The Hilltop Institute

Medicaid Long-Term Services and Supports in Maryland:

FY 2016 to FY 2020

Nursing Facility Services
A Chart Book

November 2022

Prepared for the
Maryland Department of Health

UMBC

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Chapter 1. Maryland Medicaid Long-Term Services and Supports (LTSS) Overview

Background

COVID–19 Pandemic

Data for this chart book may have been impacted by the COVID-19 pandemic. In Maryland, Governor Larry Hogan proclaimed a state of emergency and catastrophic health emergency on March 5, 2020.[1]

Maryland Home and Community-Based Services

The *Medicaid Long-Term Services and Supports (LTSS) in Maryland Chart Book, Nursing Facility Services* explores utilization and expenditures for Medicaid-funded LTSS in Maryland for state fiscal years (FYs) 2016 through 2020. The focus of this chart book is on Medicaid nursing facility services, with one chapter that illustrates Maryland's efforts at providing home and community-based services (HCBS)[2] to an increasing number of Medicaid recipients who may otherwise be served in nursing facilities. Medicaid programs and services addressed in this chart book include the following:

- *Medicaid Nursing Facility Services*
- *The Home and Community-Based Options (CO) Waiver*
- *Community First Choice (CFC)*
- *Community Personal Assistance Services (CPAS)*

This chart book summarizes information on demographic, functional, and cognitive characteristics; chronic conditions, pain assessments, and medication use; and service utilization and expenditures for Maryland Medicaid nursing facility residents from FY 2016 to FY 2020. Demographic and expenditure data are also provided for programs that are vital to Maryland's LTSS rebalancing efforts.

Nursing Facility Residents

For the purposes of this chart book, a Medicaid nursing facility resident is defined as a Medicaid beneficiary who had at least one Medicaid-paid day in a nursing facility, a bed hold payment, or Medicaid cost-sharing payments (premiums, co-payments, etc.).[3] In FY 2020, Maryland's annual Medicaid nursing facility resident count was 22,927.

Data Sources

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

- **Medicaid Management Information System (MMIS2):** This system contains data for all individuals enrolled in Maryland's Medicaid program during the relevant fiscal years, including Medicaid eligibility category and fee-for-service (FFS) claims. All MMIS2 data, owned by the Maryland Department of Health, are warehoused and processed monthly by The Hilltop Institute.

[1]The Office of Governor Larry Hogan. (2020) *COVID-19 Pandemic: Orders and Guidance.*
[2]The HCBS population in this chart book excludes those in any Developmental Disabilities Administration waiver program, the Brain Injury Waiver, and the Autism Waiver.
[3]Medicare payment, including skilled nursing facility days up to the first 100 days, are excluded from these analyses.

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Chapter 1. Maryland Medicaid LTSS Overview continued

Data sources continued…

- **Maryland Office of Health Care Quality, Minimum Data Set (MDS) 3.0:** The MDS is a federally mandated assessment instrument that is conducted for each nursing facility resident upon admission and at least quarterly thereafter. Hilltop receives MDS 3.0 data for Maryland nursing facilities on a routine basis.
- **Chronic Conditions Data Warehouse (CCW):** This is the source for Center for Medicare and Medicaid Services (CMS) research data. Hilltop utilizes the CCW Condition Algorithms and Medicaid claims to identify chronic conditions among Medicaid beneficiaries.
- **Office of Health Care Quality (OHCQ):** This is an agency charged with monitoring the quality of care in Maryland's heath care facilities and community-based programs. Hilltop uses OHCQ data to determine licensed nursing facility beds.

Key Findings

Notable trends in the data include the following.

Nursing Facility Entry

- The majority (87%) of nursing facility residents were admitted from an acute hospital setting in FY 2020.
- Hypertension was an active diagnosis in more than 75% of nursing facility admissions from FY 2016 to FY 2020.
- The ratio of admissions to re-entries fluctuated during the study period. In FY 2016, for every 1.28 admissions there was 1 re-entry. In FY 2017, this ratio was 1.44 to 1, and by FY 2020, it dropped to 1.14 to 1.
- Inpatient costs accounted for 56% of acute care costs in the six months prior to admission in FY 2020.

Nursing Facility Stay

- The Maryland nursing facility population decreased from 25,083 residents in FY 2016 to 22,927 residents in FY 2020. This is a decrease of approximately 9%.
- There was a decrease from 42% (FY 2016) to 38% (FY 2020) of nursing facility residents who had stays of four months or less.
- Female nursing facility residents continued to outnumber males in FY 2020: 61% to 39%, respectively.
- In FY 2020, the largest racial group of nursing facility residents was White (51%), followed by Black (39%).
- Nursing facility residents aged 85 and older decreased from 33% in FY 2016 to 31% in FY 2020, but still remained the largest age group.
- Baltimore City, Baltimore County, and Montgomery County each had over 3,000 nursing facility residents and licensed nursing facility beds in FY 2020. Baltimore County had the most providers (42).

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Chapter 1. Maryland Medicaid LTSS Overview continued

Notable trends continued…

- The percentage of residents needing the highest level of assistance and those needing minimal assistance with activities of daily living (ADLs) decreased.
- The percentage of nursing facility residents cognitively intact averaged 46% during the study period.
- The most common diagnosis among nursing facility residents during the study period was hypertension.
- The percentage of nursing facility residents diagnosed with six or more chronic conditions decreased 2%.
- The percentage of nursing facility residents diagnosed with depression increased from 40% in FY 2016 to 47% in FY 2020.
- Psychotropic medication use remained relatively stable during the study period.
- In FY 2020, 69% of nursing facility residents indicated that they had no pain in the last five days.
- The number of hospice users increased from 2,170 in FY 2016 to 2,534 in FY 2020, a 17% increase. Additionally, hospice service expenditures increased 32% during the study period.
- Total Medicaid expenditures for nursing facility residents were lower for those under 65 years compared to those 65 and over for each of the study years.
- On average, from FY 2016 to FY 2020, total Medicaid per member per month (PMPM) expenditures were $6,878 for all age groups.

Nursing Facility Discharges

- The percentage of residents discharged to the community was 38% in FY 2016 and 26% in FY 2020.
- The majority (56%) of nursing facility residents discharged to the community received a CO, CFC, or CPAS service. Of these discharged residents, 40% received case management/supports planning assistance.

In the Community

- In FY 2016, 39% of LTSS users utilized HCBS; in FY 2020, this increased to 46%.
- Between FY 2016 and FY 2020, HCBS expenditures increased steadily—at an average of 9% per year—while nursing facility expenditures increased an average of 1% each year.
- On average, annual costs for HCBS users were $25,395 less than they were for nursing facility residents.
- PMPM total Medicaid expenditures were consistently lower for HCBS users than for nursing facility residents.

Chapter 2. Nursing Facility Entry

Chapter 2. Nursing Facility Entry

Key Findings

Pre-Admission Status

The majority of nursing facility residents were admitted from an acute care hospital: 87% in FYs 2016 and 2020 (Figure 1). Only 5% of nursing facility residents were admitted directly from the community in FYs 2016 and 2020.

Active Diagnoses at Time of Nursing Facility Admission

The top five active diagnoses for all study years were hypertension, diabetes, hyperlipidemia, depression, and anemia. The MDS defines an active diagnosis as a disease that has a relationship to the resident's current functional, cognitive, mood, or behavior status or medical treatments. The MDS is administered upon admission to a nursing facility and specifically asks about active diagnoses present in the last seven days. Hypertension was present in more than 75% of residents and generally increased over the reporting period. An active diagnosis of diabetes, hyperlipidemia, depression, and anemia at the time of admission all had an overall increase from FY 2016 to FY 2020. See Figure 2.

Entry Status

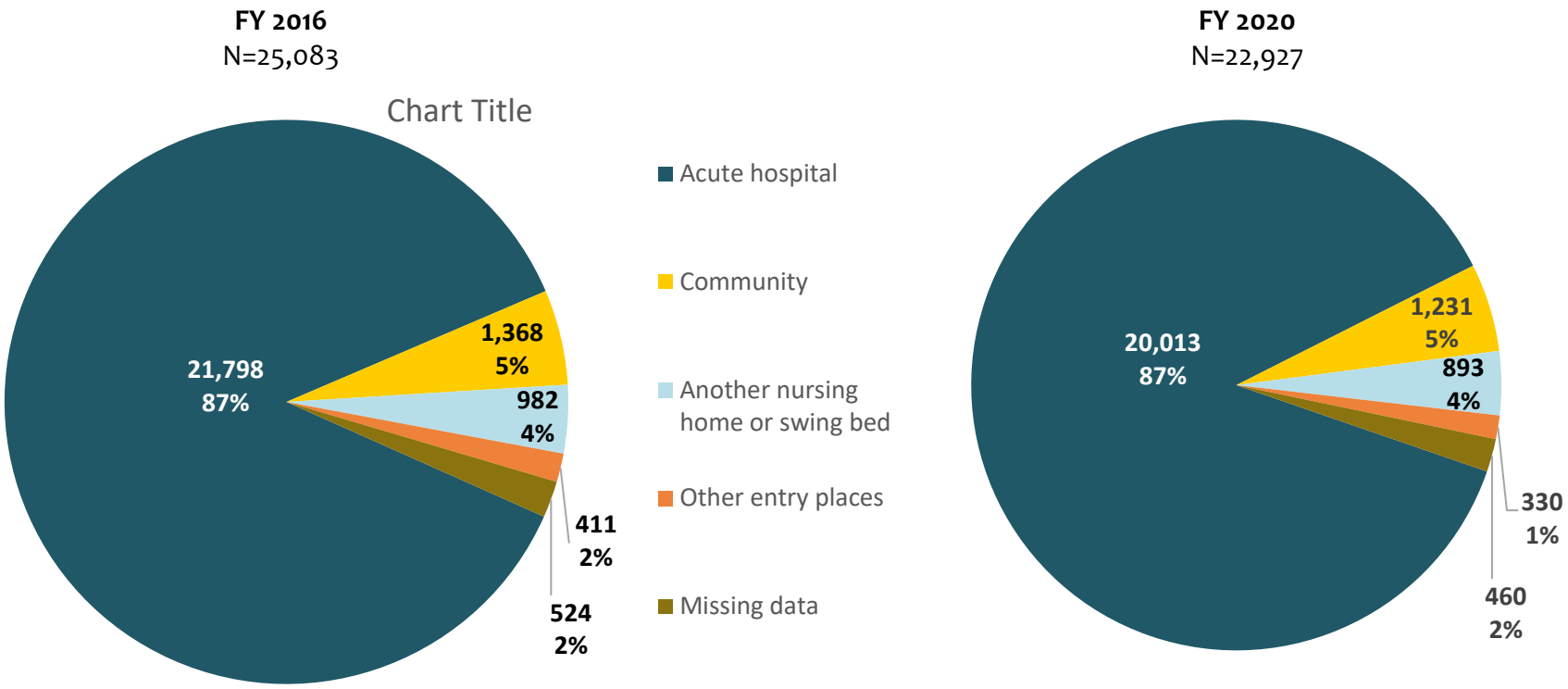
A nursing facility resident can enter the facility as a regular admission or as a re-entry. A re-entry occurs if the resident was discharged from a nursing facility within the past 30 days. First-time nursing facility admissions decreased from 56% in FY 2016 to 53% in FY 2020, while nursing facility re-entries increased from 44% in FY 2016 to 47% in FY 2020. See Figure 3.

Acute Care Costs Prior to Nursing Facility Entry

During the six months prior to a nursing facility admission, inpatient costs accounted for the largest percentage (56%) of acute care costs. Acute care costs include inpatient and outpatient services, physician services, and pharmacy services. See Figure 4.

Figure 1. Pre-Admission Status of Nursing Facility Residents, FY 2016 and FY 2020

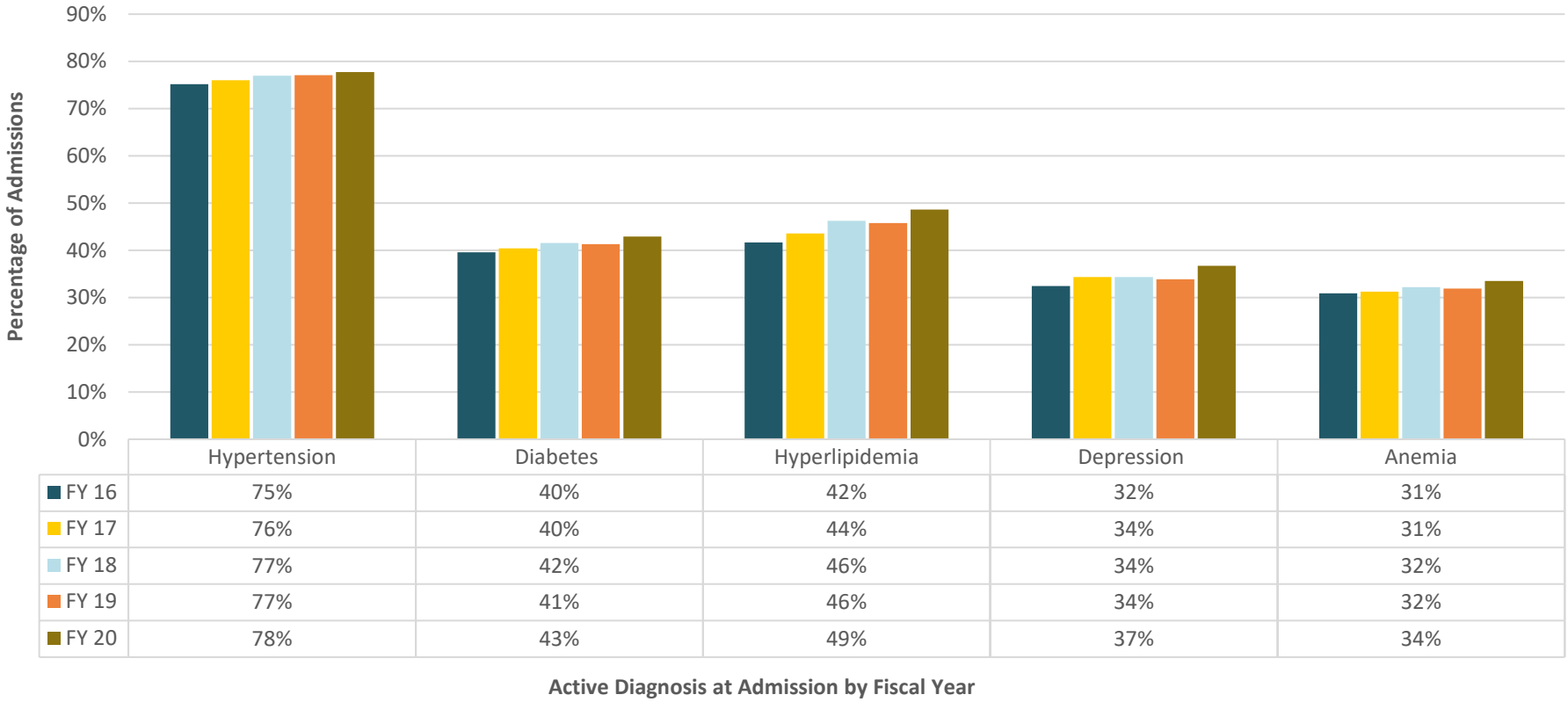
In both FYs 2016 and 2020, 87% of nursing facility residents were admitted from an acute hospital and only 5% were admitted directly from the community.



Notes: "Community" includes private home/apartment, board/care, assisted living, or group home. "Other entry places" include psychiatric hospital, inpatient rehabilitation facility, intellectual disabilities/developmental disabilities (ID/DD) facility, hospice, long- term care hospital, and other. "Missing data" includes nursing facility residents from MMIS2 data that are missing MDS data from the time of admission. Percentages might not equal 100 due to rounding.

Sources: MDS and MMIS2

Figure 2. Top Five Active Diagnoses at Time of Nursing Facility Admission, FY 2016–FY 2020

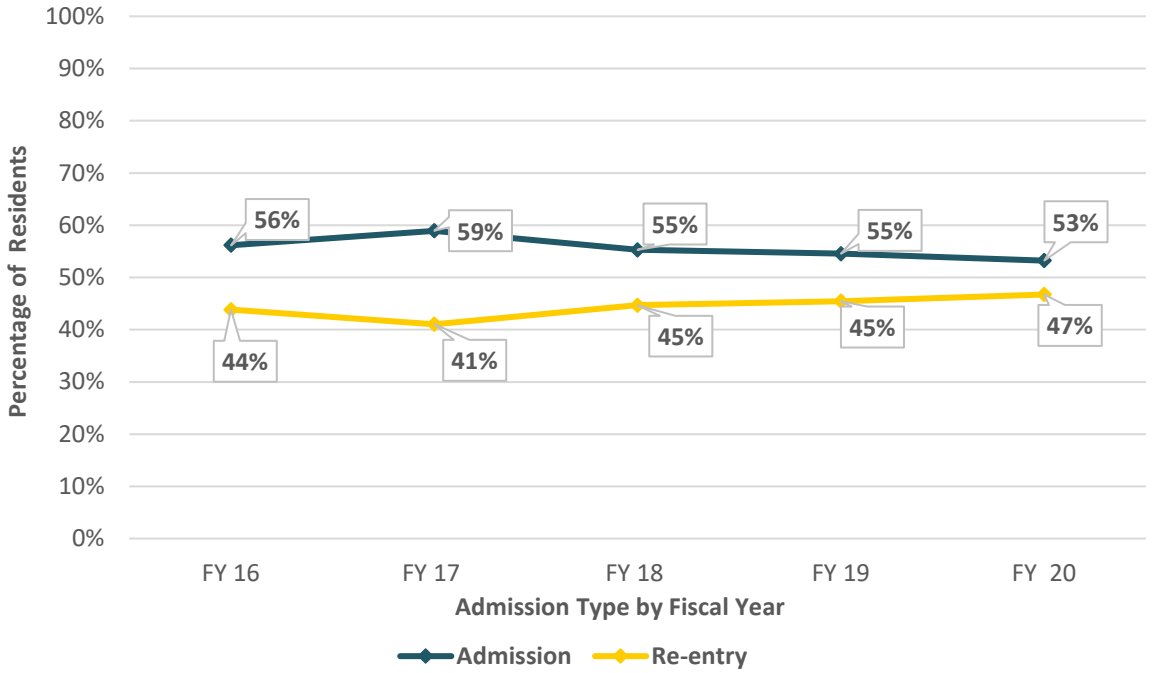


	Hypertension	Diabetes	Hyperlipidemia	Depression	Anemia
FY 16	75%	40%	42%	32%	31%
FY 17	76%	40%	44%	34%	31%
FY 18	77%	42%	46%	34%	32%
FY 19	77%	41%	46%	34%	32%
FY 20	78%	43%	49%	37%	34%

Source: MDS

The top five active diagnoses upon admission to a nursing facility were hypertension, diabetes, hyperlipidemia, depression, and anemia. Hypertension was present in more than 75% of nursing facility admissions in each of the study years and generally increased over the study period. An active diagnosis of diabetes, hyperlipidemia, depression, and anemia at the time of admission all had an overall increase from FY 2016 to FY 2020.

Figure 3. Admission Type of Nursing Facility Residents, FY 2016–FY 2020



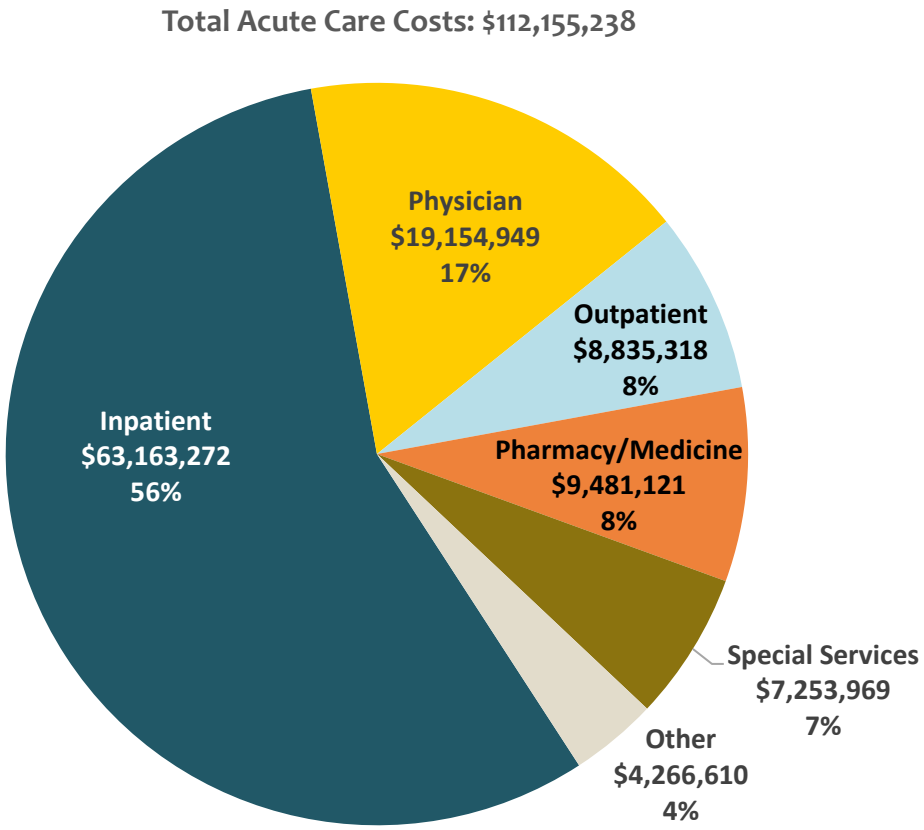
Ratio of admissions to re-entries				
FY 16	FY 17	FY 18	FY 19	FY 20
1.28	1.44	1.24	1.20	1.14

Note: Data shown for individuals for which there was valid MDS data to determine admission type.

Source: MDS

Based on the most recent MDS assessment, first-time nursing facility admissions generally decreased, and the number of re-entries generally increased during the study period. The ratio of admissions to re-entries declined from FY 2016 to FY 2020. Specifically, in FY 2016, for every 1.28 admissions, there was 1 re-entry; by FY 2020, the ratio was 1.14 to 1. A re-entry is an admission that occurs within 30 days of a previous nursing facility discharge.

Figure 4. Acute Care Costs in the Six Months Prior to a Nursing Facility Admission, FY 2020



Notes: "Special services" includes Medicare crossover payments, lab, diagnostic and evaluation services, radiology, ambulance, surgery, durable medical services and equipment, oxygen, and individualized education plan (IEP)-related services. "Other services" includes managed care organizations, emergency department, and dental services.

Source: MMIS2

In FY 2020, acute care costs totaled approximately $112 million in the six months prior to a nursing facility admission. Inpatient costs accounted for 56% of these costs. Physician costs was the next highest category, at 17% of acute care costs.

Chapter 3. Nursing Facility Stay

Chapter 3. Nursing Facility Stay

Key Findings

Resident Counts and Length of Stay

There were 22,927 Maryland nursing facility residents in FY 2020—a decrease of 9% from FY 2016 (Figure 5). The lengths of stay for nursing facility residents remained relatively stable throughout the study period. In FY 2020, 16% of nursing facility residents had a stay that lasted less than a month, and an additional 22% had a stay of one to four months (Figure 6).

Demographics

The gender, race, and age distribution of the nursing facility residents remained relatively stable during the study period. Females continued to outnumber males; in FY 2020, the distribution was 61% to 39%. White residents continued to make up the largest racial group, followed by Black residents. Residents aged 85 and older made up the largest age group, averaging 32% during the study period. In FY 2020, dual-eligible nursing facility residents (those who have both Medicare and Medicaid coverage) made up 88% of all residents, while non-dual-eligible residents (those only covered by Medicaid) made up 12% of residents. See Figure 7.

*From Morris, J.N., Fries, B.N., & Morris, S.A. (1999). Scaling ADLs within the MDS. *Journals of Gerontology: Medical Sciences 54*(11), M546-M553.

Geographical Characteristics

Baltimore City had the largest number of nursing facility residents, followed in order by Baltimore County and Montgomery County (Figure 8). Montgomery County had the largest number of licensed nursing facility beds, while Baltimore County had the most providers (Figure 9).

Functional Characteristics

The functional needs of nursing facility residents are assessed using the MDS 3.0. The different levels measure the resident's need for assistance to perform various ADLs, including personal hygiene, toilet use, locomotion, and eating. *Supervision* requires the least amount of assistance, while *total dependence* requires the most.* Figure 10 shows a decrease in residents requiring the most assistance, from 9% in FY 2016 to 6% in FY 2020.

Cognitive functioning of nursing facility residents is measured using the Brief Interview for Mental Status (BIMS). The cognitive functioning of residents changed little during the study period. A large percentage of residents continued to be cognitively intact, averaging 46% during the study period (Figure 11).

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Key Findings continued …

Chronic Conditions

The top eight chronic conditions of nursing facility residents for FYs 2016 and 2020 included hypertension, Alzheimer's disease and related disorders, diabetes, anemia, depression, ischemic heart disease, chronic kidney disease, and hyperlipidemia. The largest percentage (over 65%) of residents were diagnosed with hypertension in both FYs 2016 and 2020. The percentage of nursing facility residents diagnosed with six of the top eight chronic conditions increased during the study period. Residents diagnosed with ischemic heart disease decreased 2 percentage points, and residents with anemia had no change over the evaluation period. The condition with the largest percentage change was depression, from 40% of residents in FY 2016 to 47% in FY 2020. See Figure 12.

Figure 13 illustrates that the number of residents diagnosed with six or more chronic conditions changed little over the study period.

Among the top 18 chronic conditions nursing facility residents were diagnosed with, four were mental illnesses: depression, bipolar disorder, anxiety disorders, and schizophrenia and other psychotic disorders. The percentage of residents diagnosed with bipolar disorder decreased from a high of 18% in FY 2016 to 9% in FY 2020. However, the percentage of residents diagnosed with depression and anxiety disorders increased each year during the study period. See Figure 14.

Medication Use

Figure 15 shows psychotropic medication use among nursing facility residents. The percentage of residents taking antipsychotic or antidepressant medications at least once during the last seven days changed little during the study period.

Pain Assessment and Management

During their MDS assessments, nursing facility residents are asked a series of questions about their pain in the last five days. In FY 2020, 51% of nursing facility residents were on a regular pain medication schedule, and the majority (69%) indicated no pain (Figure 16). Of the residents who did experience pain, 21% indicated a pain level of 5 on a scale of 0 to 10. See Figure 17.

Hospice Use and Expenditures

The number of hospice users increased from 2,170 in FY 2016 to 2,534 in FY 2020, an increase of 17%. During the same period, average annual expenditures increased 32%. See Figure 18.

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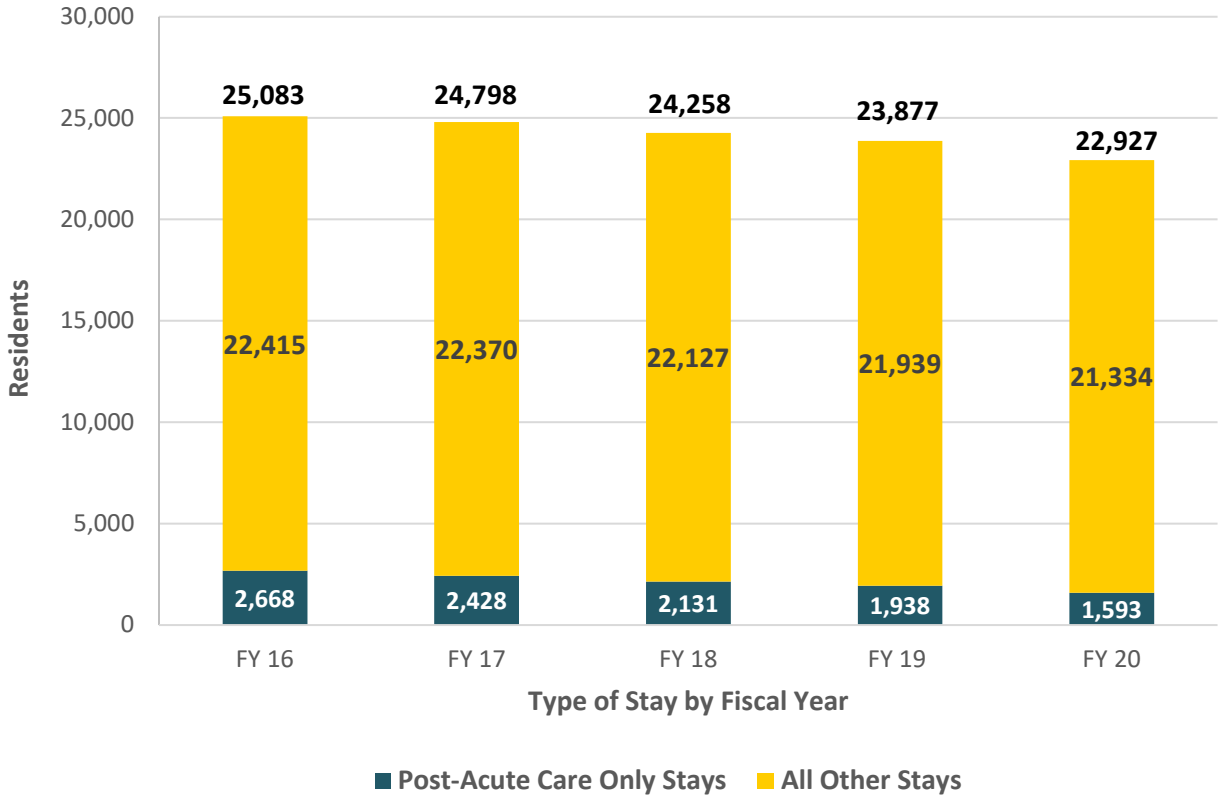
Key Findings continued …

Expenditures

Total Medicaid expenditures fluctuated for those younger than 65 and those 65 and older. Specifically, total Medicaid expenditures increased from FY 2016 to FY 2019 before decreasing slightly in FY 2020 for nursing facility residents aged 65 years and older. Those younger than 65 years saw an increase in expenditures from FY 2016 to FY 2017 but a decrease in 2018 before seeing an increase again in FYs 2019 and 2020 (Figure 19). Nursing facility expenditures accounted for 95% of total Medicaid expenditures for nursing facility residents in FY 2020 (Figure 20). On average, from FY 2016 to FY 2020, total Medicaid PMPM expenditures were $6,878 for all age groups (Figure 21).

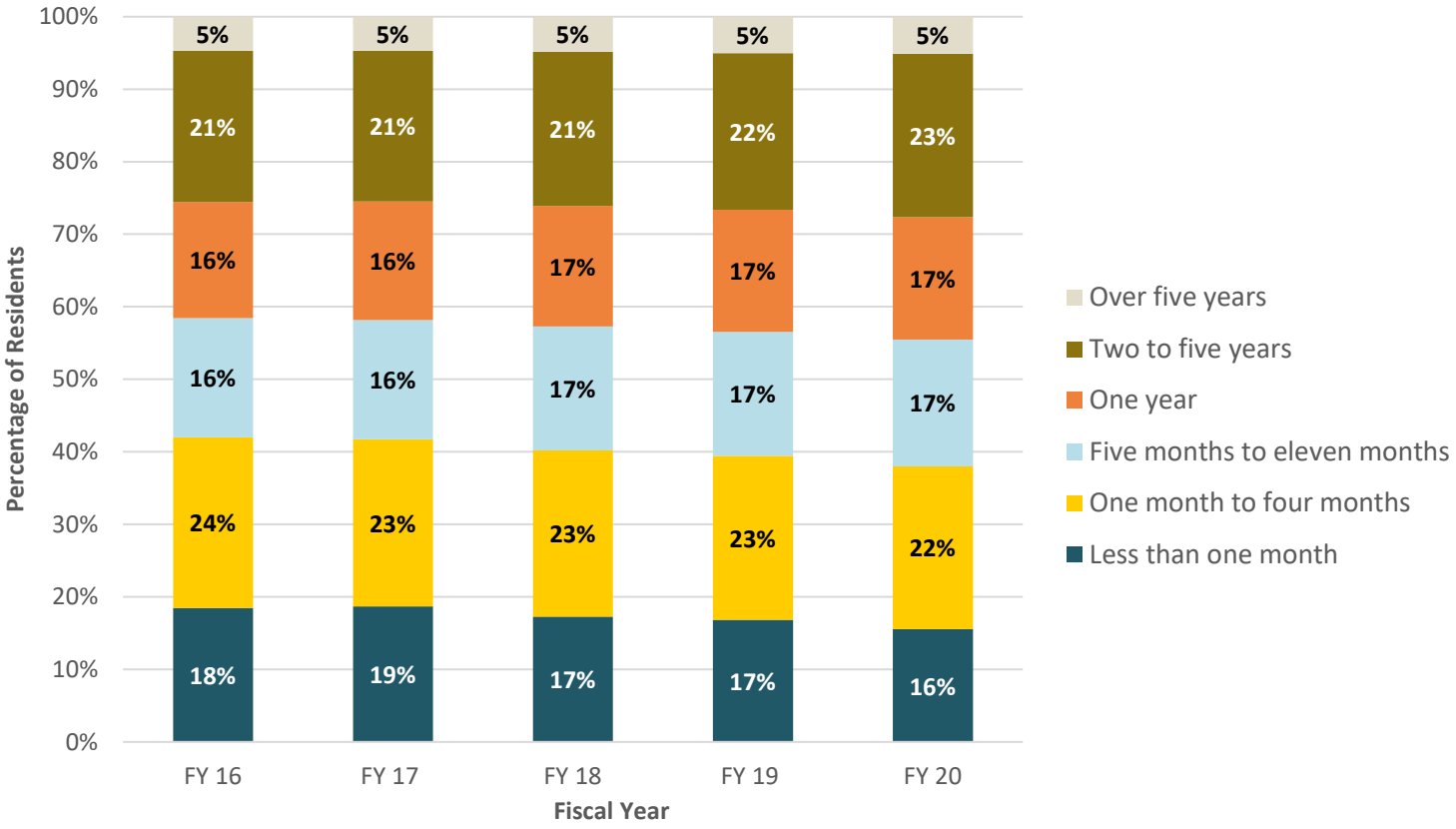
Figure 5. Nursing Facility Annual Resident Count, by Type of Stay, FY 2016–FY 2020



Source: MMIS2

The average number of nursing facility residents with post-acute care only stays was 2,152 for the study period. Post-acute care only stays decreased an average of 12% each year of the study period.

Figure 6. Length of Stay of Nursing Facility Residents, FY 2016–FY 2020



Source: MMIS2

The length of stay for nursing facility residents remained relatively stable during the study period. Approximately 17% of residents had stays less than one month, while a slightly higher percentage (approximately 23%) of residents had stays between one and four months. About one in five (21% of) nursing facility residents had stays between two and five years, while a smaller percentage (5%) had stays over five years.

Figure 7. Nursing Facility Residents by Gender, Race, Age, and Dual-Eligibility Status, FY 2016 and FY 2020

Demographic		FY 2016	FY 2020
Gender	Female	63%	61%
	Male	37%	39%
	Total	**100%**	**100%**
Race	Asian	2%	3%
	Black	37%	39%
	Native American	0%	1%
	White	47%	51%
	Other/Unknown	12%	7%
	Total	**99%**	**100%**
Age	0 to 49	5%	4%
	50 to 64	18%	17%
	65 to 74	19%	23%
	75 to 84	24%	26%
	85 and older	33%	31%
	Total	**100%**	**100%**
Dual-Eligibility	Dual-Eligible	86%	88%
	Medicaid-Only	14%	12%
	Total	**100%**	**100%**

Notes: Other/Unknown includes Hispanic, Pacific Islander/Alaskan, and Unknown. **Dual-eligible** residents include those residents who are fully or partially dual-eligible. Percentages have been rounded and may not equal 100%.

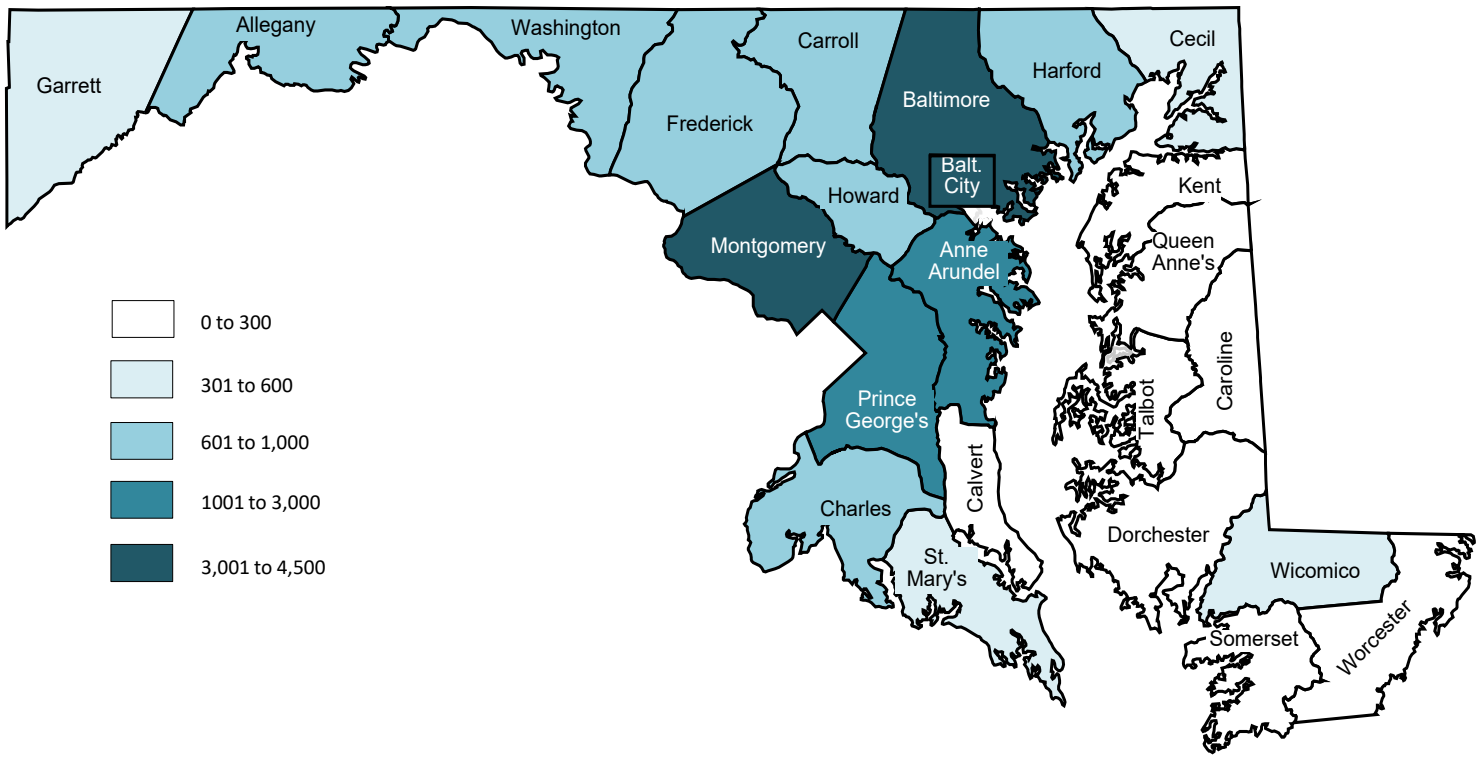
Source: MMIS2

Females continued to outnumber males during the study period: 63% to 37% in FY 2016 and 61% to 39% in FY 2020. White residents (47% in FY 2016 and 51% FY 2020) continued to make up the largest racial group, followed by Black residents (37% in FY 2016 and 39% in FY 2020).

Nursing facility residents aged 85 and older were the largest age group during the evaluation period, despite dropping two percentage points from FY 2016 to FY 2020. The percentage of 65- to 74-year-olds increased from 19% in FY 2016 to 23% in FY 2020.

The percentage of dual-eligible residents remained relatively constant over the evaluation period.

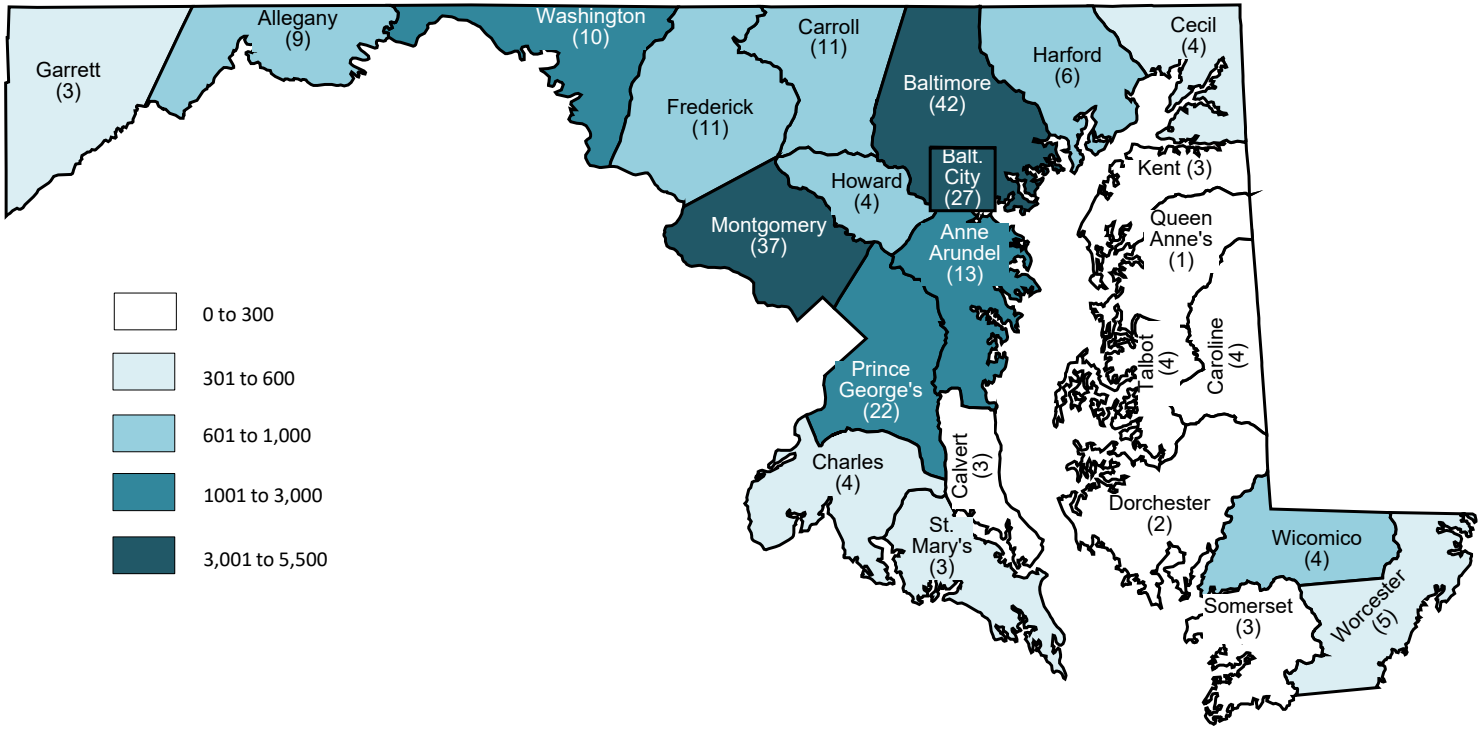
Figure 8. Medicaid Nursing Facility Residents, by County, FY 2020



Source: MMIS2

Baltimore City, Baltimore County, and Montgomery County each had over 3,000 nursing facility residents in FY 2020. Eight counties—Calvert, Caroline, Dorchester, Kent, Queen Anne's, Somerset, Talbot, and Worcester—had 300 or fewer residents.

Figure 9. Licensed Nursing Facility Beds and Providers, by County, FY 2020

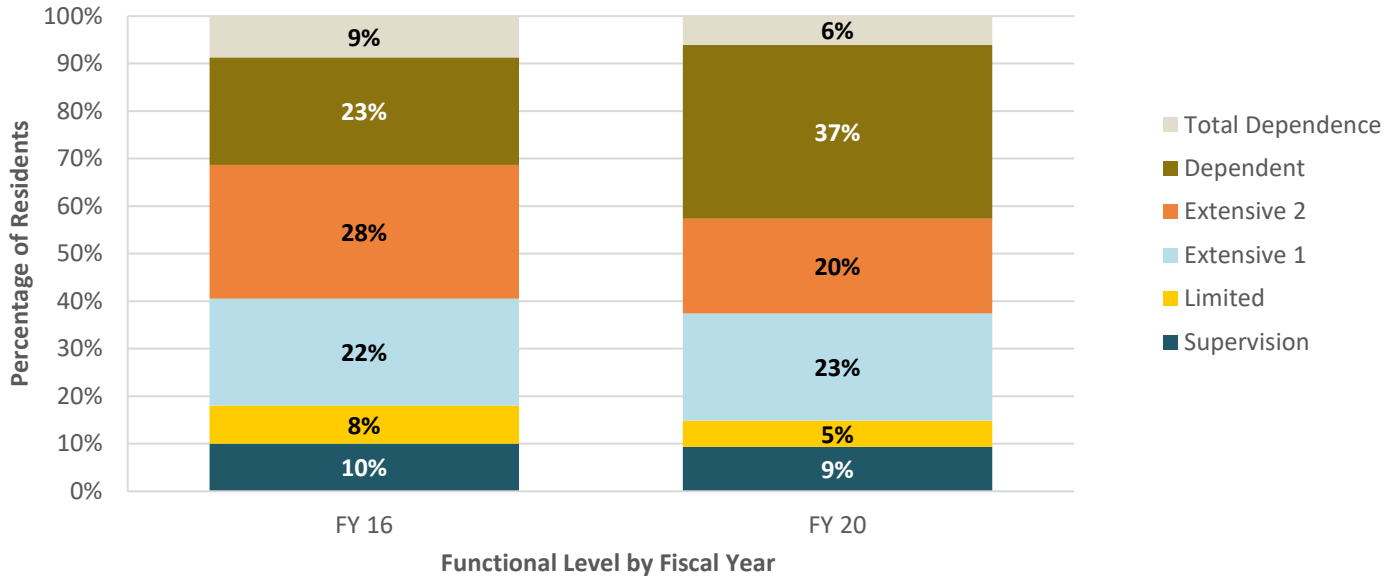


Notes: The parentheses under each county's name show the number of providers. The legend shows the number of beds as of June 2, 2022 (from https://app.smartsheet.com/b/publish?EQBCT=08adff96ac8c4d18a97bf909162a2250). The beds are certified as Medicare/Medicaid; Medicare; Medicaid; or Private-Pay Only. Only facilities licensed before July 1, 2020, have been included in the figure.

Sources: MMIS2 and OHCQ

Baltimore City, Baltimore County, and Montgomery County each had over 3,000 licensed nursing facility beds in FY 2020. Baltimore County had the largest number of providers (42), followed by Montgomery County (37) and Baltimore City (27). Seven counties—Calvert, Caroline, Dorchester, Kent, Queen Anne's, Somerset, and Talbot—had 300 or fewer licensed nursing facility beds. Queen Anne's County had a single provider, followed by Dorchester with two providers; Calvert, Somerset and Kent with three providers; and Talbot and Caroline with four providers.

Figure 10. Functional Levels of Nursing Facility Residents, FY 2016 and FY 2020



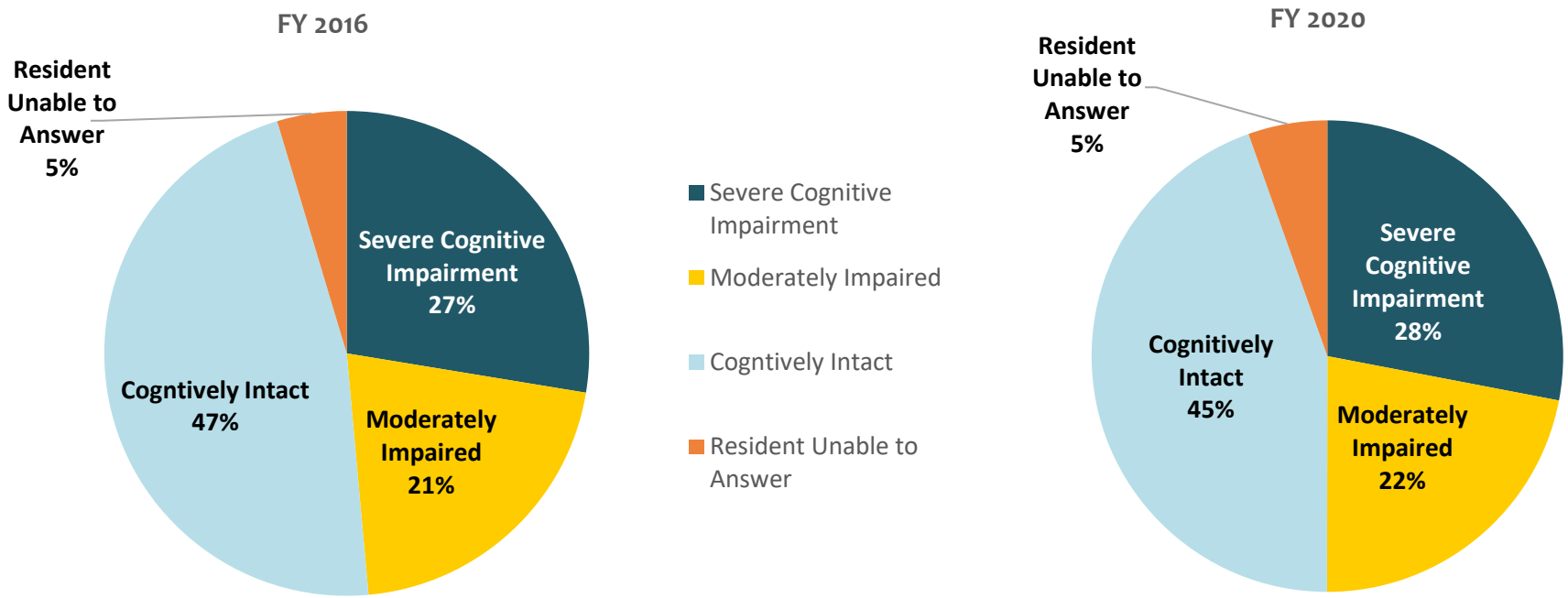
Source: MDS

Functional levels measure a resident's need for assistance to perform various ADLs. Hilltop incorporated a more precise functional level system from Morris et al.[1] The algorithm uses different combinations of ADL scores from the MDS (including eating, locomotion, personal hygiene, and toileting) and turns the five MDS scores into seven.[2] *Supervision* requires the least amount of assistance (either cueing or oversight from staff) OR a high level of resident involvement. *Limited* requires either cueing or staff oversight AND a high level of involvement from the resident. *Extensive 1* indicates that both eating and locomotion require either cueing or staff oversight or a high level of involvement from the resident AND either or both personal hygiene and toileting require the resident to be involved but not engaging in any weight-bearing activity. *Extensive 2* indicates either eating or locomotion requiring the resident to be involved but not engaging in any weight-bearing activity AND neither of these ADLs require full staff assistance. *Dependent* indicates one or both (eating and locomotion) require full staff assistance. *Total dependence* indicates that all four ADLs require full staff assistance.

Over the five-year study period, the percentage of residents requiring *supervision* decreased from 10% (FY 2016) to 9% (FY 2020), and the percentage of residents who were *totally dependent* decreased from 9% (FY 2016) to 6% (FY 2020). Residents who were *dependent* increased from 23% in FY 2016 to 37% in FY 2020. *Extensive 2* and *limited* assistance both saw a decrease of roughly 30% over the evaluation period.

[1]Morris, J.N., Fries, B.N., & Morris, S.A. (1999). Scaling ADLs within the MDS. *Journals of Gerontology: Medical Sciences 54*(11), M546-M553.
[2]No participants were in the *independent* category, which indicates that no staff involvement is necessary to complete the ADL.

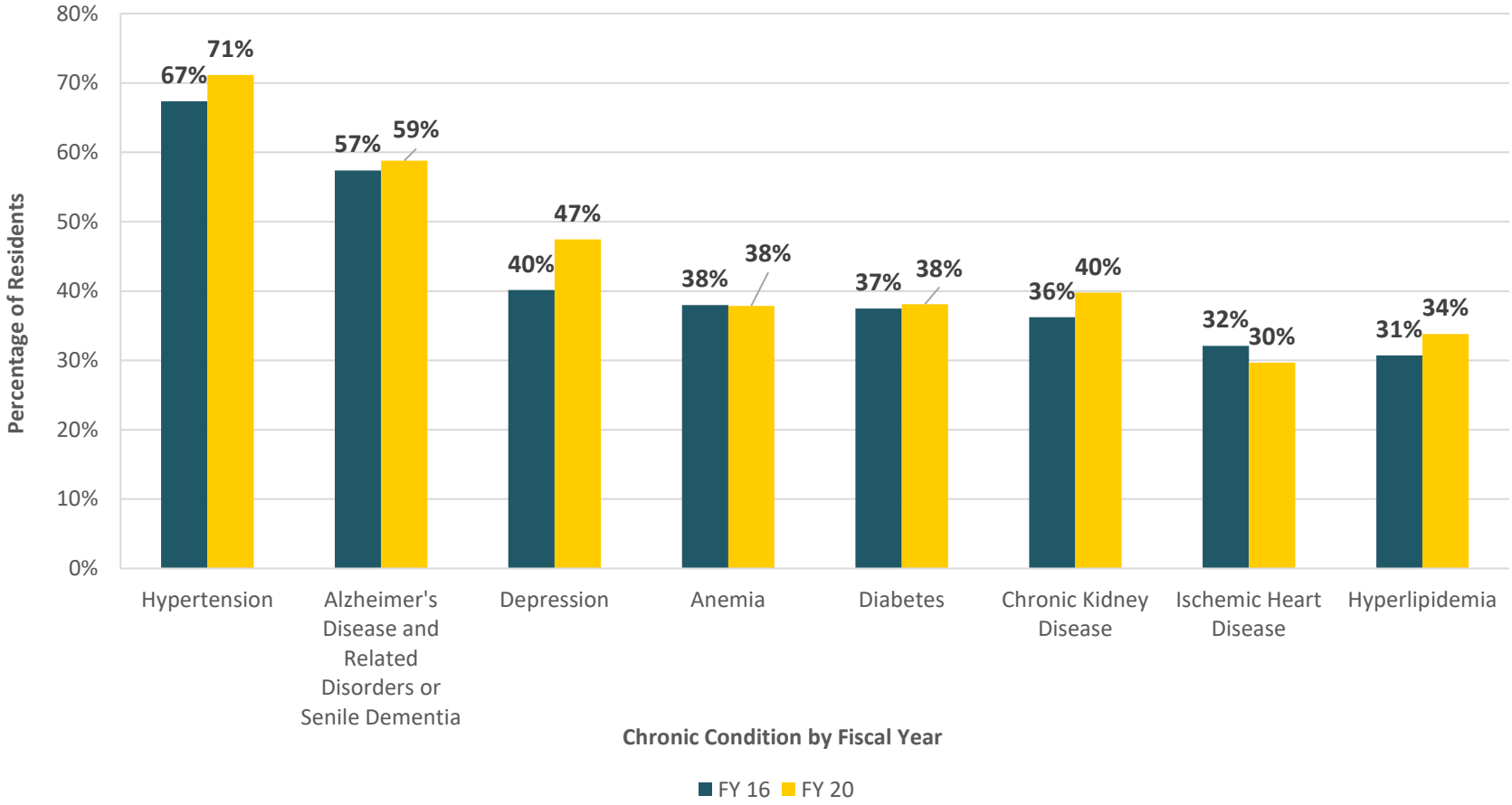
Figure 11. Cognitive Function of Nursing Facility Residents, FY 2016 and FY 2020



Source: MDS

The BIMS measures the cognitive functioning of nursing facility residents. There were only slight changes between FY 2016 and FY 2020; specifically, residents who were cognitively intact decreased by 2 percentage points over the study period, while those with a severe cognitive impairment increased by 1 percentage point in FY 2020. The percentage of residents who were cognitively intact averaged 46% during the study.

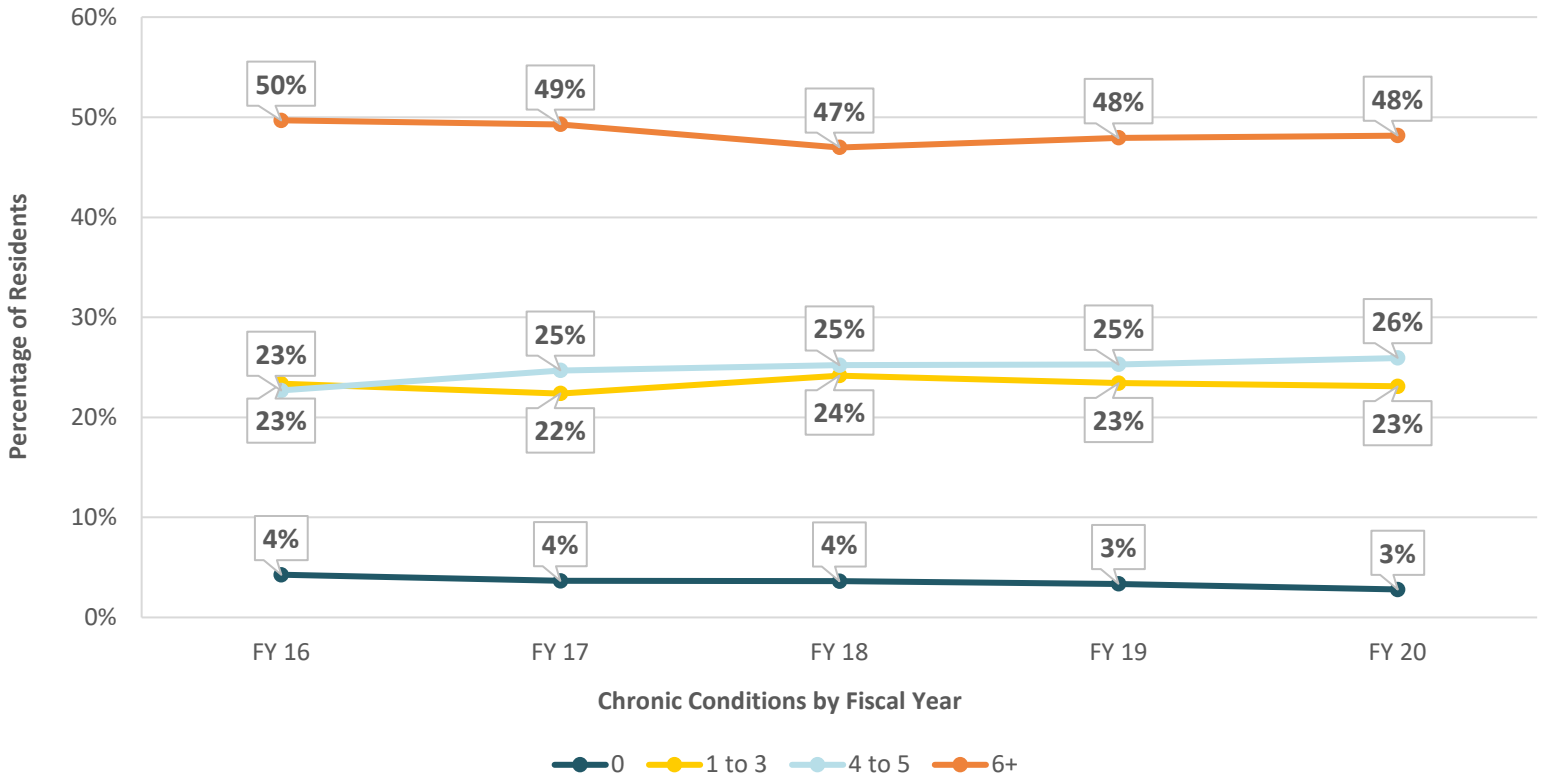
Figure 12. Top Eight Chronic Conditions of Nursing Facility Residents, FY 2016 and FY 2020



Source: MDS

Hypertension was diagnosed in the largest percentage of nursing facility residents in FYs 2016 and 2020, followed by Alzheimer's disease and related disorders. The largest increase was seen in residents diagnosed with depression—from 40% in FY 2016 to 47% in FY 2020—followed by chronic kidney disease and hypertension, with both conditions increasing by 4 percentage points.

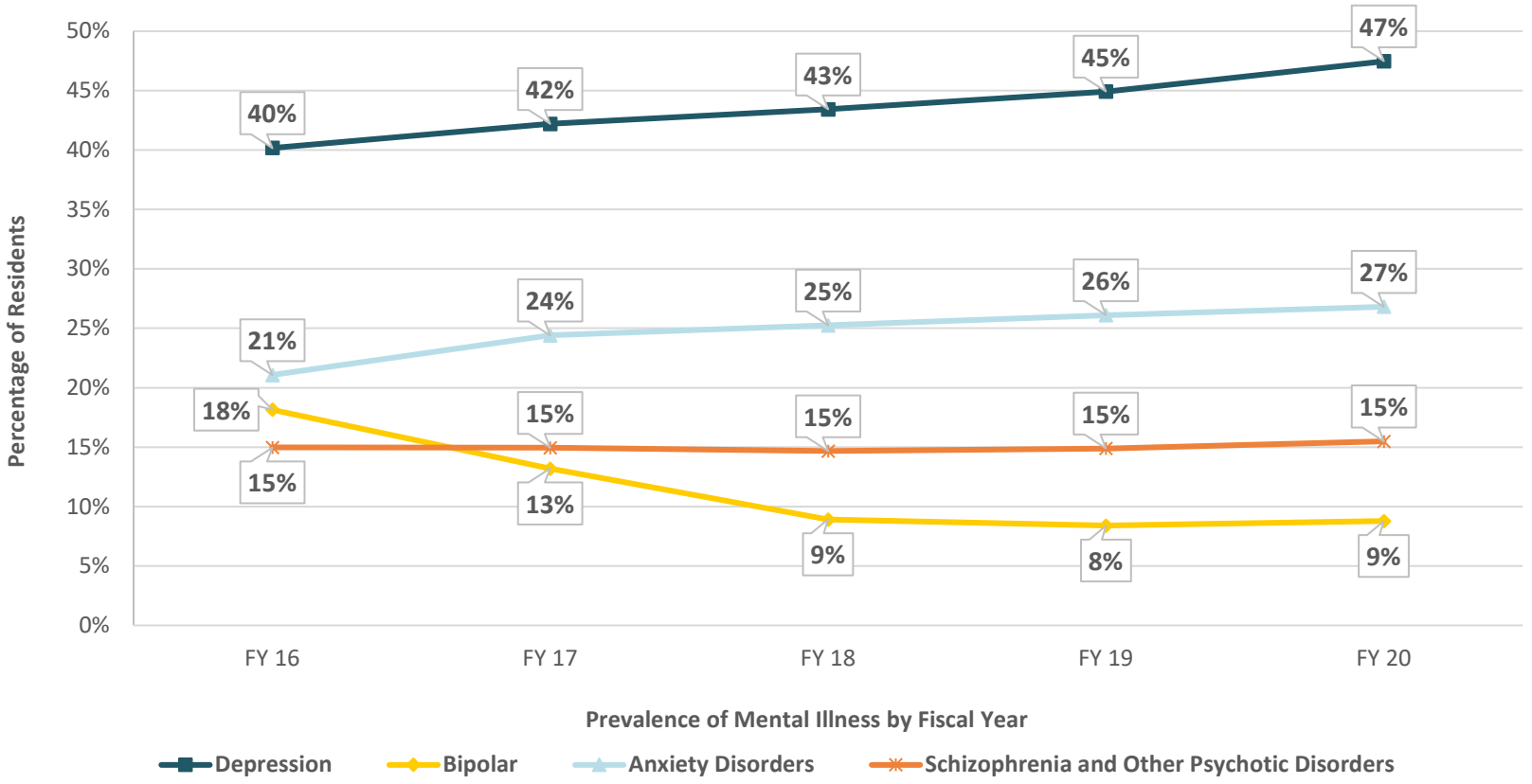
Figure 13. Number of Chronic Conditions of Nursing Facility Residents, FY 2016–FY 2020



Sources: CCW and MMIS2

From FY 2016 to FY 2020, the number of nursing facility residents diagnosed with six or more chronic conditions decreased by 2 percentage points, and the number of residents diagnosed with no conditions decreased 1 percentage point. It is worth noting that a nursing facility resident could be considered to have no chronic conditions due to another insurance provider paying the claims.

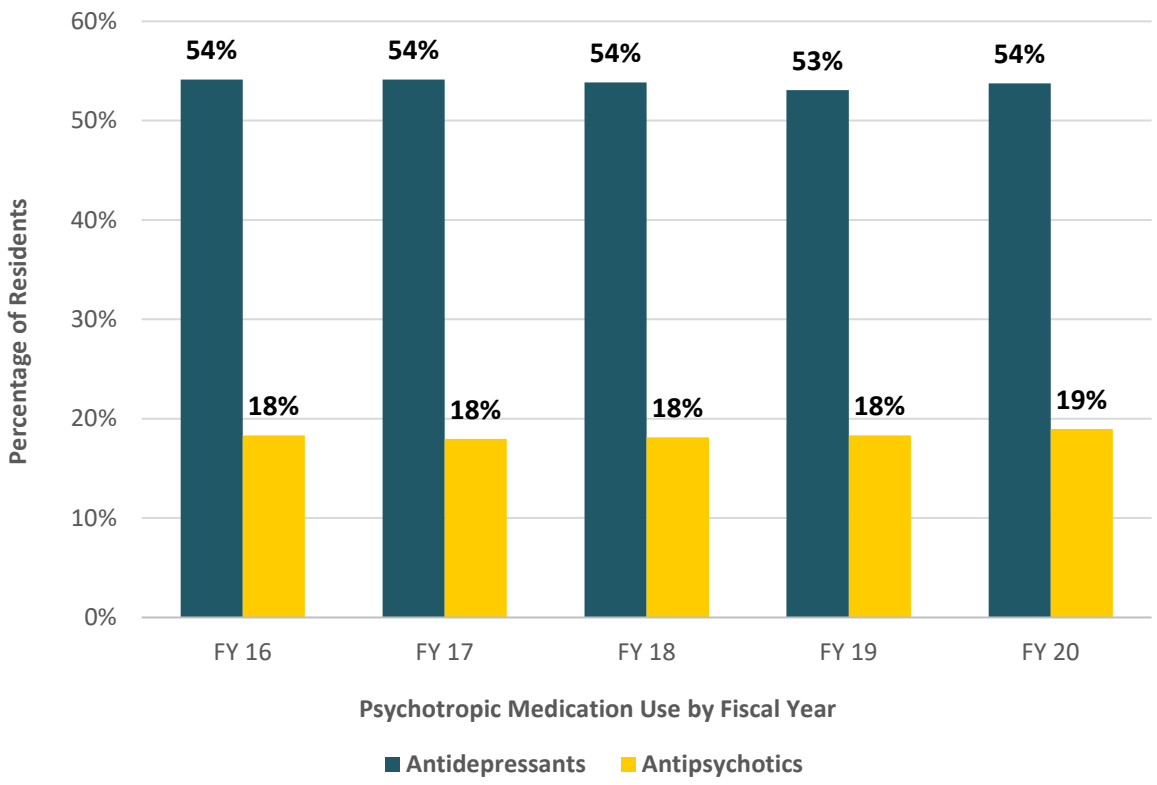
Figure 14. Mental Illnesses among Nursing Facility Residents, FY 2016–FY 2020



Sources: CCW and MMIS2

Four mental illnesses were among the top 18 chronic conditions that residents were diagnosed with during the study period. The percentage of residents diagnosed with depression increased: from 40% in FY 2016 to 47% in FY 2020. The percentage of residents diagnosed with anxiety disorders also increased: from 21% in FY 2016 to 27% in FY 2020. The percentage of residents diagnosed with schizophrenia and other psychotic disorders remained constant at 15%. Additionally, there was a drop in the percentage of residents diagnosed with bipolar disorder from FY 2016 (18%) to FY 2020 (9%).

Figure 15. Psychotropic Medication Use among Nursing Facility Residents, FY 2016–FY 2020



Source: MDS

The percentage of residents receiving any psychotropic medication at least once in the previous seven days stayed relatively consistent throughout the study years. Those receiving antidepressants hovered around 54%, while those receiving antipsychotics remained relatively stable at 18%.

Figure 16. Pain Assessment and Management, FY 2020

MDS 3.0 Question Regarding Pain	Response	FY 2020
Received scheduled pain medication regime	No	49%
	Yes	51%
Received PRN pain medication OR was offered and declined	No	77%
	Yes	23%
Received non-medication intervention for pain	No	94%
	Yes	6%
Presence of pain	No	69%
	Yes	24%
	Unable to answer	7%
Pain frequency	Rarely	9%
	Occasionally	60%
	Frequently	21%
	Almost Constantly	8%
	Unable to answer	1%
Pain impacts activities	No	82%
	Yes	16%
	Unable to answer	1%

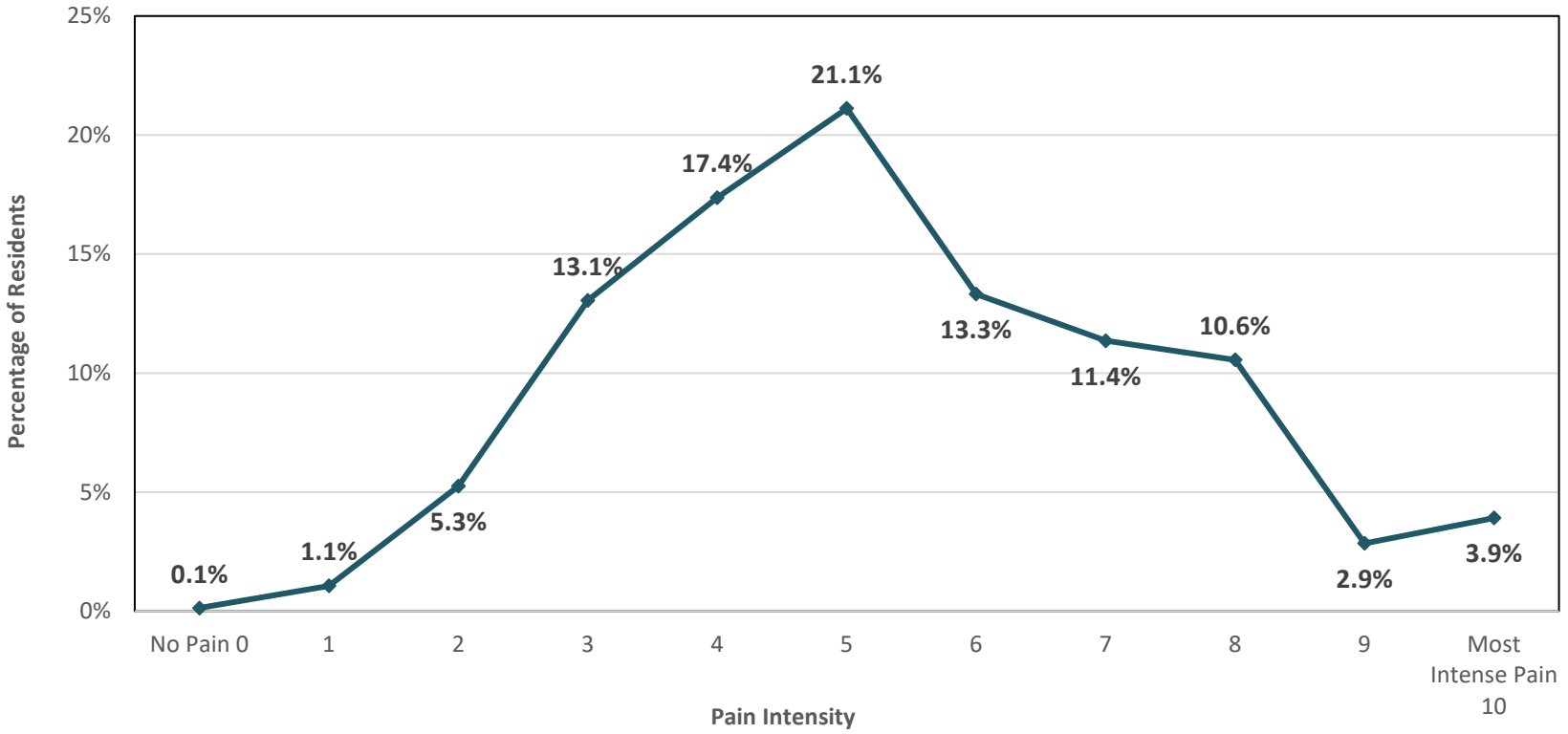
Note: PRN refers to medications that are taken "as needed."

Source: MDS

Nursing facility residents are asked a series of questions about their pain in the last five days when assessed with the MDS. All residents are asked the first four questions in Figure 16, while only those responding *Yes* to the presence of pain question are asked about pain frequency and its impact on daily activities.

In FY 2020, 24% of nursing facility residents noted the presence of pain. Of these residents, 60% reported that the pain occurred occasionally, and 82% responded that there was no impact on their day-to-day activities during the last five days.

Figure 17. Intensity of Pain among Nursing Facility Residents, FY 2020



Source: MDS

In FY 2020, on a scale of 0 to 10—0 being no pain and 10 being the worst pain—of those nursing facility residents who reported having pain, 21.1% indicated a pain level of 5 during the previous five days.

Figure 18. Hospice Utilization and Expenditures among Nursing Facility Residents, FY 2016–FY 2020

Fiscal Year	Number of Hospice Beneficiaries	Total Expenditures
2016	2,170	$35,265,533
2017	2,478	$42,983,115
2018	2,601	$44,613,638
2019	2,519	$44,971,215
2020	2,534	$46,701,397

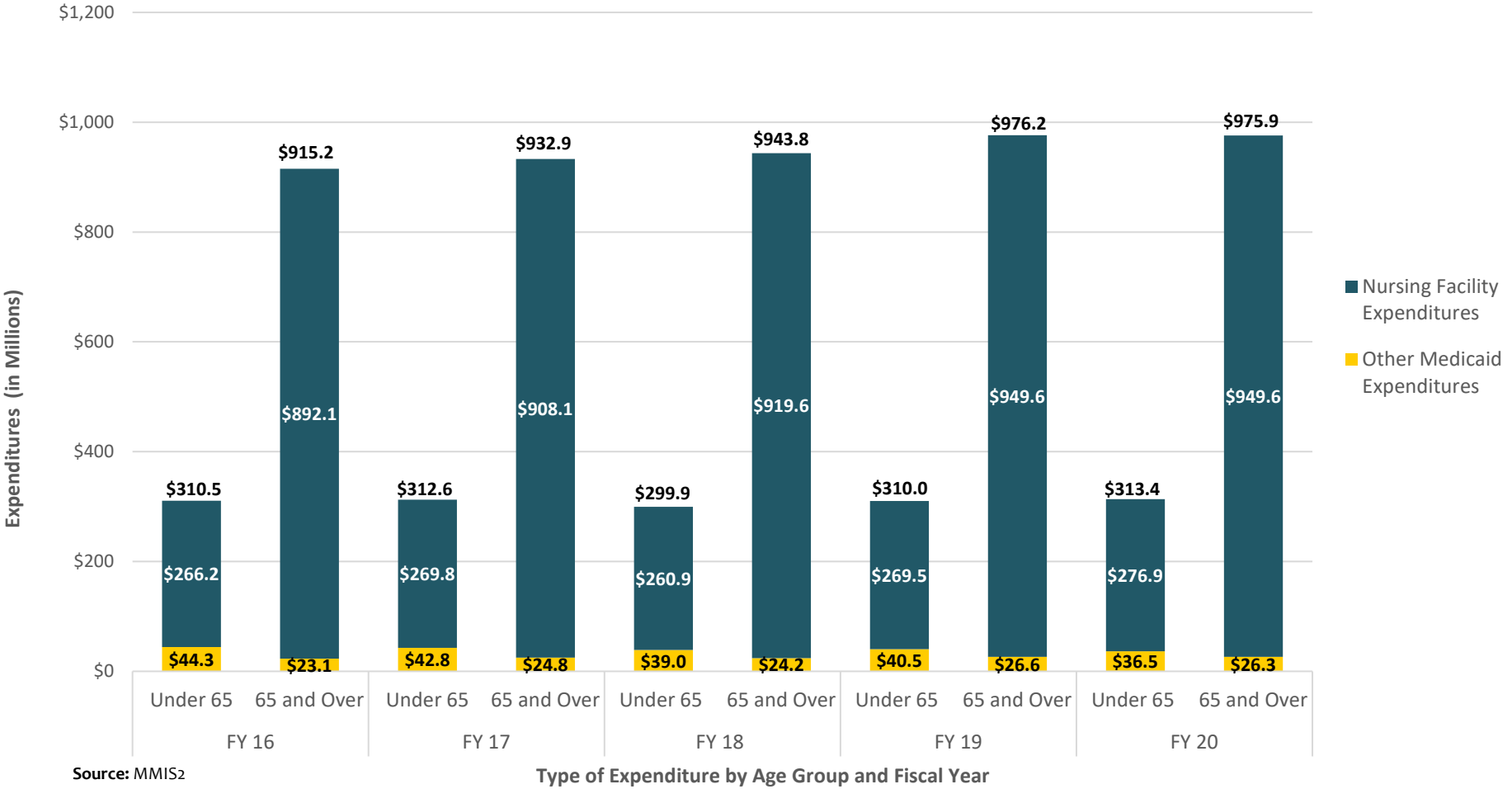
Note: Figure includes hospice beneficiaries and expenditures covered by Medicaid.

Source: MMIS2

The number of nursing facility residents who used hospice services increased from 2,170 in FY 2016 to 2,534 in FY 2020, an increase of 17% during the study period.

Average annual Medicaid expenditures increased from nearly $35.3 million in FY 2016 to $46.7 million by FY 2020, an increase of 32%.

Figure 19. Total Medicaid Expenditures (in Millions) for Nursing Facility Residents, by Age, FY 2016–FY 2020

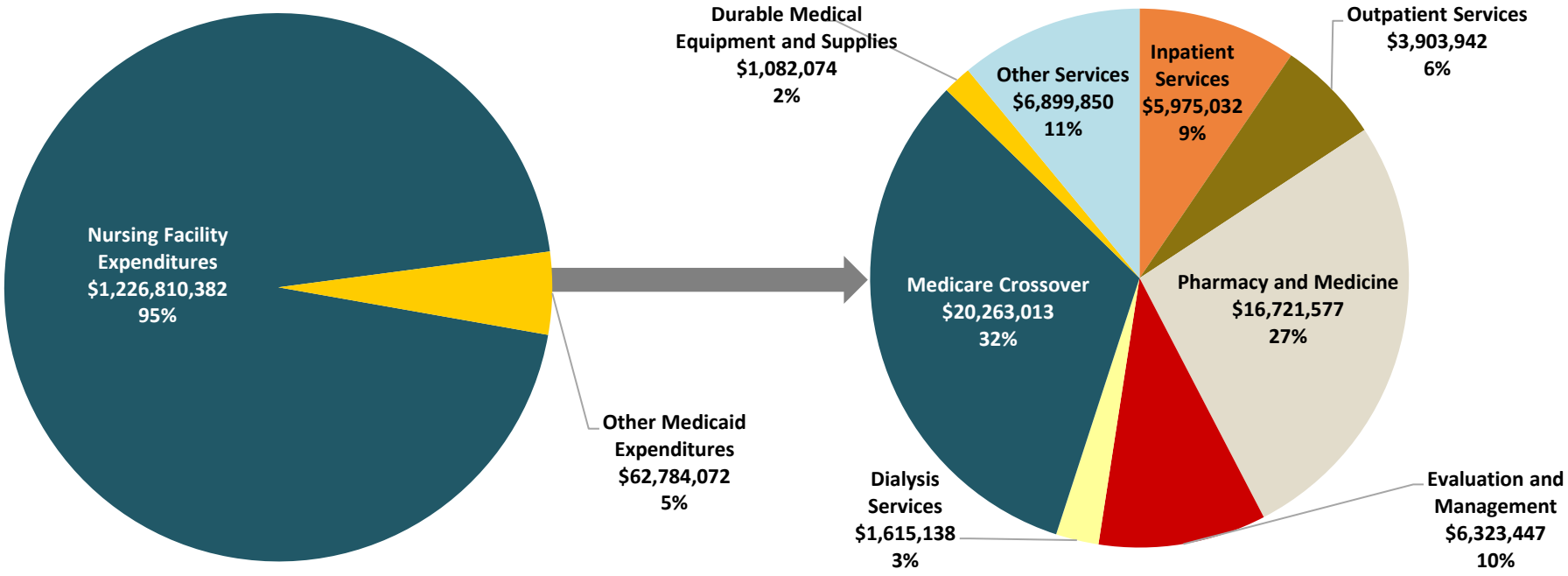


Source: MMIS2

Total Medicaid expenditures for those under 65 years were consistently lower compared to those 65 years and over, most likely because there are fewer nursing facility residents younger than 65 years. Total Medicaid expenditures for residents under 65 fluctuated little, while expenditures for those 65 and older generally increased during the study period. There was a decrease in total Medicaid expenditures from FY 2017 to FY 2018 for residents under 65 years while costs increased consistently for those 65 years and older.

Figure 20. Total Medicaid Expenditures for Nursing Facility Residents, with Other Medicaid Expenditures Breakdown, FY 2020

Total Medicaid expenditures for Maryland nursing facility residents were approximately $1.29 billion in FY 2020. Of this, 95% was for nursing facility services, while 5% was for other Medicaid expenditures. The chart below illustrates the breakdown of this 5%, with the largest expense category being Medicare crossover payments ($20.3 million), followed by pharmacy/medicine expenditures ($16.7 million).



Notes: 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). Other services include mental health services, DDA behavioral services, community personal care services, hearing aids, drug abuse clinic, federally qualified health centers, mobile treatment program, psychiatric rehabilitation program, dental diagnostic, dental preventive, health home, private duty nursing service, diagnostic equipment, ER services, Community First Choice, anesthesiology, vasectomy, surgery, radiology, oxygen, residential SUD services, emergency transport services, community options waiver, IEP/FSP (family service plan) school health-related services, STEPS case management, medical day care. Inpatient services include hospitalizations.

Source: MMIS2

Figure 21. PMPM Medicaid Expenditures for Nursing Facility Residents, by Age Group, FY 2016–FY 2020

	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
All Ages					
Nursing Facility Expenditures	$6,230	$6,372	$6,473	$6,717	$6,927
Other Medicaid Expenditures	$361	$364	$345	$368	$353
Total PMPM	$6,565	$6,712	$6,794	$7,061	$7,257
Under 65 Years					
Nursing Facility Expenditures	$7,018	$7,243	$7,291	$7,554	$7,877
Other Medicaid Expenditures	$1,158	$1,140	$1,081	$1,127	$1,032
Total PMPM	$8,115	$8,325	$8,315	$8,628	$8,860
65 and Older					
Nursing Facility Expenditures	$6,029	$6,152	$6,273	$6,512	$6,692
Other Medicaid Expenditures	$155	$168	$165	$182	$185
Total PMPM	$6,165	$6,302	$6,420	$6,676	$6,859

Notes: PMPM calculations were made by dividing the annual expenditures by the total number of member months (defined as a count of months with at least one Medicaid-paid day for each Medicaid nursing facility resident) in each year. Medicare costs for nursing facility residents are not included in this analysis.

Source: MMIS2

Total PMPM for all ages increased an average of 3% across the study years. Most expenditures for those under 65 and those 65 and older were for nursing facility expenditures. Other Medicaid expenditures for persons ages 65 and older were far lower than those for the younger age group. This is likely due to Medicare paying for services.

Chapter 4.
Nursing Facility Discharge

Chapter 4. Nursing Facility Discharge

Key Findings

Discharge Status

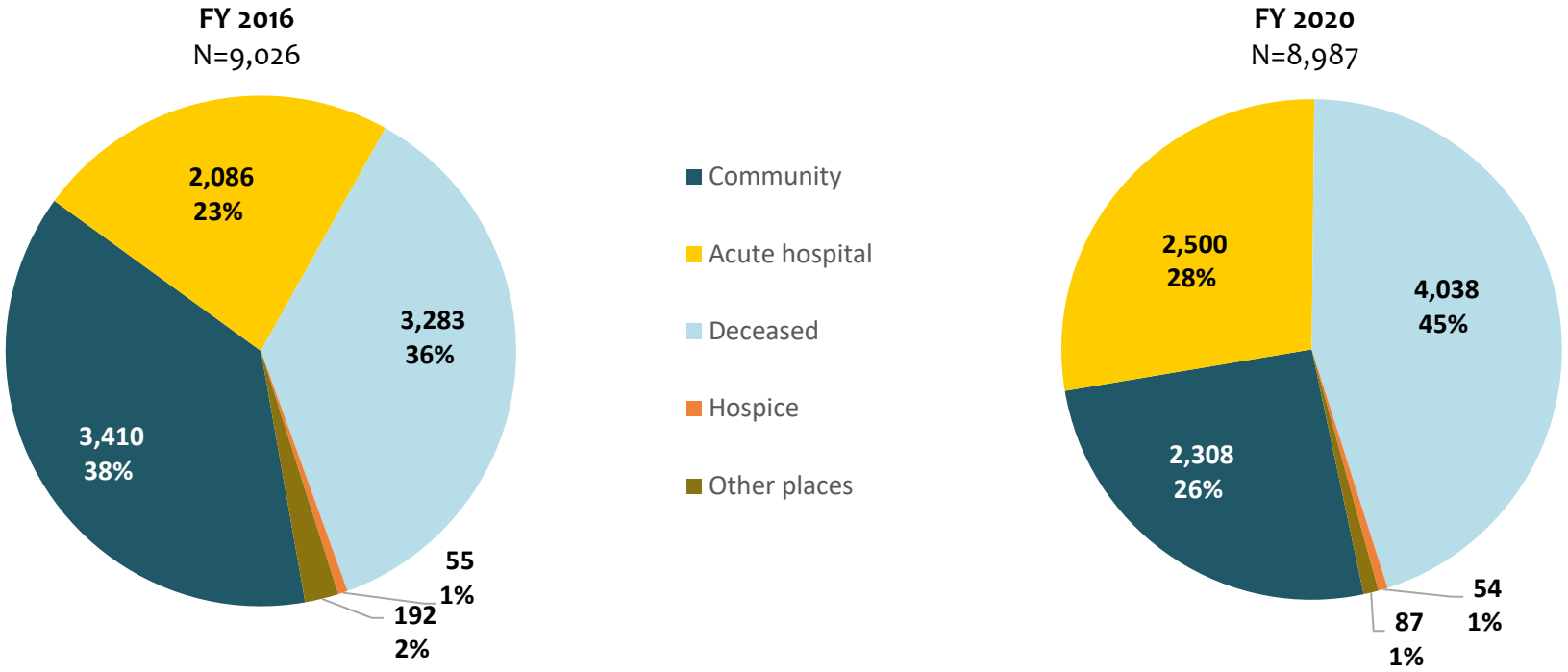
Approximately 36% of the discharges from a Maryland nursing facility in FY 2016 and 45% in FY 2020 were a result of a resident passing away. The percentage of residents discharged to the community decreased from 38% in FY 2016 to 26% in FY 2020. See Figure 22.

HCBS Received in the Community after Discharge

In FY 2020, 56% of nursing facility residents discharged to the community received a CO, CFC, or CPAS service. The highest percentage (40%) of residents discharged to the community received case management/supports planning services, 19% received personal assistance services, and 14% received personal emergency response system and monitoring services. Personal assistance services accounted for 55% of expenditures for HCBS for those discharged to the community. See Figure 23.

Figure 22. Discharge Status of Nursing Facility Residents, FY 2016 and FY 2020

In FY 2016, 36% of the nursing facility discharges (based on the most recent stay) were due to death; in FY 2020, this increased to 45%. In FY 2016, 38% of nursing facility residents were discharged to the community; in FY 2020, this decreased to 26%. In FY 2016, 23% were discharged to an acute hospital; this increase to 28% in FY 2020.



Notes: Community includes private home/apartment, board/care, assisted living, or group home. **Other places** include psychiatric hospital, inpatient rehabilitation facility, intellectual disabilities/developmental disabilities (ID/DD) facility, long- term care hospital, and other. Discharge status is based on the assessment for the most recent stay.

Source: MDS

Figure 23. HCBS Received 30 Days after Nursing Facility Residents' Discharge to the Community, FY 2020

Service	Cost	Percentage of Total Cost	Percentage of Participants
Assisted Living	$211,056	13%	7%
Case Management/Supports Planning	$272,499	17%	40%
Items That Can Substitute for Human Assistance	$50,980	3%	5%
Medical Day Care	$94,326	6%	5%
Nursing Monitoring	$30,608	2%	8%
Personal Assistance Services	$902,575	55%	19%
Personal Emergency Response System and Monitoring	$21,575	1%	14%
Transition Services	$62,054	4%	2%
Total	**$1,645,673**	**100%**	**100%**

Notes: Services with a cell size of 11 cases or less are omitted. Percentages have been rounded and may not equal 100%.

Sources: MDS and MMIS2

Fifty-six percent of nursing facility residents discharged to the community received a CO, CFC, or CPAS service in the 30 days after discharge. While personal assistance services accounted for the largest percentage of costs (55%), the largest percentages of participants (40%) received case management/supports planning services.

Chapter 5.
In the Community:
Comparisons between HCBS Users and Nursing Facility Residents

Chapter 5. In the Community: Comparisons between HCBS Users and Nursing Facility Residents

Key Findings

Balancing Maryland's LTSS

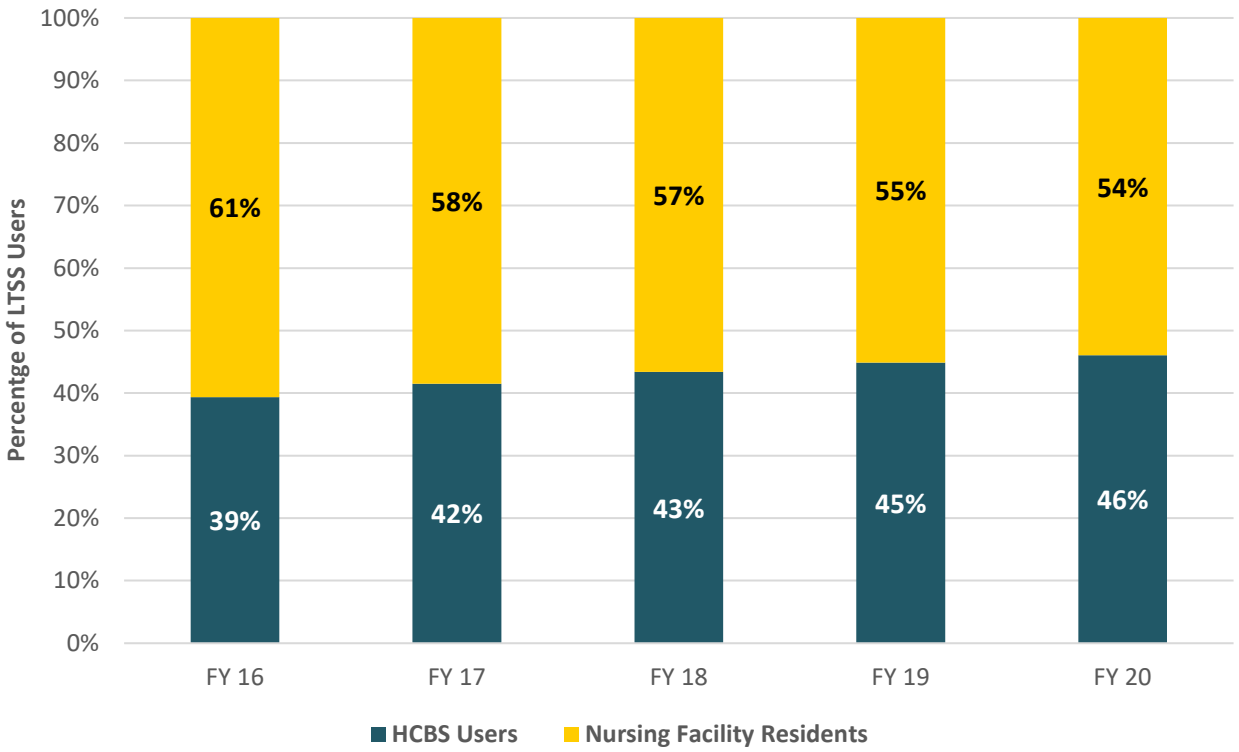
Historically, a higher percentage of Maryland Medicaid LTSS users have received services in nursing facilities than in the community. To balance the HCBS-to-nursing facility LTSS users, Maryland implemented a number of initiatives, such as the Money Follows the Individual (MFI) Act of 2003, the Money Follows the Person (MFP) Demonstration, 1915(c) waivers, the Balancing Incentives Program (BIP), and CFC. Figure 24 shows that these initiatives appear to be working; the percentage of nursing facility residents decreased from 61% of the LTSS population in FY 2016 to 54% by FY 2020. At the same time, the HCBS users increased from 39% of the LTSS population to 46%.

LTSS Expenditures

As a portion of LTSS expenditures, HCBS expenditures increased from 24% in FY 2016 to 29% in FY 2020. On average, nursing facility expenditures increased approximately 1% each year. See Figure 25.

During the study period, average annual costs were $49,386 for nursing facility residents and $23,991 for HCBS users. As such, HCBS users' average annual costs were 49% of nursing facility residents' average annual costs (Figure 26). Similarly, total Medicaid PMPM expenditures were $4,465 less, on average, for HCBS users than for nursing facility residents (Figure 27).

Figure 24. Medicaid HCBS and Nursing Facility Residents as a Percentage of LTSS Users, FY 2016–FY 2020

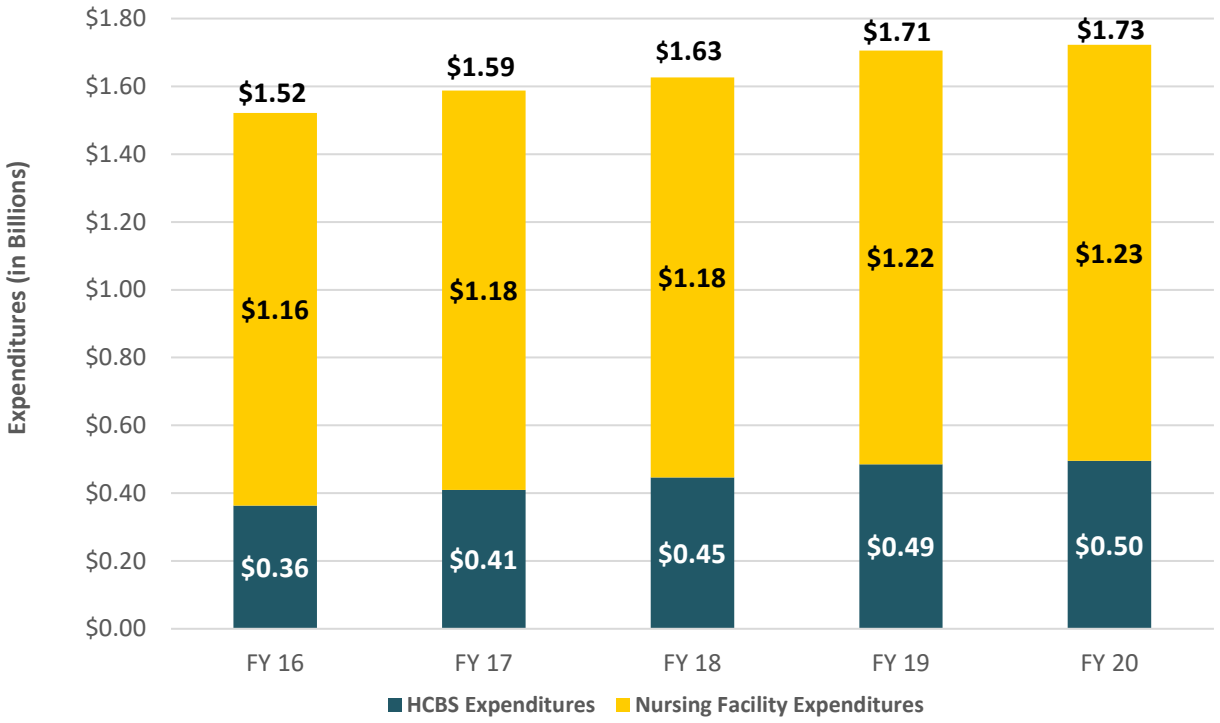


Note: Home and community-based programs include Maryland's 1915(c) waivers—Community Options (previously Older Adults and Living at Home), and Medical Day Care—and state plan personal care programs—Medical Assistance Personal Care (now Community Personal Assistance Services) and Community First Choice.

Source: MMIS2

Historically, a larger percentage of Marylanders received Medicaid LTSS in a nursing facility than in the community. However, between FYs 2016 and 2020, the percentage of LTSS users receiving services in the community increased from 39% to 46%.

Figure 25. Medicaid HCBS and Nursing Facility Expenditures (in Billions), FY 2016–FY 2020



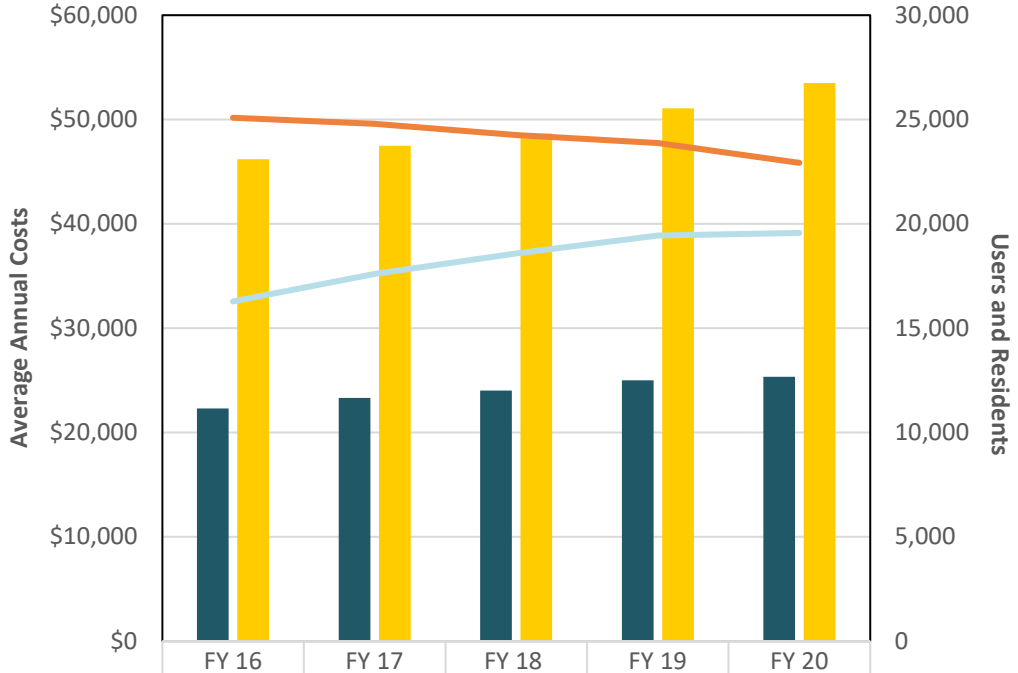
Notes: Home and community-based programs include Maryland's 1915(c) waivers—Community Options (previously Older Adults and Living at Home), and Medical Day Care—and state plan personal care programs—Medical Assistance Personal Care (now Community Personal Assistance Services) and Community First Choice. Expenditures do not include non-waiver services.

Source: MMIS2

Total LTSS expenditures were $1.73 billion in FY 2020, an increase of 13% from FY 2016. In FY 2016, HCBS accounted for 24% of total LTSS spending; by FY 2020, it was 29% of LTSS spending.

Additionally, HCBS expenditures increased an average of 9% each year during the study period, while nursing facility expenditures increased an average of 1% each year.

Figure 26. Comparison of Average Annual Costs for HCBS Users and Nursing Facility Residents, FY 2016–FY 2020



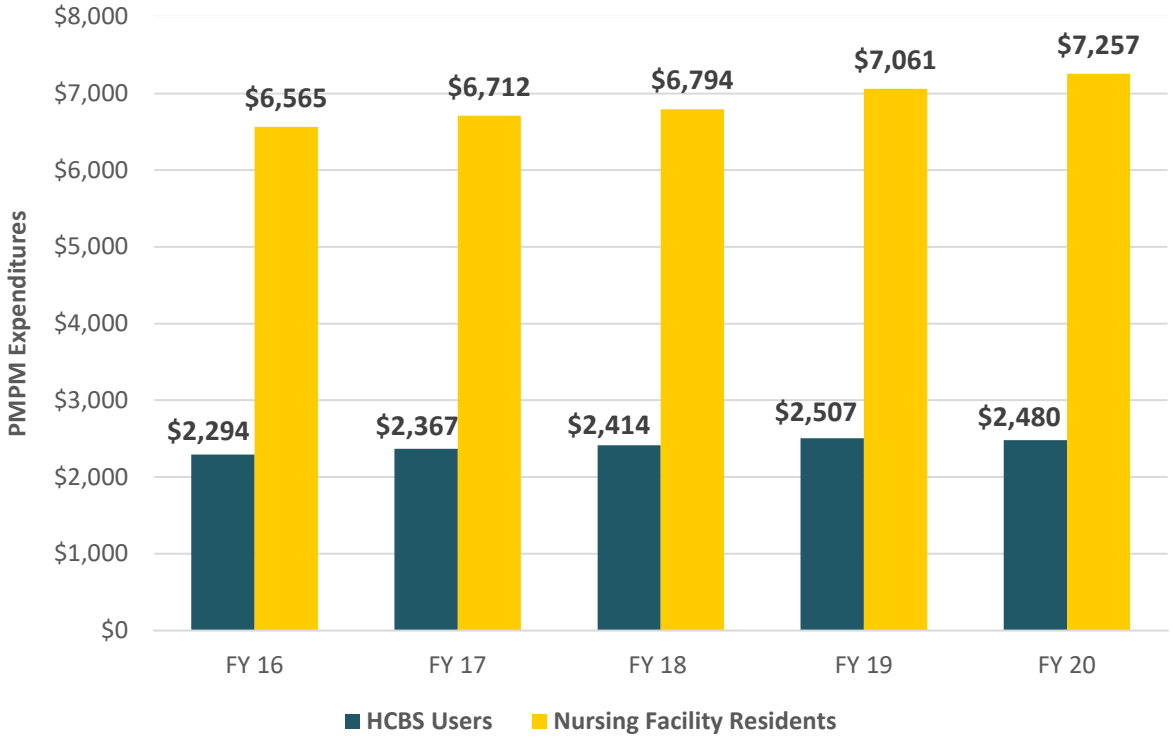
	FY 16	FY 17	FY 18	FY 19	FY 20
HCBS Costs	$22,305	$23,298	$24,017	$24,983	$25,350
Nursing Facility Costs	$46,180	$47,498	$48,664	$51,079	$53,509
HCBS Users	16,281	17,593	18,579	19,439	19,568
Nursing Facility Residents	25,083	24,798	24,258	23,877	22,927

Notes: Home and community-based programs include Maryland's 1915(c) waivers—Community Options (previously Older Adults and Living at Home), and Medical Day Care—and state plan personal care programs—Medical Assistance Personal Care (now Community Personal Assistance Services) and Community First Choice. Expenditures do not include non-waiver services. A nursing facility annual stay is 7 to 8 months, on average. Acuity levels of the populations were not factored in.

Source: MMIS2

Annual per-person LTSS expenditures for HCBS have historically been less costly than those provided in a nursing facility. Between 2016 and 2020, the average annual cost per person was $25,395 less for HCBS users than for nursing facility residents.

Figure 27. PMPM Medicaid HCBS and Nursing Facility Expenditures, FY 2016–FY 2020



The PMPM total Medicaid expenditures for HCBS users were, on average, $4,465 lower than for nursing facility residents.

Notes: Home and community-based programs include Maryland's 1915(c) waivers—Community Options (previously Older Adults and Living at Home), and Medical Day Care—and state plan personal care programs—Medical Assistance Personal Care (now Community Personal Assistance Services) and Community First Choice. Expenditures do not include non-waiver services. A nursing facility annual stay is 7 to 8 months, on average. Acuity levels of the population were not factored in.

Source: MMIS2

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