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Medicaid Long-Term Services and Supports in Maryland: Nursing Facilities
FY 2006 to FY 2009

A Chart Book

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Overview of Medicaid Long-Term Services and Supports in Maryland

The Nursing Facilities Chart Book is one in a series of five that explores service utilization and expenditures for Medicaid long-term services and supports in Maryland. Together the five chart books provide an overview of the number of Marylanders using long-term services and supports and the cost to Medicaid to finance these services. Other chart books in the *Medicaid Long-Term Services and Supports in Maryland* series are:

- *The Autism Waiver*
- *The Living at Home Waiver*
- *The Medical Day Care Services Waiver*
- *The Older Adults Waiver*

Maryland's Older Adults Waiver, Living at Home Waiver, and Autism Waiver provide community-based services such as personal and attendant care, assisted living services, case management, and intensive individual support services to older adults with low incomes and persons with disabilities. The Medical Day Care Services Waiver is a single-service waiver that provides medical day care services only. Participants in the Living at Home Waiver and Older Adults Waiver also receive medical day care services.

In FY 2009, a total of 9,305 individuals were enrolled in the four Medicaid home and community-based services waivers and 22,635 individuals had a Medicaid-paid nursing facility stay. FY 2009 expenditures for waiver participants and Medicaid nursing facility payments totaled $1.4 billion.

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Introduction

This chart book provides information about Maryland Medicaid participants residing in nursing facilities. It summarizes demographic, service utilization, acuity, expenditure, and length of stay data for state fiscal years (FYs) 2006 through 2009. The data are presented through a series of figures that illustrate trends in nursing facility utilization, along with accompanying narrative text. Notable trends in the data include:

- The number of Medicaid nursing facility residents decreased 4% between FY 2006 and FY 2009, while total Medicaid nursing facility expenditures increased 14% over the same time period.
- Following a 5% decline from FY 2006 to FY 2008, the number of residents under age 65 in nursing facilities increased 3% from FY 2008 to FY 2009.
- The number of nursing facility residents per 10,000 population declined from FY 2006 to FY 2009 in all regions of the state except the Eastern Shore.
- The 65 and older population typically requires a higher level of care in nursing facilities. However, from FY 2008 to FY 2009, residents under age 65 requiring "heavy special" care, as defined in Figure 3, increased 11%; those requiring "heavy" care increased 16%.
- Inpatient costs continued to be a major component of other Medicaid services for the under age 65 population. From FY 2008 to FY 2009, inpatient costs for this group increased 29%.
- While there was a marked decrease in the number of nursing facility stays from FY 2006 to FY 2009, the average length of stay increased 36% for the under age 65 group and 8% for the age 65 and over group.

Chart Book Organization

The data in this chart book are presented in four sections.

- **Demographics and Utilization:** This section includes data on the number of nursing facility residents and utilization by region and the state as a whole.
- **Acuity Levels:** This section presents data on the level of care and diagnoses for nursing facility residents.
- **Medicaid Expenditures:** This section contains information about Medicaid expenditures for Medicaid-eligible nursing facility residents. It examines costs for nursing facility services, as well as other Medicaid services that an individual may receive while residing in a nursing facility, such as pharmacy and physician services.
- **Admissions and Length of Stay:** This section considers average length of stay for nursing facility residents. It also examines the settings from which residents have been admitted to the nursing facility.

Each section includes data for the nursing facility population as a whole, residents younger than 65, and residents aged 65 and older.

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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 eligible for Medicaid services in Maryland during the relevant fiscal year, including Medicaid eligibility category and fee-for-service claims.

- **DHMH Decision Support System (DSS)**: This system provides summary reports based on MMIS2 files and functions as a data resource for figures in this chart book.

- **Maryland Office of Health Care Quality, Minimum Data Set (MDS)**: The MDS is a federally mandated assessment instrument that is conducted for each nursing facility resident upon admission and at least quarterly thereafter. Hilltop collects and refines MDS data for Maryland nursing facilities on a routine basis. Hilltop's refined dataset was used in this chart book.

- **U.S. Census Bureau, Population Division**: Annual Estimates of the Resident Population for the United States, Regions, States, and Puerto Rico: April 1, 2000, to July 1, 2009.

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Demographics
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Utilization

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Figure 1. Number of Medicaid Nursing Facility Residents, by Age Cohort*

Age	FY 06	FY 07	FY 08	FY 09	% Change FY 06 - FY 09
All Ages	23,646	23,216	22,719	22,635	-4.3%
Under 65	4,785	4,679	4,529	4,669	-2.4%
65 and Older	18,861	18,537	18,190	17,966	-4.7%

 * Number of individuals having at least one Medicaid-paid day in a nursing facility in the fiscal year. Individuals who entered, left, and reentered a nursing home during a given fiscal year were counted only once during that fiscal year. Unless otherwise noted, all subsequent charts contain *unduplicated* waiver participant counts.

Source: DSS.

The total number of nursing facility residents declined by 1,011; from 23,646 in FY 2006 to 22,635 in FY 2009.

While the 65 and older age cohort in nursing facilities diminished over the four-year reporting period, the under 65 population increased 3% from FY 2008 to FY 2009.

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Figure 2. Medicaid Nursing Facility Residents per 10,000 Population, by Region
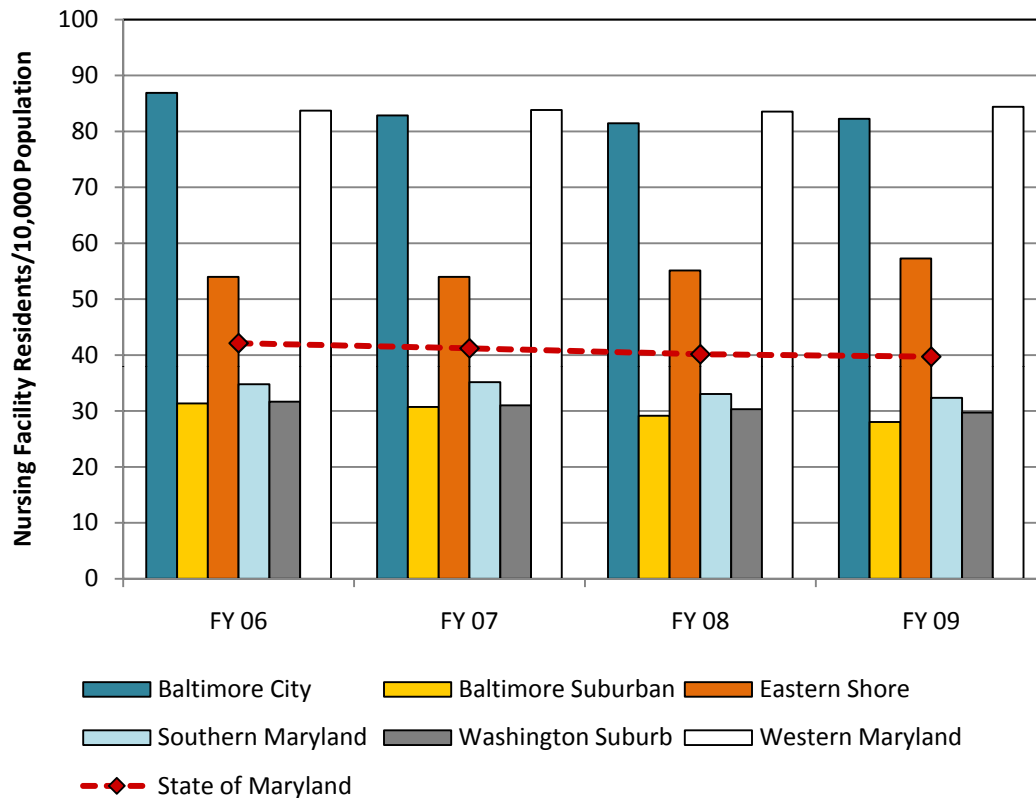
Baltimore City and Western Maryland had approximately twice the number of nursing facility residents per 10,000 population compared to the state average.

The Eastern Shore was the only region to see an increase (6%) from FY 2006 to FY 2009.

The number of residents in Baltimore Suburban nursing facilities dropped 10%, from 31 per 10,000 population in FY 2006 to 28 per 10,000 population in FY 2009.

Note: This chart book uses the following regions, which are based on the individual's county of residence: Baltimore City, Baltimore Suburban (Anne Arundel , Baltimore, Carroll, Harford, and Howard Counties), Eastern Shore (Caroline, Cecil, Dorchester, Kent, Queen Anne's, Somerset, Talbot, Wicomico, and Worcester Counties), Southern Maryland (Calvert, Charles, and St. Mary's Counties), Washington Suburban (Frederick, Montgomery, and Prince George's Counties), and Western Maryland (Allegany, Garrett, and Washington Counties).

Sources: DSS, U.S. Census Bureau.

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Figure 3. Medicaid Nursing Facility Residents per 10,000 Population, by County, FY 2009
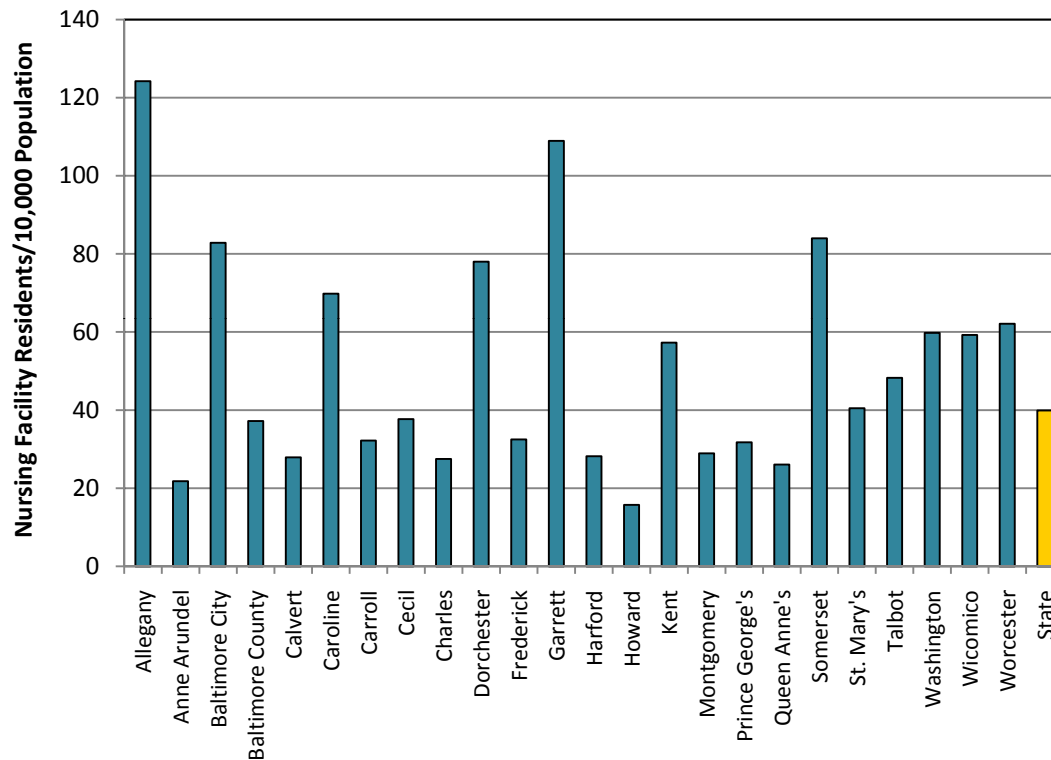
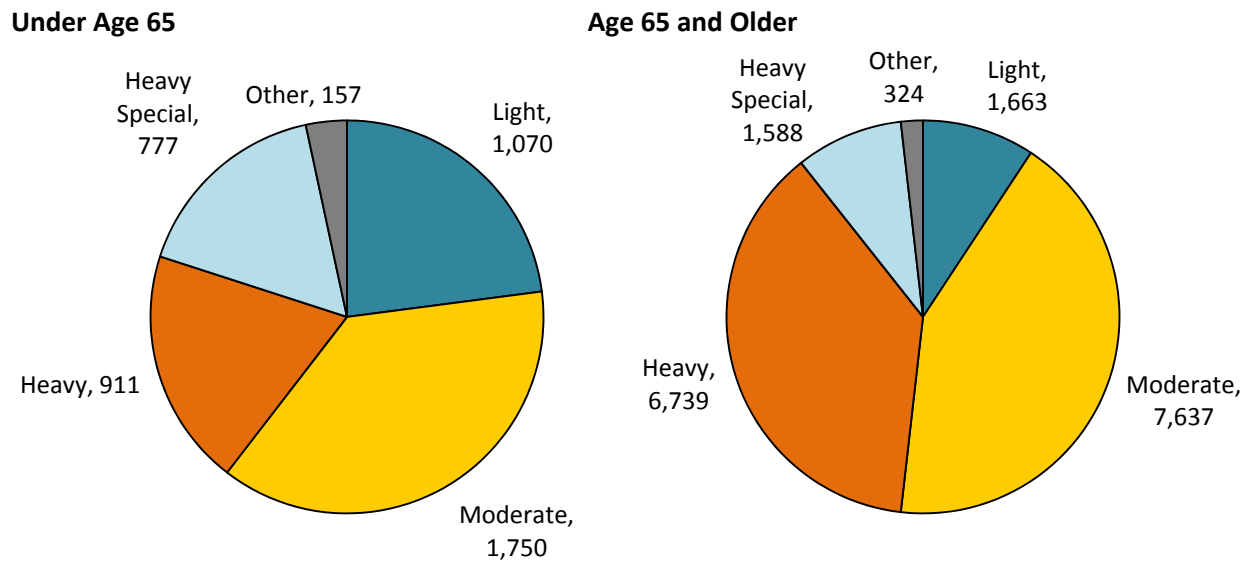At three times the state average, Allegany County had the largest number of nursing facility residents per 10,000 population. Baltimore City, Garrett County, and Somerset County had more than two times the state average of nursing facility residents per 10,000 population.

Sources: DSS, U.S. Census Bureau.

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Acuity Levels

Figure 4. Medicaid Nursing Facility Residents, by Age Cohort and Level of Care, FY 2009

Under Age 65

Heavy Special, 777
Other, 157
Light, 1,070
Heavy, 911
Moderate, 1,750

Age 65 and Older

Heavy Special, 1,588
Other, 324
Light, 1,663
Heavy, 6,739
Moderate, 7,637

The 65 and older population typically requires a higher level of care in nursing facilities.

In FY 2009, 46% of the population aged 65 and older required "heavy" or "heavy special" care, compared to 36% of the under 65 population.

The number of nursing facility residents under age 65 increased slightly from FY 2008 to FY 2009 (see Figure 1). This group required a higher level of care. From FY 2008 to FY 2009, the number of those needing "heavy special" care increased 11%; those needing "heavy" care increased 16%.

Note: The total number of nursing facility residents with a level of care designation in FY 2009 was 22,616. Levels of Care are defined as follows: Light – Dependent in 0, 1, or 2 ADLs; Moderate – Dependent in 3 or 4 ADLs; Heavy – Dependent in all 5 ADLs; Heavy Special – Dependent in all 5 ADLs and requires and receives one or more of the following: Communicable Disease Care, Central Intravenous Line, Peripheral Intravenous Care, Decubitus Ulcer Care, Tube Feeding, Ventilator Care, or Support Surface A or B during the majority of the month; Other – Either Not Specified, Therapeutic Bed Hold, Hospital Bed Hold, or Medicare Copay.
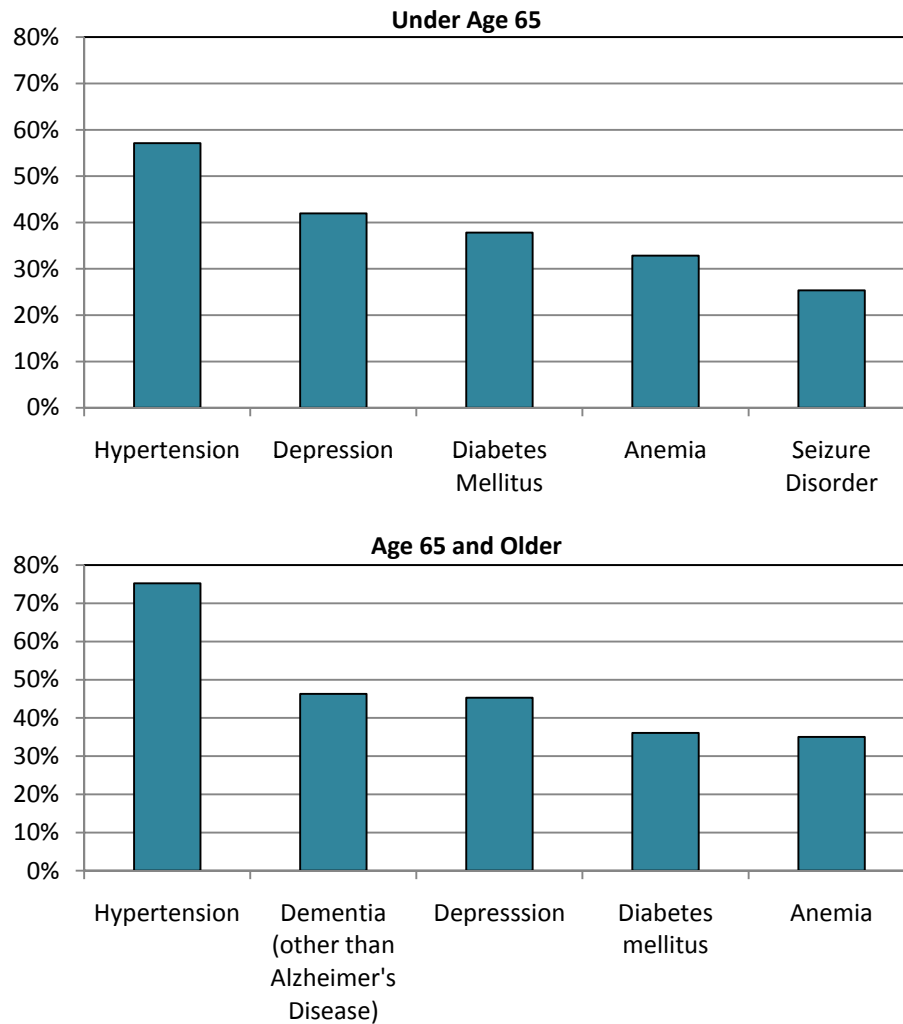
Source: MMIS2.

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Figure 5. Top Five Diagnoses for Medicaid Nursing Facility Residents, by Age Cohort, FY 2009

Under Age 65

Diagnosis	Percentage
Hypertension	57%
Depression	42%
Diabetes Mellitus	38%
Anemia	33%
Seizure Disorder	25%

Age 65 and Older

Diagnosis	Percentage
Hypertension	75%
Dementia (other than Alzheimer's Disease)	46%
Depresssion	45%
Diabetes mellitus	36%
Anemia	35%

In FY 2009, hypertension was the most common diagnosis for both age cohorts (under age 65 and age 65 and older) among nursing facility residents.

More than 40% in both age cohorts had depression.

Among those aged 65 and older, 46% had a dementia diagnosis.

Note: From Section I. Disease Diagnoses on the MDS 2.0. These are diseases that the assessor determines have "a relationship to current ADL status, cognitive status, mood and behavior status, medical treatments, nursing monitoring, or risk of death."

Source: Hilltop Refined MDS Data, Section I.1.

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Medicaid Expenditures

Figure 6. Total Medicaid Expenditures for Nursing Facility Residents, by Age Cohort

Note: Total Medicaid expenditures include a) Medicaid nursing facility expenditures, b) other Medicaid expenditures with dates of service concurrent to a resident's nursing facility claims, and c) Medicaid expenditures for an intervening hospital stay (i.e., the beginning day of the hospital claim coincides with the last day of a nursing facility claim, and the last day of the hospital claim coincides with the beginning day of a nursing facility claim).

Source: MMIS2.
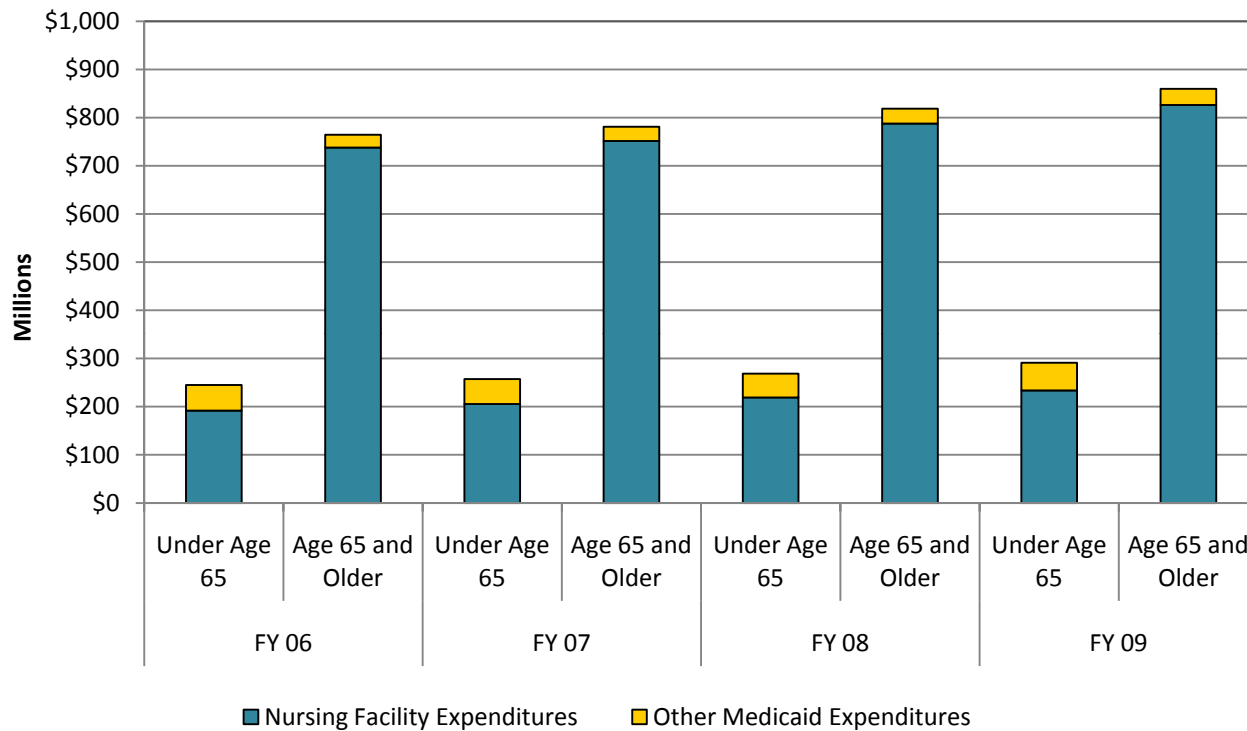
Total Medicaid expenditures for nursing facility residents under age 65 increased 19% from FY 2006 to FY 2009.

Total Medicaid expenditures for nursing facility residents aged 65 and older increased 13% from FY 2006 to FY 2009.
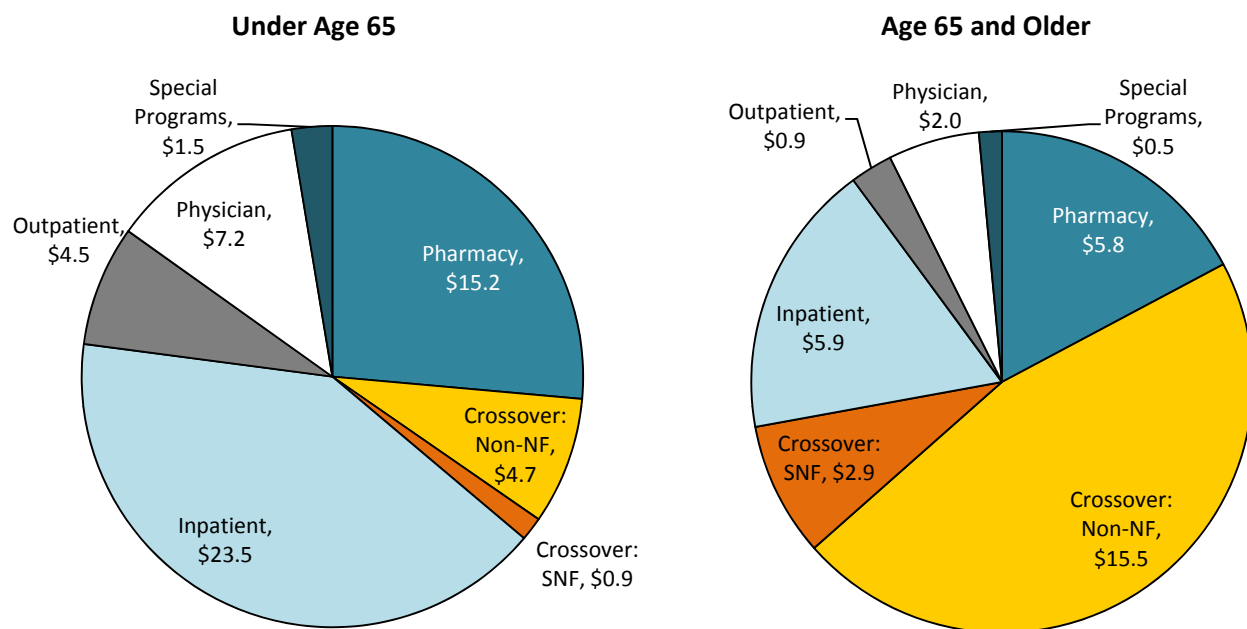
For both age cohorts, the distribution between nursing facility expenditures and other Medicaid expenditures remained relatively constant.

Total Medicaid nursing facility expenditures for all ages increased 14% between FY 2006 and FY 2009.

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Figure 7. Other Medicaid Service Expenditures for Nursing Facility Residents in Millions, by Age Cohort, FY 2009

Under Age 65

Special Programs, $1.5
Outpatient, $4.5
Physician, $7.2
Pharmacy, $15.2
Inpatient, $23.5
Crossover: Non-NF, $4.7
Crossover: SNF, $0.9

Age 65 and Older

Outpatient, $0.9
Physician, $2.0
Special Programs, $0.5
Pharmacy, $5.8
Inpatient, $5.9
Crossover: SNF, $2.9
Crossover: Non-NF, $15.5

Crossover payments make up 55% of other Medicaid expenditures for nursing facility residents aged 65 and older.

Inpatient costs continue to be a major component of other Medicaid expenditures for the under age 65 population. From FY 2008 to FY 2009, inpatient costs for this group increased 29%, from $18.2 million to $23.5 million.

Note: Other Medicaid service expenditures include Medicaid expenditures with dates of service concurrent to a resident's nursing facility claims and Medicaid expenditures for an intervening hospital stay (i.e., the beginning day of the hospital claim coincides with the last day of a nursing facility claim, and the last day of the hospital claim coincides with the beginning day of a nursing facility claim).

Pharmacy – Prescription medications and certain "over the counter" medications.
Crossover/Non-NF (Nursing Facility) – Medicare cost sharing (premiums, copayments, etc.) for non-nursing facility services that are paid by Medicaid.
Crossover/SNF (Skilled Nursing Facility) – Medicare cost sharing (premiums, copayments, etc.) for skilled nursing facilities that are paid by Medicaid.
Inpatient – Services provided to patients who are admitted to a hospital, including bed and board, nursing services, diagnostic, therapeutic, or rehabilitation services, and medical or surgical services.
Outpatient – Medical or surgical care that does not require an overnight hospital stay, such as ambulatory care, therapeutic care, rehabilitation services, clinic services, medical supplies, and laboratory tests.
Physician – Services provided by a licensed physician.
Special Services – Services that do not fall into any of the categories listed above (e.g., transportation services; occupational, physical, and speech therapy; and oxygen services).

Source: MMIS2.

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Admissions
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Length of Stay

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Figure 8. Prior Setting of Medicaid Participants Admitted to Nursing Facilities, FY 2009

Admitted From	Admissions	Percent
Private Home or Apartment without Home Health Services	1,653	8%
Private Home or Apartment with Home Health Services	507	3%
Board and Care/Assisted Living/Group Home	992	5%
Nursing Facility	2,339	12%
Acute Hospital	13,906	69%
Psychiatric Hospital or MR/DD Facility	275	1%
Rehabilitation Hospital	216	1%
Other	279	1%
Total	**20,167**	**100%**

The majority (69%) of admissions to Medicaid nursing facilities were from acute care hospitals.

Note: The population represented in this figure is unduplicated individuals having at least one Medicaid-paid day in a nursing facility in FY 2009.

Source: Hilltop Refined MDS Data, Section AB.2.

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Figure 9. Average Length of Extended Stay at Discharge for Individuals with a Medicaid Nursing Facility Claim, by Age Cohort

FY 06						
Age Group	**<90 Day Stay**		**≥90 Day Stay**		**Total**	
	Stays	**Avg LOS**	**Stays**	**Avg LOS**	**Stays**	**Avg LOS**
Under 65	521	41	986	532	1,507	362
65 and Older	325	46	4,503	1,012	4,828	947
FY 07						
Age Group	**<90 Day Stay**		**≥90 Day Stay**		**Total**	
	Stays	**Avg LOS**	**Stays**	**Avg LOS**	**Stays**	**Avg LOS**
Under 65	416	39	992	564	1,408	409
65 and Older	327	46	4,749	1,046	5,076	981
FY 08						
Age Group	**<90 Day Stay**		**≥90 Day Stay**		**Total**	
	Stays	**Avg LOS**	**Stays**	**Avg LOS**	**Stays**	**Avg LOS**
Under 65	384	38	945	626	1,329	456
65 and Older	300	44	4,518	1,081	4,818	1,016
FY 09						
Age Group	**<90 Day Stay**		**≥90 Day Stay**		**Total**	
	Stays	**Avg LOS**	**Stays**	**Avg LOS**	**Stays**	**Avg LOS**
Under 65	367	39	997	662	1,364	494
65 and Older	294	40	4,309	1,085	4,603	1,018

For the age 65 and older group, the average extended length of stay increased 71 days (8%), from 947 days in FY 2006 to 1018 days in FY 2009.

For the under age 65 group, the average extended length of stay increased 132 days (36%), from 362 days in FY 2006 to 494 days in FY 2009.

The increase in the average extended length of stay has been accompanied by a slight decrease in the number of nursing facility stays for both age groups.

Note: An *extended stay*– as defined by Hilltop–includes one or more discrete stays (a discrete stay includes contiguous days from first evidence of admission to discharge in a single facility) but allows for short periods of discharge (up to 30 days), such as a hospital stay, and changes in nursing facility. For this figure, the population was limited to Medicaid recipients with at least one full Medicaid-paid day in a nursing facility in the given fiscal year. Stays that were only covered as a Medicare benefit were excluded.

Source: Hilltop Refined MDS Data.

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