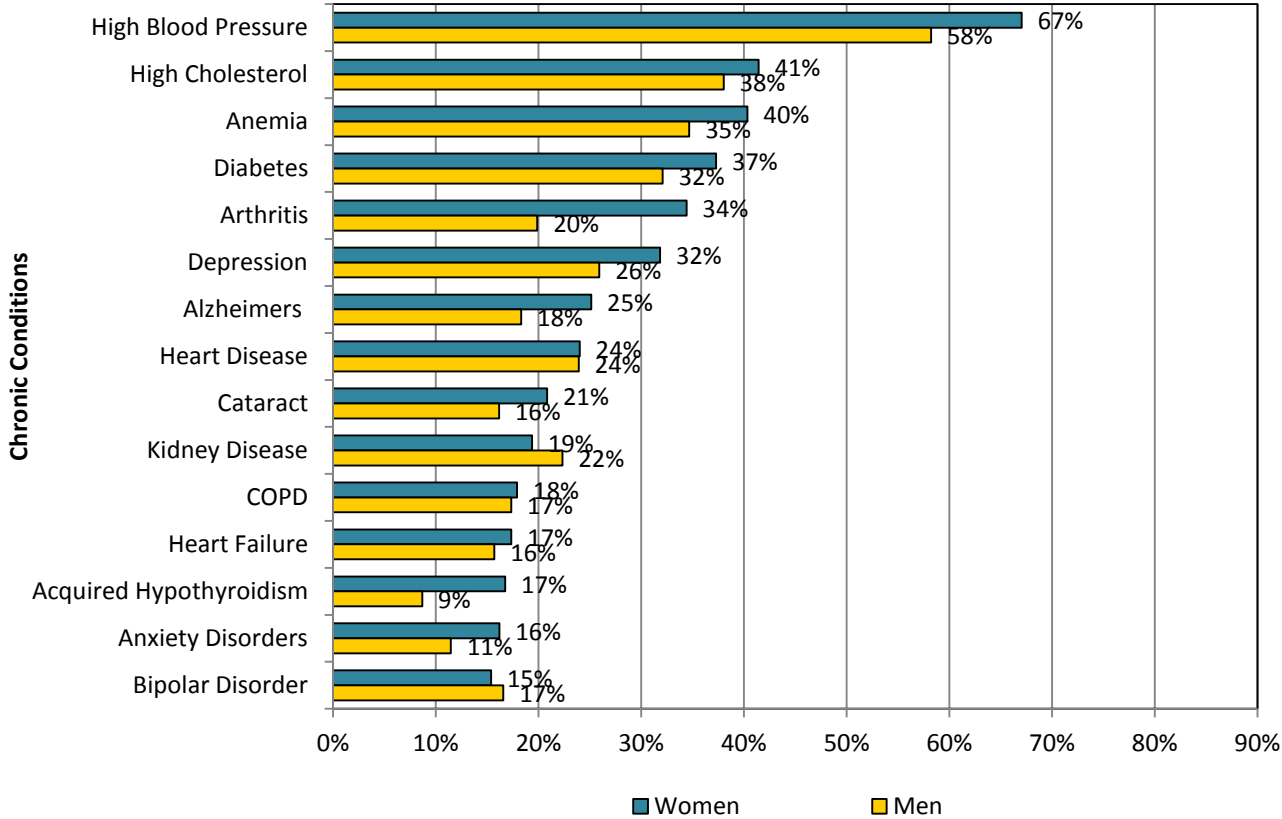
**Figure 25. Percentage of Full-Benefit Dual-Eligible Beneficiaries with Selected Chronic Conditions, by Age Group, CY 2012**



Full-benefit dual-eligible beneficiaries younger than 65 were more likely to have depression than those 65 and older in CY 2012. Otherwise, persons aged 65 and older were more likely than their younger counterparts to have a given chronic condition.

Sources: MMIS2, Medicare Claims

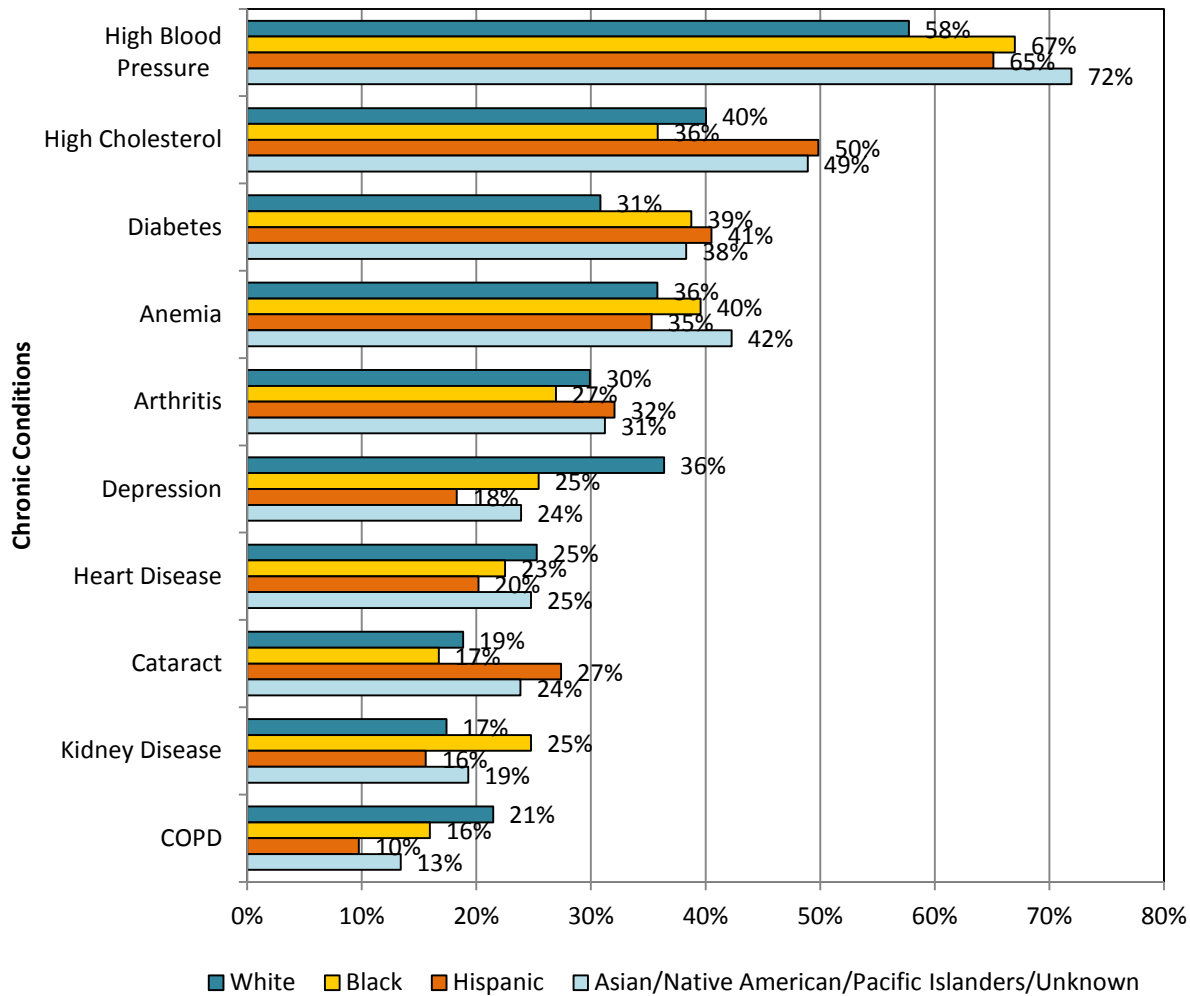
**Figure 26. Percentage of Full-Benefit Dual-Eligible Beneficiaries with Selected Chronic Conditions, by Gender, CY 2012**



With the exception of heart disease, kidney disease, and bipolar disorder, women had higher rates than men of most of the chronic conditions.

Sources: MMIS2, Medicare Claims

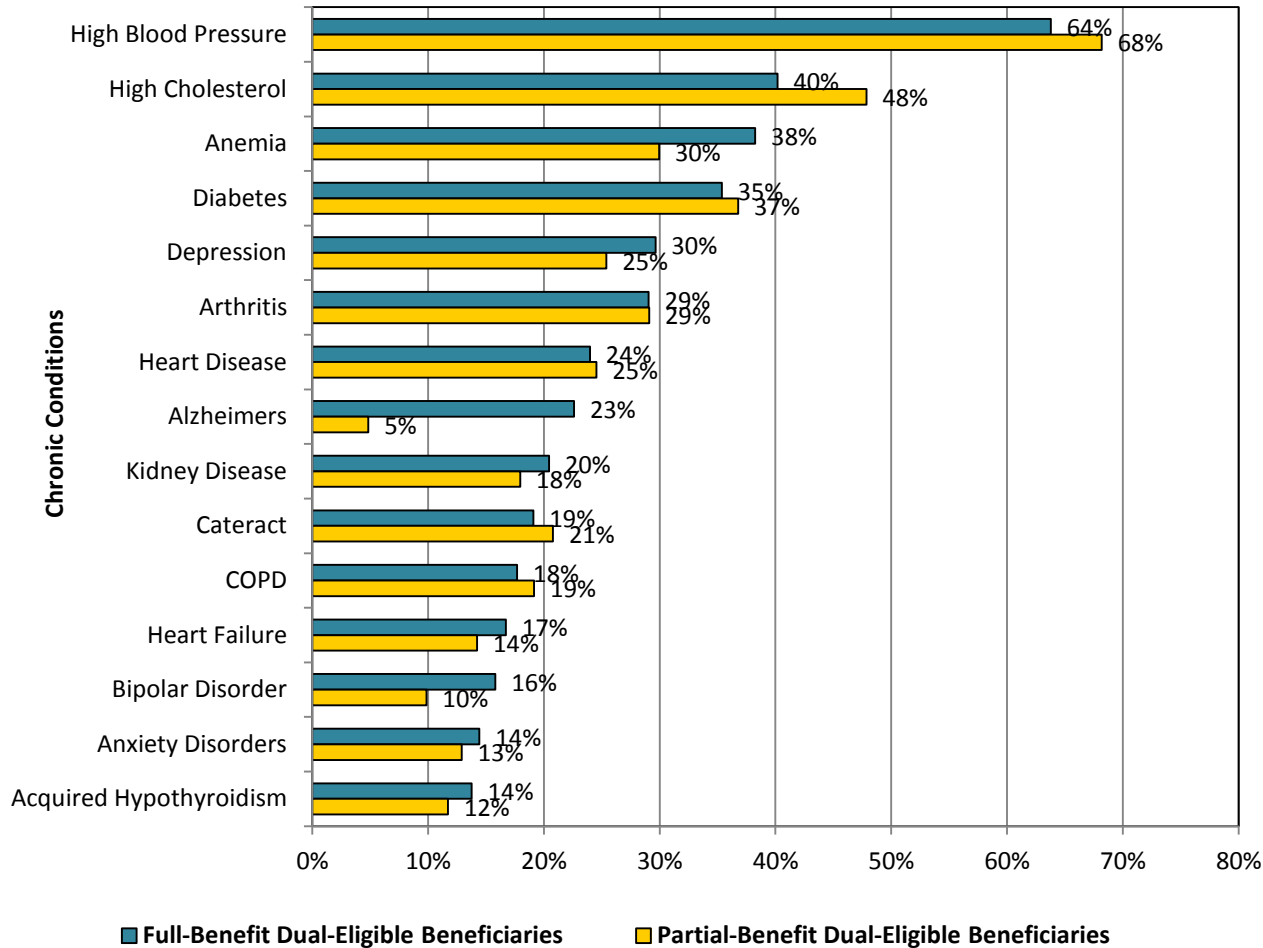
**Figure 27. Percentage of Full-Benefit Dual-Eligible Beneficiaries with Selected Chronic Conditions, by Race, CY 2012**



The incidence of chronic conditions among full-benefit dual-eligible beneficiaries varied by race. In CY 2012, high blood pressure was the most common condition within each racial group. Whites were less likely than the other racial groups to have diabetes but more likely to have depression and chronic obstructive pulmonary disease (COPD). Blacks were more likely to have kidney disease.

Sources: MMIS2, Medicare Claims

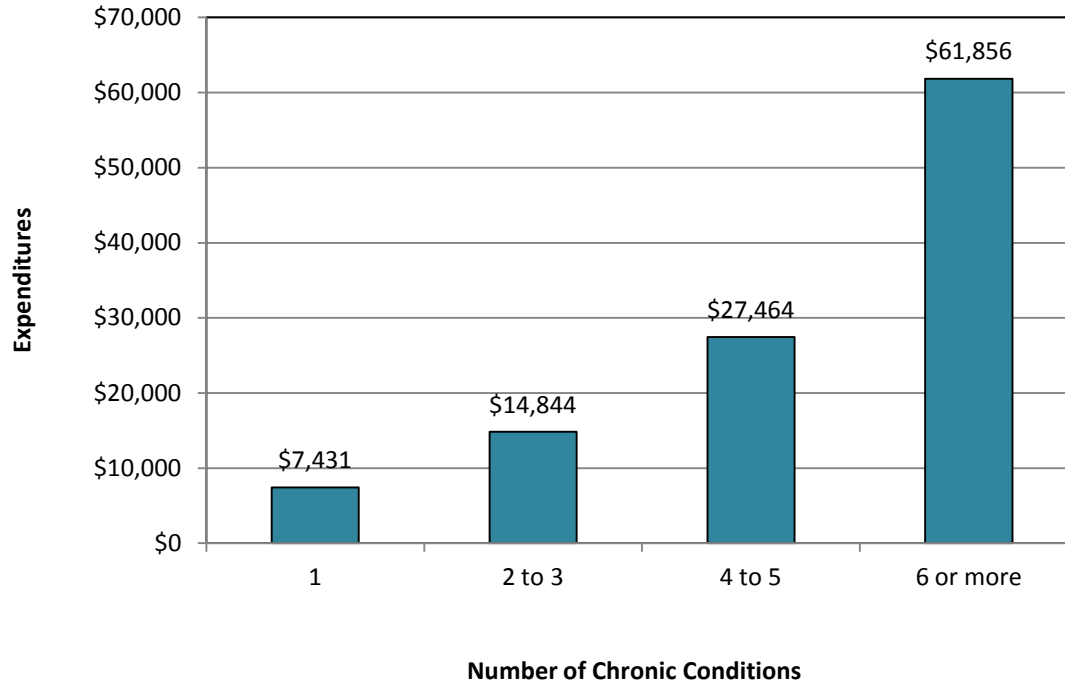
**Figure 28. Percentage of Full-Benefit Dual-Eligible Beneficiaries with Selected Chronic Conditions, by Benefit Category, CY 2012**



The incidence of chronic conditions varies between partial-benefit and full-benefit dual-eligible beneficiaries. In CY 2012, those with full benefits were much more likely than those with partial benefits to have Alzheimer’s disease.

Source: MMIS2, Medicare Claims

**Figure 29. Per Capita Medicare and Medicaid Expenditures, by Number of Chronic Conditions, CY 2012**

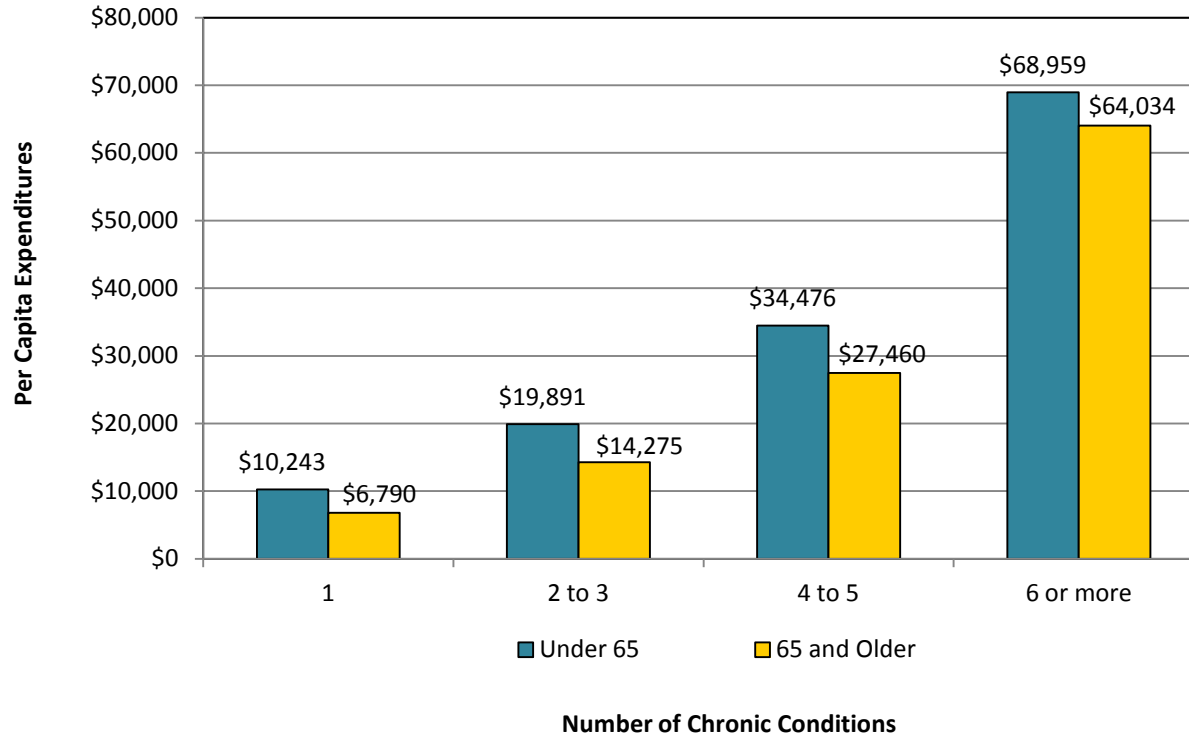


In CY 2012, per capita expenditures for full-benefit dual-eligibles increased as the number of chronic conditions increased. The average per-person expenditures for persons with one chronic condition were less than \$8,000, while the expenditures for persons with six or more conditions were nearly \$62,000.

Sources: MMIS2, Medicare Claims



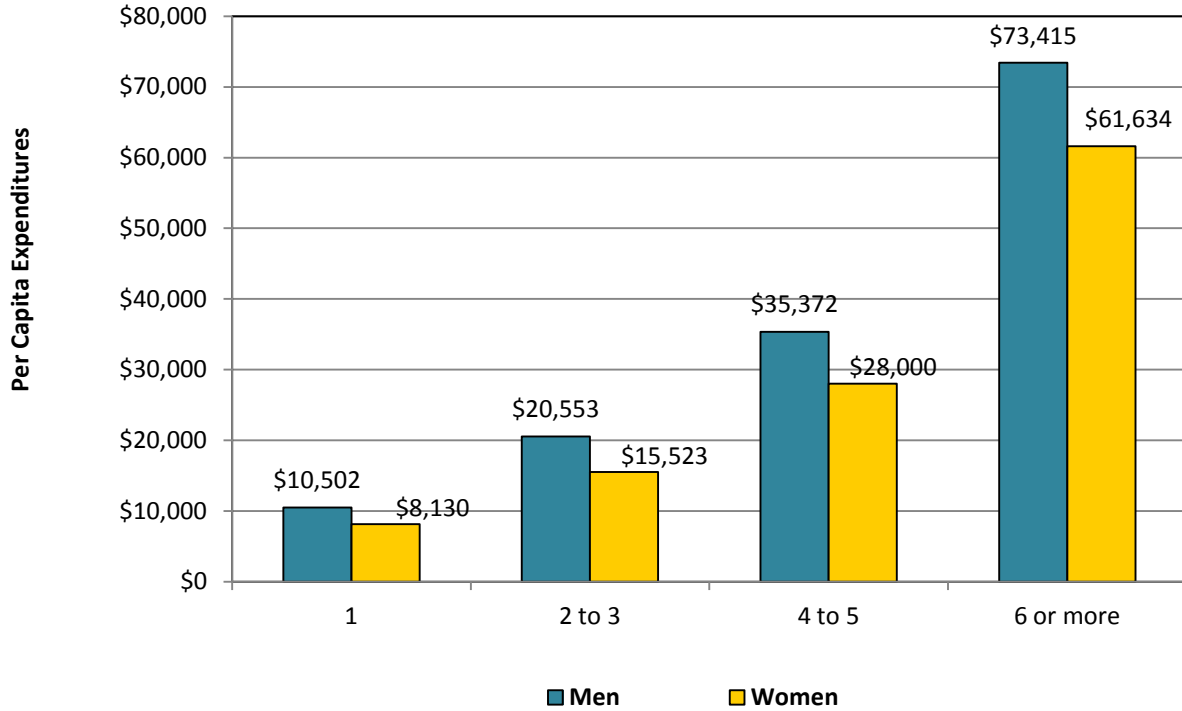
**Figure 30. Per Capita Medicare and Medicaid Expenditures, by Number of Chronic Conditions and Age Group, CY 2012**



In CY 2012, per capita expenditures for full-benefit dual-eligible beneficiaries younger than 65 years were higher than they were for full-benefit dual-eligibles aged 65 and older, regardless of the number of chronic conditions.

Sources: MMIS2, Medicare Claims

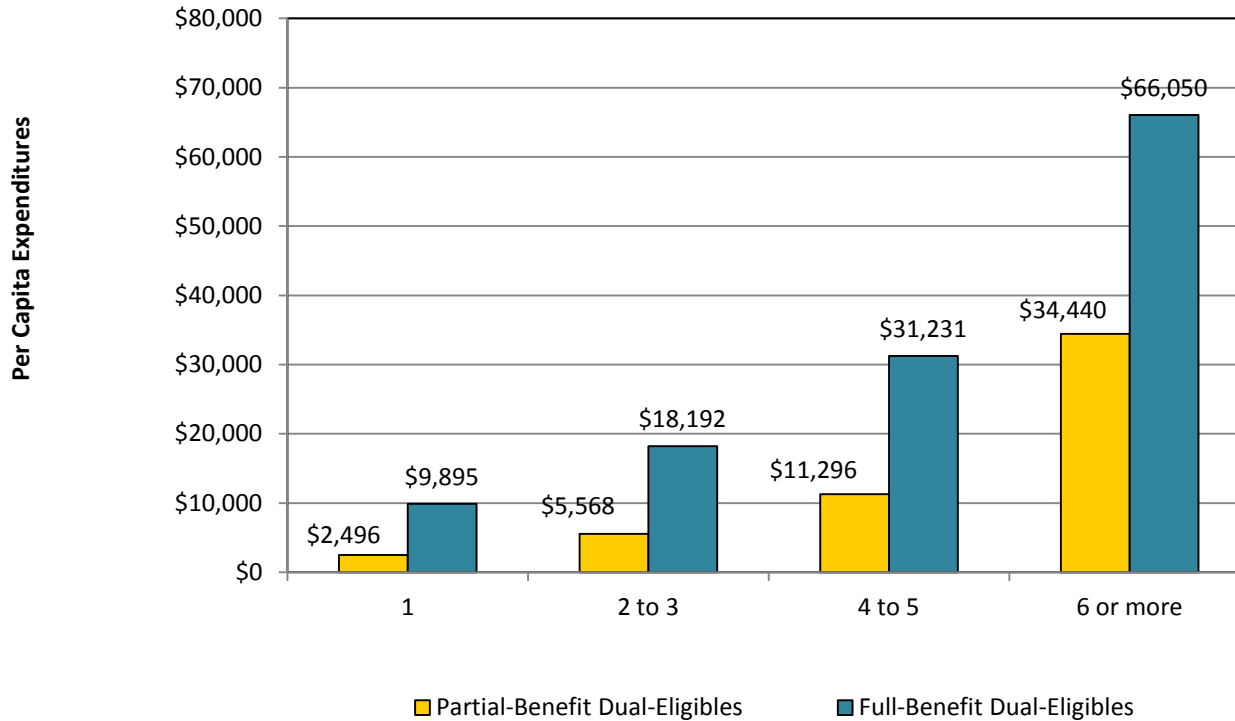
**Figure 31. Per Capita Medicare and Medicaid Expenditures, by Number of Chronic Conditions and Gender, CY 2012**



Average total spending was higher in CY 2012 for male full-benefit dual-eligibles than for females, and the difference increased as the number of chronic conditions increased. Per capita expenditures for men with six or more chronic conditions were more than \$11,000 greater than expenditures for women with the same number of conditions.

Sources: MMIS2, Medicare Claims

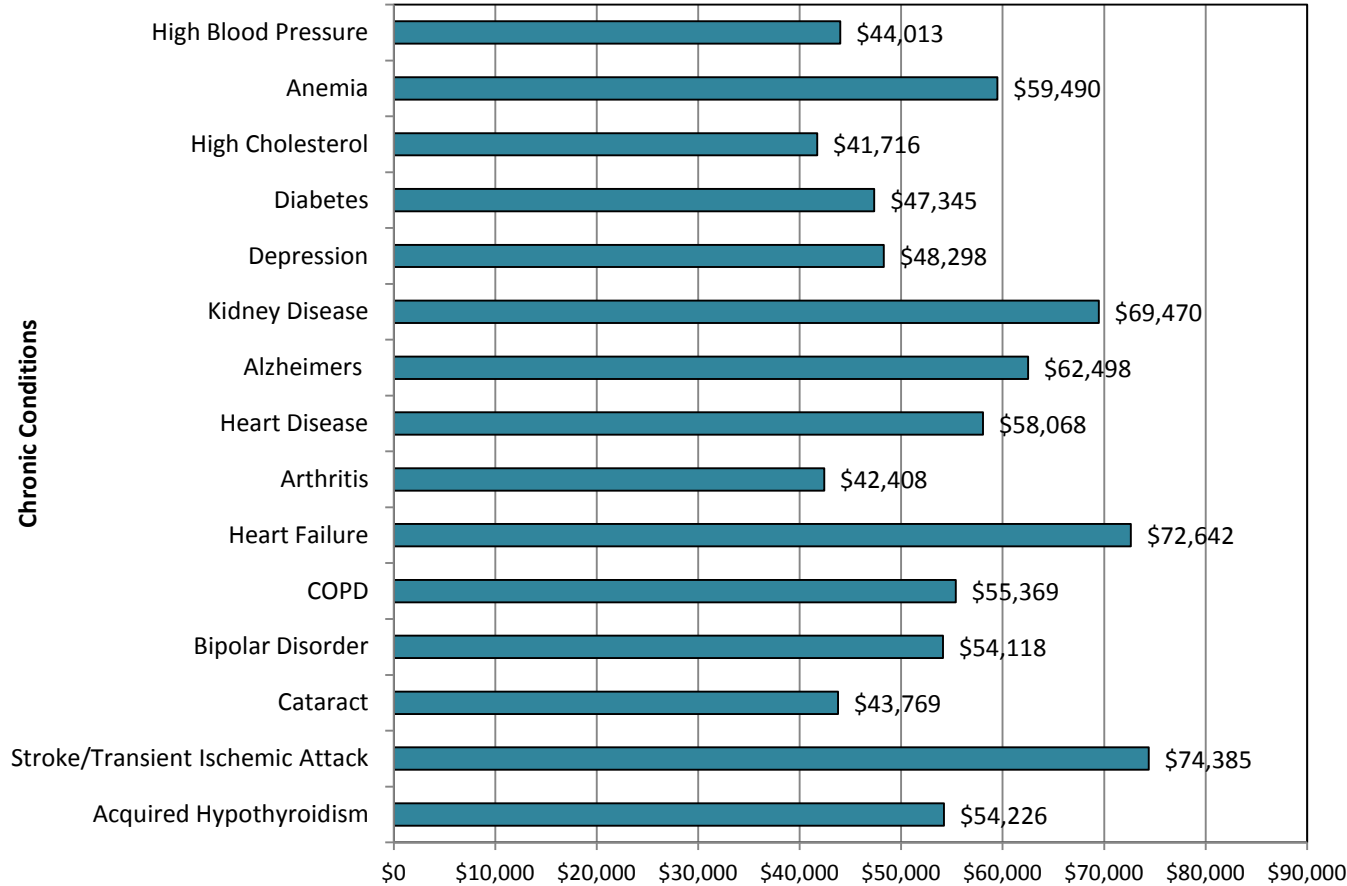
**Figure 32. Per Capita Medicare and Medicaid Expenditures, by Number of Chronic Conditions and Benefit Category, CY 2012**



In CY 2012, full-benefit dual-eligible beneficiaries had greater per capita costs than partial-benefit dual-eligibles at each level of chronic condition. The greatest disparity was noted in the “six or more conditions” category, in which full-benefit dual-eligibles cost nearly \$30,000 more than partial-benefit dual-eligibles.

Sources: MMIS2, Medicare Claims

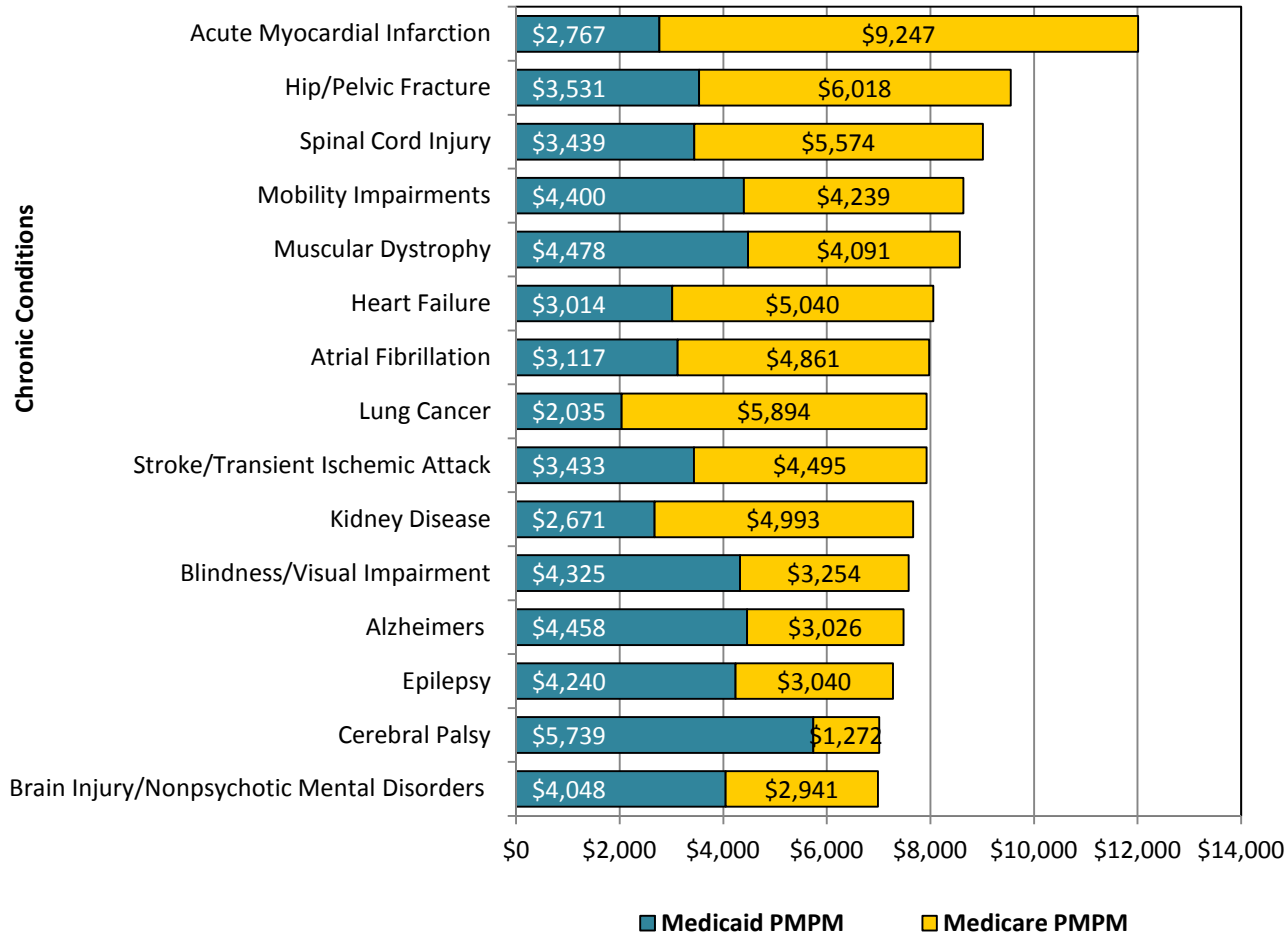
**Figure 33. Average Medicare and Medicaid Expenditures, by Type of Chronic Condition, CY 2012**



When expenditures were compared by type of chronic condition, full-benefit dual-eligible beneficiaries with heart failure, stroke/transient ischemic attack, or kidney disease were, on average, the most costly in CY 2012. The least costly of the chronic conditions were high cholesterol, cataracts, and arthritis.

Sources: MMIS2, Medicare Claims

**Figure 34. PMPM Medicare and Medicaid Expenditures for Full-Benefit Dual-Eligible Beneficiaries, by Chronic Condition, CY 2012**



Medicare generally pays more than Medicaid for health care services for beneficiaries with chronic conditions; however, this does vary by chronic condition. PMPM expenditures for full-benefit dual-eligible beneficiaries with acute myocardial infarction (also known as a heart attack) were a little over \$12,000 in CY 2012. Of this amount, Medicare paid \$9,247 (77%).

Sources: MMIS2, Medicare Claims

**Figure 35. Co-Morbidities, by Selected Chronic Conditions, CY 2012**

	Only Condition	1 or 2 Other Conditions	3 or 4 Other Conditions	5 or More Other Conditions
Acquired Hypothyroidism	1%	7%	19%	73%
Alzheimer's	2%	9%	19%	70%
Anemia	1%	9%	20%	70%
Anxiety Disorders	1%	11%	20%	67%
Arthritis	2%	12%	22%	64%
Bipolar Disorder	2%	12%	19%	66%
Cataract	2%	10%	21%	67%
COPD	1%	8%	17%	74%
Depression	3%	13%	21%	64%
Diabetes	2%	11%	22%	65%
Heart Disease	1%	5%	15%	79%
Heart Failure	<1%	4%	11%	85%
High Blood Pressure	2%	14%	26%	59%
High Cholesterol	1%	11%	25%	63%
Kidney Disease	1%	6%	15%	78%

Co-morbid conditions are conditions that exist simultaneously with another medical condition. Co-morbidity among chronic conditions is very common. Heart failure was one of the most highly co-morbid conditions: 85% of persons with this condition had five or more other chronic conditions.

Sources: MMIS2, Medicare Claims

**Figure 36. Per Capita Medicare and Medicaid Expenditures, by Chronic Condition Dyads, CY 2012**

Chronic Condition Dyads	Prevalence	Per Capita Costs*
<b>Age 65 and Older</b>		
High Cholesterol, High Blood Pressure	42.2%	\$45,666
Diabetes, High Blood Pressure	35.7%	\$55,353
Anemia, High Blood Pressure	39.3%	\$66,304
High Blood Pressure, Arthritis	29.2%	\$51,387
High Blood Pressure, Heart Disease	29.7%	\$64,005
<b>Under Age 65</b>		
High Cholesterol, High Blood Pressure	23.9%	\$49,699
Diabetes, High Blood Pressure	21.9%	\$59,487
Anemia, High Blood Pressure	19.7%	\$79,105
High Blood Pressure, Depression	18.9%	\$58,270
Bipolar Disorder, Depression	16.2%	\$45,186

\*Per capita expenditures do not include Medicare Part D Claims.

Sources: MMIS2, Medicare Claims

High blood pressure or high cholesterol were represented in most of the dyad combinations.

High cholesterol and high blood pressure was the most common co-morbid chronic condition dyad in CY 2012: 42% of full-benefit dual-eligible beneficiaries aged 65 and older and 24% of those under the age of 65 had this dyad of conditions. At \$49,699 on average, it cost \$4,033 more per person per year to treat these conditions for persons under the age of 65 than for those aged 65 and older.

**Figure 37. Per Capita Medicare and Medicaid Expenditures, by Chronic Condition Triads, CY 2012**

Chronic Condition Triads	Prevalence	Per Capita Costs*
Diabetes, High Cholesterol, High Blood Pressure	22.4%	\$51,765
Anemia, High Cholesterol, High Blood Pressure	19.6%	\$65,161
Anemia, Diabetes, High Blood Pressure	18.6%	\$76,768
High Cholesterol, High Blood Pressure, Heart Disease	16.2%	\$61,651
Anemia, Chronic Kidney Disease, High Blood Pressure	15.7%	\$89,003

**Note:** Denominator is number of beneficiaries with at least three chronic conditions (n=61,979).

\*Per capita expenditures do not include Medicare Part D Claims.

**Sources:** MMIS2, Medicare Claims

Diabetes, high cholesterol, and high blood pressure formed the most prevalent triad of co-morbid conditions among full-benefit dual-eligibles in CY 2012. The anemia, chronic kidney disease, and high blood pressure triad was, on average, the most costly triad in CY 2012.

**Figure 38. Five Most Costly Chronic Condition Dyads, CY 2012**

Chronic Condition Dyads	Prevalence*	Per Capita Cost
Muscular Dystrophy, Sensory - Deafness and Hearing Impairment	<1%	\$562,010
Autism Spectrum Disorders, Spinal Cord Injury	<1%	\$473,037
Acquired Hypothyroidism, Muscular Dystrophy	<1%	\$224,616
Cystic Fibrosis and Other Metabolic Developmental Disorders, Learning Disabilities	<1%	\$224,191
Muscular Dystrophy, Stroke/Transient Ischemic Attack	<1%	\$181,658

\* Denominator is the number of beneficiaries with at least two chronic conditions (n=70,437).

**Sources:** MMIS2, Medicare Claims

The combination of muscular dystrophy (MD) and deafness/hearing impairment was the most costly dyad in CY 2012. This high cost is most likely due to MD-related costs.



## Appendix

**Figure A. Full-Benefit Dual-Eligible Beneficiaries as a Percentage of All Medicaid Beneficiaries Aged 16 and Older, by County and Age Group, CY 2012**

County	Full-Duals Aged 16 to 64	Medicaid Enrollees Aged 16 to 64	%	Full-Duals Aged 65 and Older	Medicaid Enrollees Aged 65 and Older	%	All Full-Dual Eligibles	All Medicaid Enrollees	%
Allegany	954	11,515	8%	1,197	2,084	57%	2,151	13,599	16%
Anne Arundel	2532	38,706	7%	2,274	4,212	54%	4,806	42,918	11%
Baltimore City	10,161	154,251	7%	9,414	17,540	54%	19,575	171,791	11%
Baltimore County	5,879	82,246	7%	6,556	10,914	60%	12,435	93,160	13%
Calvert	411	7,485	5%	457	819	56%	868	8,304	10%
Caroline	387	5,521	7%	472	811	58%	859	6,332	14%
Carroll	929	10,774	9%	955	1,598	60%	1,884	12,372	15%
Cecil	852	13,339	6%	587	1,134	52%	1,439	14,473	10%
Charles	776	12,962	6%	919	1,527	60%	1,695	14,489	12%
Dorchester	497	6,379	8%	507	996	51%	1,004	7,375	14%
Frederick	1,185	16,272	7%	1,253	2,249	56%	2,438	18,521	13%
Garrett	324	4,575	7%	461	855	54%	785	5,430	14%
Harford	1,382	19,110	7%	1,210	2,222	54%	2,592	21,332	12%
Howard	1,038	15,926	7%	1,972	3,189	62%	3,010	19,115	16%
Kent	171	2,476	7%	211	434	49%	382	2,910	13%
Montgomery	3,398	60,375	6%	10,593	15,717	67%	13,991	76,092	18%
Prince George's	4,186	83,724	5%	4,924	9,023	55%	9,110	92,747	10%
Queen Anne's	249	4,464	6%	244	539	45%	493	5,003	10%
St. Mary's	646	10,219	6%	613	1,208	51%	1,259	11,427	11%
Somerset	289	4,148	7%	355	669	53%	644	4,817	13%
Talbot	274	3,766	7%	336	701	48%	610	4,467	14%
Washington	1,619	20,069	8%	1,388	2,547	54%	3,007	22,616	13%
Wicomico	1,065	15,642	7%	932	1,793	52%	1,997	17,435	11%
Worcester	348	6,307	6%	421	873	48%	769	7,180	11%
Out of State	174	1,451	12%	173	266	65%	347	1,717	20%
<b>Total</b>	<b>39,726</b>	<b>611,702</b>	<b>6%</b>	<b>48,424</b>	<b>83,920</b>	<b>58%</b>	<b>88,150</b>	<b>695,622</b>	<b>13%</b>

Full-benefit dual-eligible beneficiaries as a percentage of all Maryland Medicaid enrollees aged 16 and older ranged across Maryland counties from a low of 10 percent to a high of 18 percent. This percentage ranged from 6% to 9% for full-duals aged 16-64 and from 45% to 67% for full-duals aged 65 and older.

Sources: MMIS2

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