Current and Future Use and Medicaid Payments for Long-Term Services and Supports among People Age 65 and Older in Minnesota

2024 LTSS Projections Study, Interim Report

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Executive Summary

This Interim Report is from the 2024 follow-up study of use and public payments for long-term services and supports (LTSS) among Minnesotans age 65 and older. The original study, conducted in 2023, is described in detail in the report, Long-Term Services and Supports for Minnesota's Older Population: Current and Future Utilization and Medicaid Payments. Both the original and follow-up studies cover the full range of long-term services and supports used by older people in Minnesota, including nursing facilities, assisted living facilities and home-based care or personal care assistance. In the follow-up study we analyze additional data through June 2023 to better capture the use and payments for LTSS after the COVID-19 pandemic. We also expand on the simulation component of the original study by testing scenarios involving different assumptions about future LTSS.

Periods Covered by the Report - The Interim Report describes updated findings on use of different types of LTSS overall and by demographic characteristics of users. It compares three periods: before the COVID-19 pandemic (2016-2019), during the pandemic (2020-2021), and as the pandemic subsided (2022-June 2023). It also includes projections of future use and public payments for LTSS from 2025-2035. The Final Report will include findings from the simulation models for future LTSS under different demographic and policy scenarios.

Data Sources - Information on use of care, Medicaid payments, and characteristics of LTSS users is drawn from Minnesota's Medicaid Management Information System (MMIS), the nursing home Minimum Data Set (MDS) assessment system, and other state administrative systems.

LTSS Population, Services and Settings - Three broad categories of LTSS are covered in the study: (1) Medicaid and non-Medicaid (Medicare or privately financed) nursing facility care - residing in one of the 370 certified nursing facilities in Minnesota; (2) Medicaid assisted living facility care - customized living in a residential facility through the Medicaid Elderly Waiver program[1]; and (3) Medicaid home and community-based services (HCBS) used by participants in the Medicaid community-based Elderly Waiver Program, Alternative Care Program or a Personal Care Assistant. Medicaid home and community-based services include adult day services, hospice, home health, access services, case management, home provided meals, homemaker, chore, respite and personal care.

LTSS in the Pre-COVID, COVID and Post-COVID Periods

Entry, Use, and Exit from the LTSS System - During the post-COVID period (2022-2023) the total population of Minnesotan's age 65 and older was slightly over 1 million people. Annually during that period, nearly 30,000 people (3% of the aged population) entered the LTSS system for the first time. They began using a nursing facility, Medicaid assisted living facility or Medicaid home and community-based services. Annually during the same period about the same numbers exited the LTSS system: 11,000 people died and 19,000 stopped using LTSS.

[1] Medicaid payments for assisted living facilities are only for regularly scheduled, health-related and supportive services and do not include room and board.

About 15,000 people exited the LTSS system alive without becoming Medicaid enrolled. Many of them entered a nursing facility for post-acute care and then after a short stay, they returned to a community setting with no care or with privately paid care.

LTSS Use and COVID-19 - The number of all monthly LTSS users declined from 51,247 in the pre-COVID period (2016-2019) to 48,965 in the COVID period (2020-2021), and then remained steady at 48,867 during the post-COVID period (2022-mid-2023). Underlying the overall figures were major differences in use of care between types of LTSS. The number of nursing facility residents, both Medicaid and non-Medicaid, showed a steady decline from 2016-2019, dropped sharply in the COVID period, and then remained at that lower level during the post-COVID period. In contrast, the number of HCBS users increased steadily during the pre-COVID, COVID, and post-COVID periods. The number of assisted living facility residents increased steadily during the pre-COVID period, dropped somewhat during the COVID period and then increased in the post-COVID period to above the pre-COVID levels.

COVID-Related Mortality - Rates of all-cause mortality of LTSS users increased during the COVID period. Nursing facility residents, both Medicaid and non-Medicaid, experienced the greatest increase in death rates. Assisted living facility residents also had high death rates, while HCBS participants had only a minimal increase in death rates.

Difference in Age and Gender of LTSS Users by Period - Across the pre-COVID, COVID and post-COVID periods, nursing facilities had the oldest residents, assisted living facility residents were somewhat younger and HCBS users were the youngest. However, the LTSS population tended to become younger over time. Both the total number and percentage of LTSS users age 85 and older declined steadily across periods. In contrast, the number and percentage of LTSS users age 75-84 steadily increased across periods, while the number and percentage of LTSS users age 65-74 remained roughly the same across periods. The largest decline in average age was among nursing facility residents age 85 and older. Women outnumbered men in all LTSS settings. The steepest decline across periods was among older, female, nursing facility residents.

Rates of LTSS Use in Relation to Minnesota's Older Population - Even though the total older population of Minnesota was growing from 2016 thru 2023, rates of LTSS use per 1000 people in the older population declined steadily. The pre-COVID downward trend accelerated during the COVID period and then continued at the lower level in the post-COVID period. Most of the downward trend occurred among nursing facility residents and people age 85 and older. High rates of COVID-related mortality contributed to the decline in LTSS use, particularly among nursing facility residents.

LTSS Projections from 2025 thru 2035

Projections of future LTSS use and Medicaid payments drew on population projections of older Minnesotans from the Minnesota State Demographic Center, and rates of LTSS use and average Medicaid payments from the pre-COVID and post-COVID periods. Projections were made separately for Medicaid nursing facility, assisted living facility, in-home care and PCA services, adult day services, home health, hospice, case management and access services used by the Medicaid LTSS population. There were three sets of projections from 2025 through 2035:

- Pre-COVID – return to pre-COVID pattern of LTSS use;
- Post-COVID – extension of the post-COVID pattern of LTSS use; and
- Blended – blending of the pre-COVID and post-COVID patterns, beginning with a post-COVID pattern in 2024 and returning to a pre-COVID pattern steadily each year from 2025 through 2035.

Assumptions for the Projections - Each scenario relied on the same state demographic projections of population growth by age group (65-74, 75-84, and 85 and older) and gender. Average payments for LTSS services were inflated at 2.5% per year. Payments are presented in current dollars or the dollars in the year to which the payment is projected. The Blended scenario is described in detail in the body of the report.

Projected increase in Minnesota's older population from 2024 to 2035 - The total population age 65 and older in Minnesota is projected to increase from 1.05 million in 2024 to 1.23 million in 2035. The largest increase will be among people age 75-84 as members of the "Baby Boom" population move through that age range. The population age 85 and older is also projected to increase, while the population age 65-74 is projected to show a small decease as more people leave that age range and fewer people enter it. The numbers of females and males are also projected to increase with larger numbers of females in each year due to their longer life expectancy.

Medicaid LTSS use with the Post-COVID Scenario - In the post-COVID scenario, the total number of people using Medicaid LTSS is projected to increase by 22% from 54,897 in 2025 to 67,231 in 2035. The number of users age 65-74 is projected to decline by 3%; the number of users age 75-84 is projected to increase by 37%; and the number of users age 85 and older is projected to increase by 33%. Nursing facility residents are projected to increase by 25%; assisted living facility residents are projected to increase by 27%; in-home care users are projected to increase by 20%; and PCA users are projected to increase by 19%.

Medicaid LTSS Use with the Blended Scenario - In the Blended scenario, the number of LTSS users is projected to increase by 35% from 55,472 in 2025 to 75,054 in 2035. The number of users age 65-74 age is projected to increase by 6%; the number of users age 75-84 is projected to increase by 52%; and the number of users 85 and older is projected to increase by 47%. Nursing facility residents are projected to increase by 63%; assisted living facility residents are projected to increase by 30%; in-home care users are projected to increase by 37%; and PCA users are projected to increase by 24%.

Medicaid LTSS Payments with the Post-COVID Scenario - In the post-COVID scenario, LTSS payments in current dollars are projected to increase by 58% from $2,527 million in 2025 to $3,996 million in 2035. Payments for people age 65-74 are projected to increase by 24%; payments for people age 75-84 are projected to increase by 74%; and payments for people age 85 and older are projected to increase by 68%. Payments for nursing facility residents are projected to increase by 61% from $1,117 million to $1,890 million; payments for assisted facility residents are projected to increase by 62% from $443 million to $720 million; and combined payments for in-home care and PCA are projected to increase by 52% from $592 million to $902 million.

Medicaid LTSS Payments with the Blended Scenario - In the Blended scenario, total projected LTSS payments in current dollars are projected to increase by 87% from $2,573 million to $4,813 million. Payments for people age 65-74 are projected to increase by 43%; payments for people age 75-84 are projected to increase by 105%; and payments for people age 85 and older are projected to increase by 102%. Payments for nursing facility residents are projected to increase by 110% from $1,201 million to $2,553 million; payments for assisted living facility residents are projected to increase by 64% from $437 million to $727 million; and combined payments for in-home care and PCA for projected to increase by 65% from $592 million to $988 million.

Simplifying Assumptions and Caveats

These future LTSS projections are based on simplifying assumptions regarding the future use of care and payments. These assumptions make the projections less complex and more transparent, yet they also represent study limitations.

- The LTSS projections rely on patterns of LTSS use and Medicaid payments in the Pre-COVID and Post-COVID periods. Future use and payments could be quite different from historical patterns.
- Rates of LTSS service use for each set of projections (pre-COVID, post-COVID, and blended) are assumed to follow the same pattern in each future year. The projections do not consider variation in the rate of people entering each type of service from year to year. Also, they do not consider potential shifts from year to year in service use between LTSS categories, e.g., from nursing facility to assisted living facility or HCBS waiver services.
- Demographic change in age groups and gender are the only population characteristics affecting future LTSS projections. Potential changes in other population characteristics, such as race, marital status, county of residence and economic status are not considered in the projections.
- Similarly, the projections do not consider potential future changes in rates of disability or mortality, availability of family or other private means of support, economic conditions or public policies and financing.

The simulation modeling in the next stage of the study is meant to test alternative scenarios that address these issues.

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Introduction and Background

This Interim Report is from the 2024 follow-up study of use and public payments for long-term services and supports (LTSS) among Minnesotans age 65 and older. The original study, conducted in 2023, is described in detail in the report, Long-Term Services and Supports for Minnesota's Older Population: Current and Future Utilization and Medicaid Payments. Both the original and follow-up studies cover the full range of long-term services and supports used by older people in Minnesota, including nursing facilities, assisted living facilities, and home-based care or personal care assistance. In the follow-up study, we analyze additional data through June 2023 to better capture the use and payments for LTSS after the COVID-19 pandemic. We also expand on the simulation component of the original study by testing scenarios involving different assumptions about future LTSS.

The Interim Report describes updated findings on use of different types of LTSS overall and by demographic characteristics of users. It compares three periods: before the COVID-19 pandemic (2016-2019), during the pandemic (2020-2021) and as the pandemic subsided (2022-June 2023). It also includes projections of future use and public payments for LTSS from 2025-2035. The Final Report will include findings from the simulation models for future LTSS under different demographic and policy scenarios.

COVID-19 in Minnesota

Minnesota's outbreak of the COVID-19 pandemic began in March 2020. Deaths from COVID-19 reached their peak in the winter of 2020-2021 with the Omicron variant, and then subsided through the rest of 2021. Prior research has documented the rapid spread of COVID-19, severity of symptoms, and disproportionate number of COVID-19 related deaths among older people in nursing facilities, particularly those of advanced age with multiple comorbid conditions. Although less is known about the effects of COVID-19 among older people in other residential care settings or receiving care at home, we can surmise that they too suffered greater symptom severity and higher rates of mortality than the population as a whole.

Future Projections and the COVID Effect

The current report focuses on trends in LTSS use overall in different settings by age groups, gender, and race/ethnicity, which are key variables in our population projections. We will link population projections for Minnesota's older population by age and gender to our study data in order to estimate future use and payments for LTSS. Assumptions about a temporary versus lasting COVID effect will have crucial implications in projecting future LTSS use and payments. In our 2023 Report we made projections based on use of LTSS and Medicaid payments during the pre-COVID period because we did not have sufficient data on the post-COVID period. In this follow-up study we have additional data through mid-2023, which offers more insight into post-COVID trends.

LTSS Population, Services and Settings

Three types of LTSS are covered in the study: (1) Medicaid and non-Medicaid (Medicare or privately financed) nursing facility care - residing in one of the 370 certified nursing facilities in Minnesota; (2) Medicaid assisted living facility care - customized living in a residential facility through the Medicaid Elderly Waiver program; and (3) Medicaid home and community-based

services (HCBS). To gain access to most Medicaid LTSS services included in our study a person must meet level of care requirements based on a health and functional assessment at entry to the LTSS program and periodically thereafter.

Residential LTSS

Nursing facilities and assisted living facilities both provide care in residential settings to older people with functional disabilities. Nursing facilities deliver skilled nursing services in combination with Activities of Daily Living (ADL) assistance and cognitive and behavioral support. The majority of their admissions are from acute care hospitals and most residents have stays of less than 90 days with discharge to a private residence or through death. Assisted living facilities are also residential care settings; however, they offer limited nursing services. Instead, they concentrate on ADL assistance, including cognitive or behavioral support if necessary. Memory centers fall under the general heading of assisted living facilities. The majority of residents in both nursing and assisted living facilities have moderate to severe cognitive impairment; however, nursing facility residents tend to have greater ADL dependency and medical complexity. Although assisted living facilities are sometimes referred to as home and community-based services, we classify them separately because of the residential nature of the care being delivered. Medicaid pays for a bundling of personal care, meals, and ADL assistance in assisted living facilities but not the room and board component.

Home and Community Based Services

Home and community-based service programs included in our study provide ADL assistance, nursing or other supportive services to older people largely in their own homes or homes of relatives through the Medicaid Elderly Waiver program, Medicaid Personal Care Assistant (PCA) program or the Alternative Care Waiver program. The LTSS services offered through these programs include personal care, homemaker and chore services, home delivered meals, nursing care, adult days services and other forms of daily living assistance in the home or community.

Gaps in information

Although our study covers major forms of LTSS financed publicly through the Medicaid program, we lacked information on care provided by family or other informal caregivers or paid for privately, whether alone or in combination with a public LTSS. The biggest gap in information would be for people not enrolled in Medicaid or using Medicaid LTSS. Also, the study focusses on LTSS and only tangentially addresses acute care use. People in need of, or using LTSS, often have very high acute care needs and are heavy users of acute care services. These acute care services are generally paid for through the Medicare program which covers all people age 65 and older. A broader picture of the LTSS population, encompassing informal care and acute care use, was beyond the scope of the study.

Methods and Data Sources

Information on use of LTSS, Medicaid payments, and characteristics of users is drawn from Minnesota's Medicaid Management Information System (MMIS), the nursing home Minimum Data Set (MDS) assessment system, and other state administrative systems. Details about LTSS programs and types of services can be found at the DHS: Programs and services

website. Details about data sources and methodology can be found in the Appendices to the 2023 report.

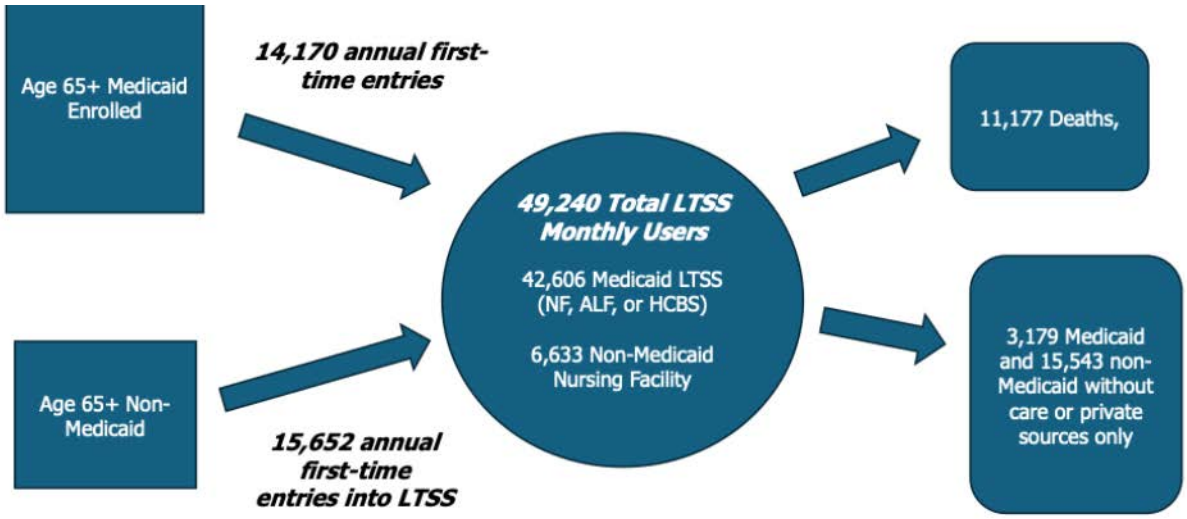
The LTSS System – Entries, Exits, and Annual LTSS Users by Period

The findings in this report cover initial entry into and exit from the LTSS system, use of care in different LTSS settings and programs and demographic characteristics of LTSS users. We draw comparison of trends in LTSS across months, calendar quarters and years over three periods: prior to the COVID-19 pandemic (2016-2019), during the pandemic (2020-2021) and when it subsided (2022-mid-2023).

Entry, Use, and Exit from the LTSS System

During 2022-2023, total population of Minnesotan's age 65 and older was slightly over 1 million people. Annually during that period, nearly 30,000 people (3% of the aged population) entered the LTSS system for the first time (Figure 1). They began using a nursing facility, Medicaid assisted living facility or Medicaid home and community-based services. The average number of LTSS users per month was nearly 50,000, or about 5% of the total Minnesota population age 65 and older. Annually during the same period about the same number exited the LTSS system: 11,000 people died and 19,000 stopped using LTSS. About 15,000 people exited the LTSS system alive without becoming Medicaid enrolled. Many of them entered a nursing facility for post-acute care and then after a short stay, they returned to a community setting with no care or privately paid care.

Figure 1. Annual Number of People Entering LTSS for the First Time, and Total Using LTSS, and Total Exiting LTSS (2022-2023)



New Entries into the LTSS System by Period

The number of new entries in each period (pre-COVID, COVID, and post-COVID) by the setting to which they entered is shown in Table 1, Figure 2 and Figure 3. The total number of annual new entries declined precipitously between pre-COVID and COVID periods, from 35,609 to 26,879, and then recovered somewhat during the post-COVID period to 29,822. The majority of new entries in all three periods entered a nursing facility without being Medicaid enrolled. Much smaller numbers of Medicaid-enrollees entered nursing facilities in each period. New nursing home admissions, both Medicaid and non-Medicaid, dropped in the COVID period and then increased during the post-COVID period but remained well below the pre-COVID levels. In contrast, new entries into assisted living facilities and home and community-based services, while dropping during the COVID period, returned to near pre-COVID levels in the post-COVID period.

Table 1. Annual New Entries into the LTSS System by Period

Entry to	Pre-COVID (2016-2019)	COVID (2020-2021)	Post-COVID (2022-2023)
MA Nursing Facility	2,378	1,634	1,821
MA Assisted Living Facility	1,470	1,208	1,409
MA Home & Community Based Services	11,613	9,161	10,940
Non-MA Nursing Facility	20,148	14,876	15,652
All LTSS	35,609	26,879	29,822

Note: MA = Medicaid enrolled

Figure 2. Total Annual New Entries into the LTSS System by Period

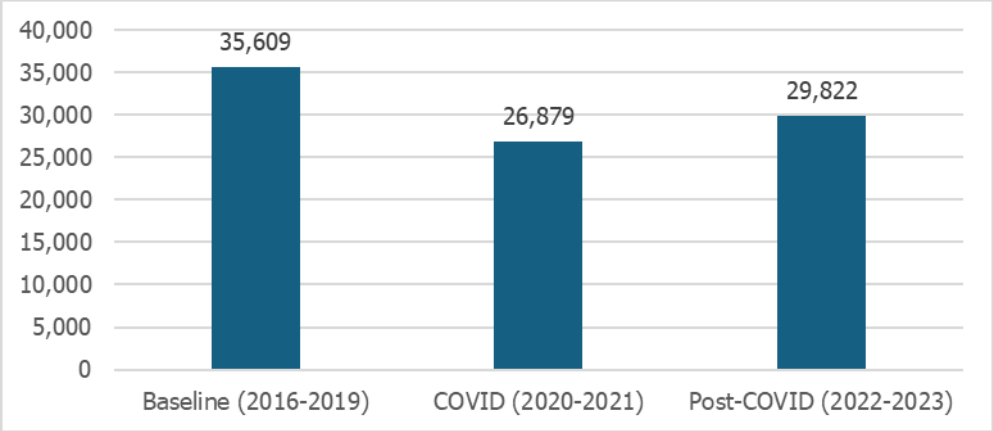
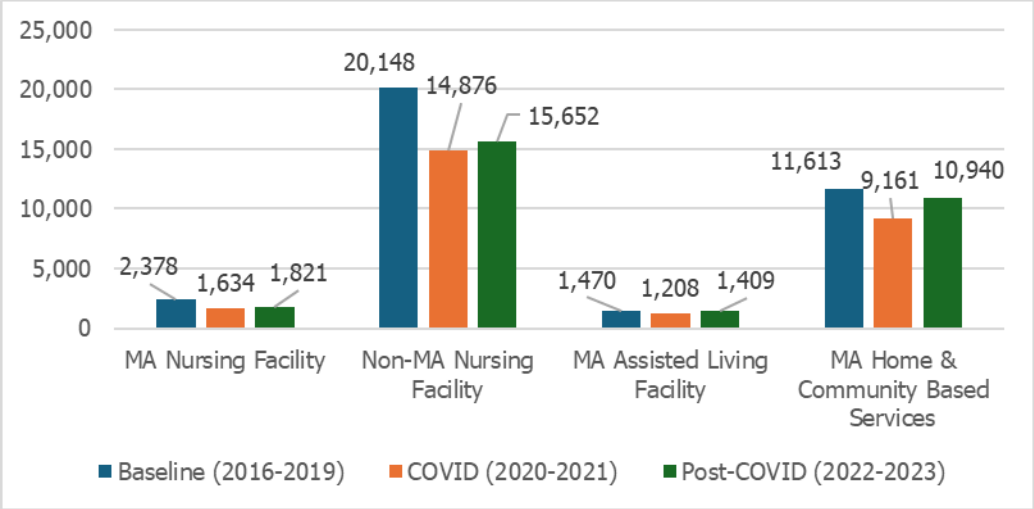


Figure 3. Annual New Entries into the LTSS System by LTSS Type and Period



Exits from the LTSS System by Period

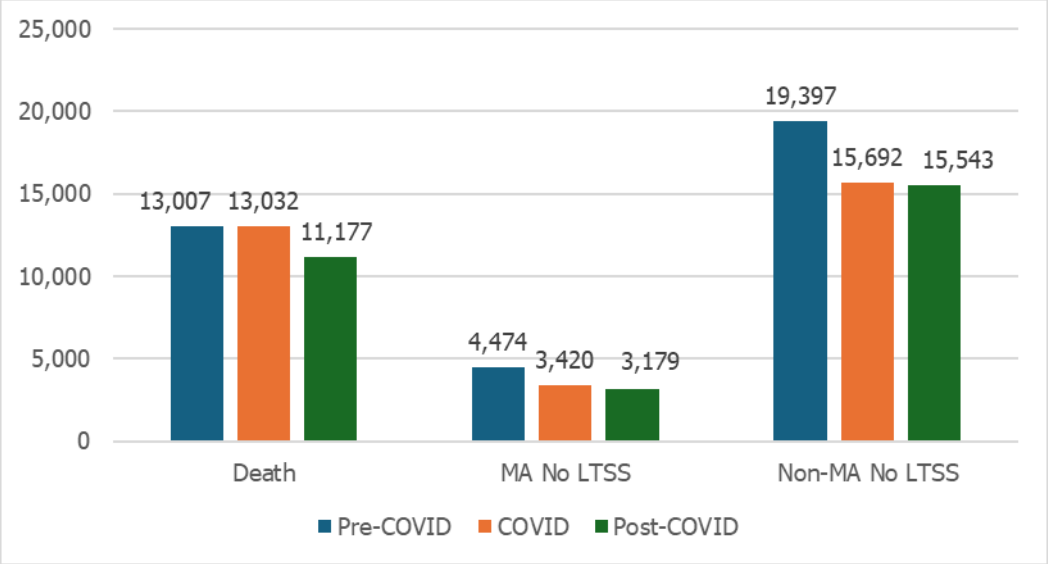
Approximately the same number of people exited the LTSS system each year as entered that year. The majority of people leaving LTSS left without being enrolled in Medicaid (Table 2 and Figure 4). Nearly all on these people had entered the LTSS system not enrolled in Medicaid, and most had relatively short stays of less than 30 days. Deaths accounted for the next highest number of exists followed by a relatively small percentage of people exiting while Medicaid enrolled. The numbers exiting the LTSS system declined precipitously during the COVID period. Because fewer people entered nursing facilities during the COVID and post-COVID periods, we would expect fewer discharges. Deaths as a percentage of all exits rose during the COVID period as would be expected because of the higher COVID-related mortality rates (see LTSS Mortality section below).

Table 2. Annual LTSS Exits – Deaths or Discharges to No LTSS by Period

Period	Death	Exit to MA, No LTSS	Exit to Non-MA, No LTSS	All Exits
Pre-COVID	13,007	4,474	19,397	36,878
COVID	13,032	3,420	15,692	32,144
Post-COVID	11,177	3,179	15,543	29,899
Pre-COVID	35%	12%	53%	100%
COVID	41%	11%	49%	100%
Post-COVID	37%	11%	52%	100%

Note: MA = Medicaid enrolled

Figure 4. Annual LTSS Deaths or Discharges to No LTSS by Period



Monthly LTSS Users by Period

Viewing the LTSS system from the perspective of average monthly users presents a different picture of the LTSS population (Table 3, Figure 5 and Figure 6). Whereas most new entries to LTSS were through the nursing facility, the largest number of monthly LTSS users were receiving care either through home and community-based services (HCBS) or in assisted living facilities. This pattern held during all three periods, despite sharp declines in nursing facility users between the pre-COVID and COVID periods.

The number of all monthly LTSS users declined from 51,247 in the pre-COVID period to 48,965 in the COVID period, and the number remained steady at 48,867 during the post-COVID period. Underlying the overall figures are major differences in use of care between types of LTSS. The number of nursing facility residents, both Medicaid and non-Medicaid, dropped sharply between pre-COVID and COVID periods. In contrast, the number of HCBS users held steady during the COVID period and then increased during the post-COVID period. The pattern for assisted living residents was more complicated. Underlying the average for the 2020-2021 COVID period is a steady number of assisted living residents in 2020 and then a drop in 2021. This was followed by a sizable recovery in the 2022-2023 post-COVID period. The following section describes these annual trends.

Table 3. Number of LTSS Users by Type of LTSS and Period

Type of LTSS	Pre-COVID (2016-2019)	COVID (2020-2021)	Post-COVID (2022-2023)
MA Nursing Facility (All LOS)	13,034	10,933	10,063
Non-MA Nursing Facility (All LOS)	8,080	6,735	6,619
MA Assisted Living Facility	9,169	9,391	9,718
MA Home & Community Based Services (All HCBS)	20,964	21,906	22,476
All LTSS	51,247	48,965	48,867

Note: MA = Medicaid enrolled

Figure 5. All LTSS Users per Month by Period

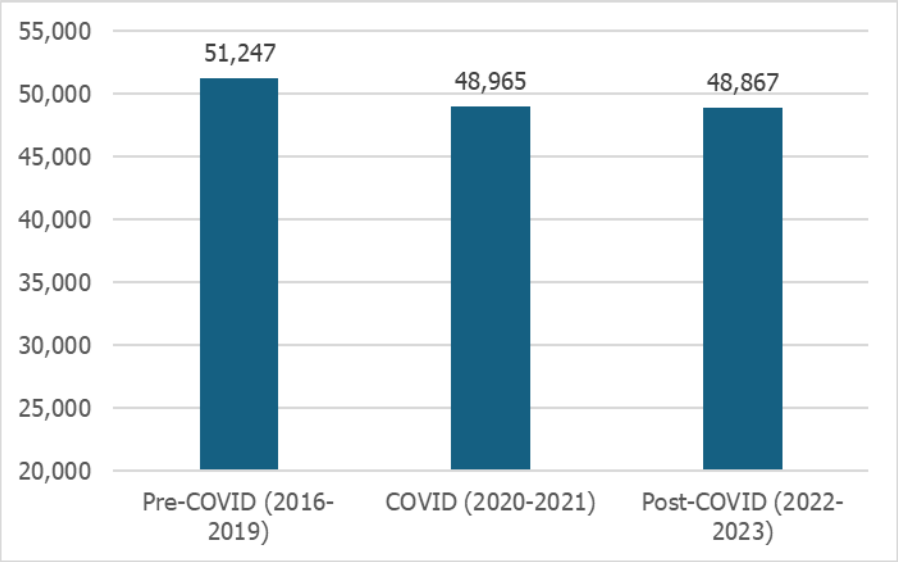
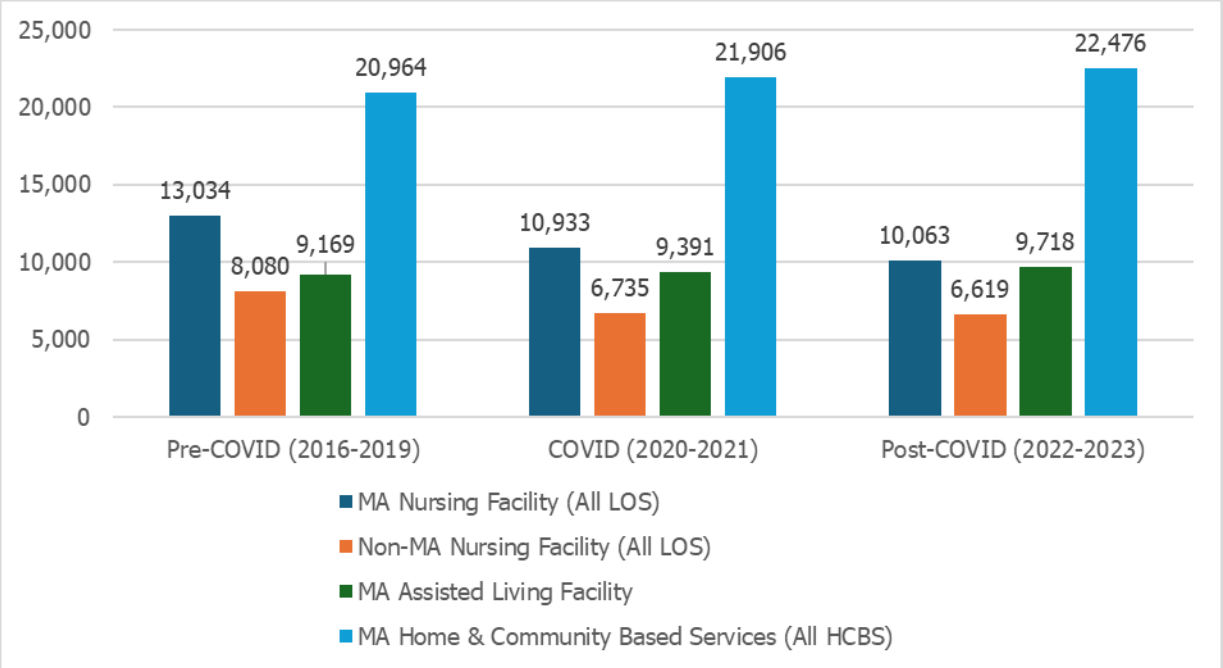


Figure 6. Monthly LTSS Users by Type and Period



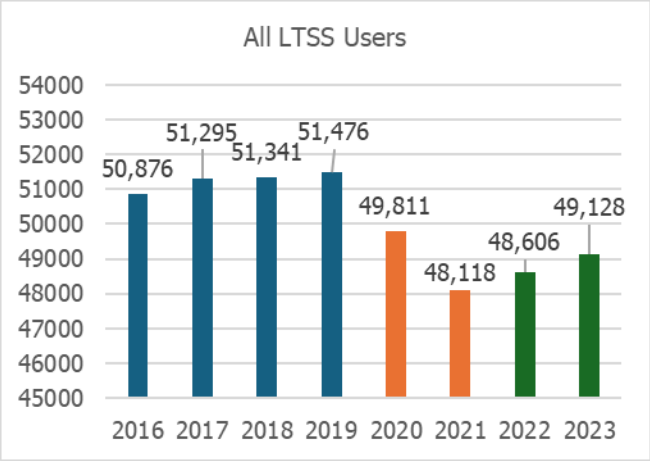
Trends in Monthly Utilization of LTSS by Year

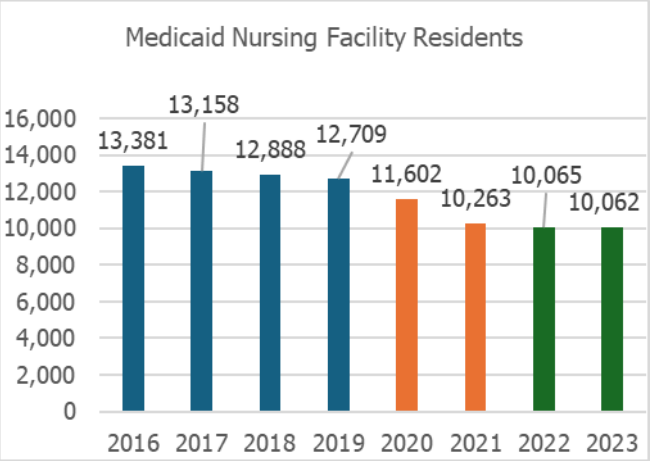
Changes in use of LTSS between periods can be examined more closely by tracking use over time. We wanted to determine if trends in LTSS use during the post-COVID period might be a continuation of trends in use during the pre-COVID period and what impact COVID might have had on post-COVID trends. Panel 1 shows the average number of monthly LTSS users annually from 2016-2023. More detailed graphs with average number of monthly users by calendar quarter are in the Appendix, Panel A1.

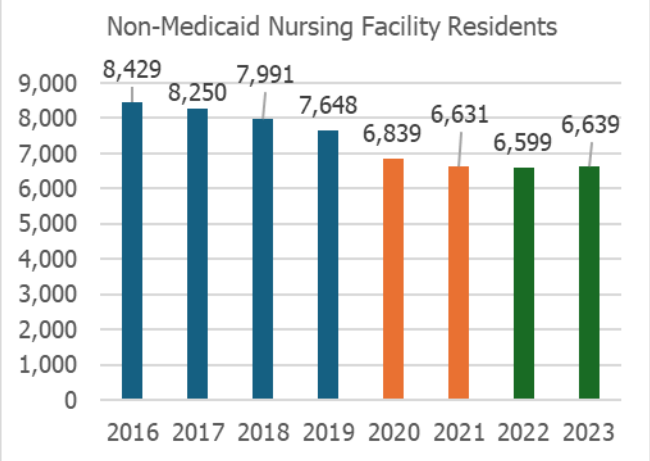
Overall, the number of monthly LTSS users increased steadily through the pre-COVID years (2016 thru 2019), declined sharply in the COVID years (2020 and 2021) and then headed upward in the post-COVID years (2022 and the first half of 2023), (Panel 1). The trends in monthly users by type of LTSS displayed very different patterns. While the numbers of nursing home users displayed very little recovery in the post-pandemic period, the use of assisted living facilities and HCBS increased in the post-pandemic period.

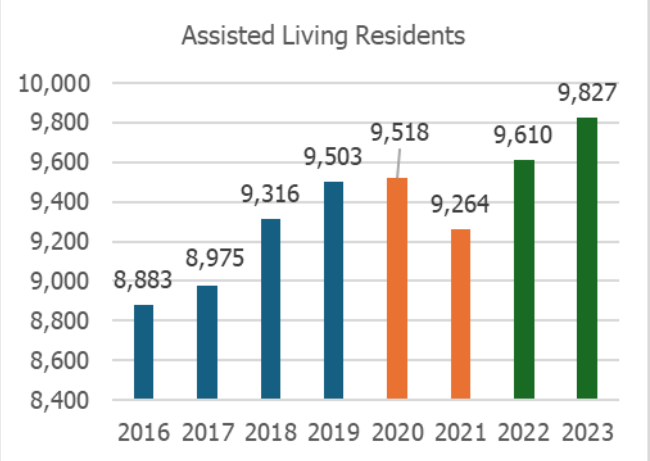
Nursing facility use by both Medicaid and non-Medicaid residents trended downward in the years leading up to the pandemic, declined sharply during the pandemic years, and then continued at the same low level during the post-pandemic years. In contrast, the trend in the number of monthly assisted living facility residents was steadily upward in the pre-COVID years, experienced a decline during the COVID years, and then displayed an upward trend during the post-COVID years. The trend in number of HCBS participants was steadily upward during the pre-COVID years, remained constant during the COVID years, and then continued upward during the post-COVID years.

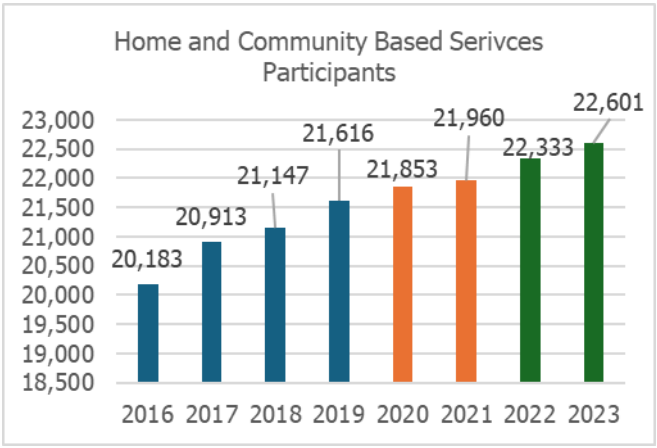
Panel 1. Number of Average Monthly LTSS Users by LTSS Type and Year











Trends in Mortality by LTSS Type and Age across Periods

As expected, the rates of all-cause mortality by LTSS users increased during the COVID period, both overall and by LTSS type. Figure 7 and Figure 8 show trends in average death rates per 1000 LTSS users by calendar quarters from quarter 1 2016 through quarter 2 2023. The mortality rates display a seasonal trend with a low during quarter 3 and a high during quarter 1 of each year. There was a sharp upward spike during quarter 4 of 2020 with the Omicron wave of COVID-19 (Figure 7). The quarter 1 2020 spike was most pronounced among nursing facility and assisted living residents (Figure 8). Also, the death rates displayed an upward trend in quarter 2 of 2020, the first months of the epidemic. Nursing facility residents not enrolled in Medicaid experienced the greatest increase in death rates, followed by nursing facility residents enrolled in Medicaid and assisted living facility residents. Trends in death rates among HCBS users displayed only minimal change during the COVID period.

Figure 7. Monthly Deaths/1,000 for All LTSS Users (Averaged Across Calendar Years)

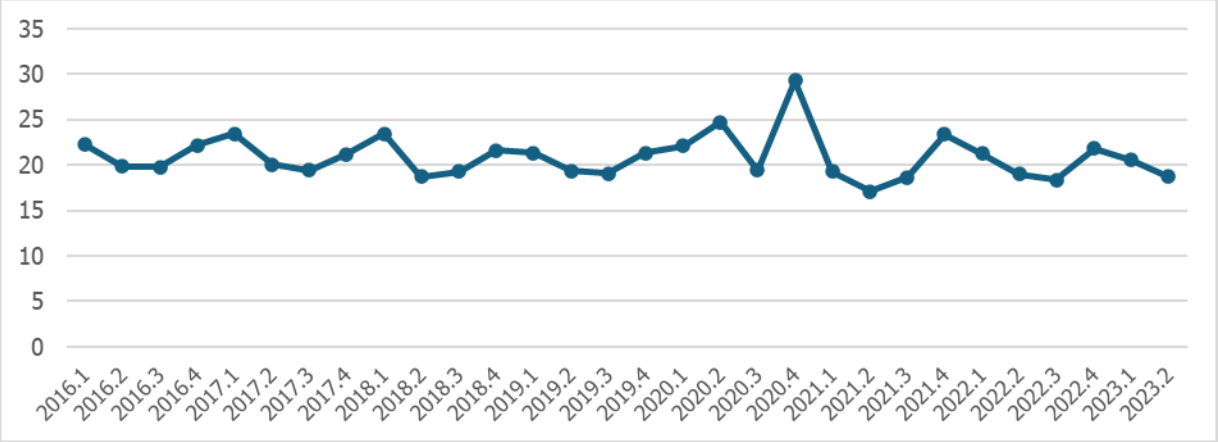
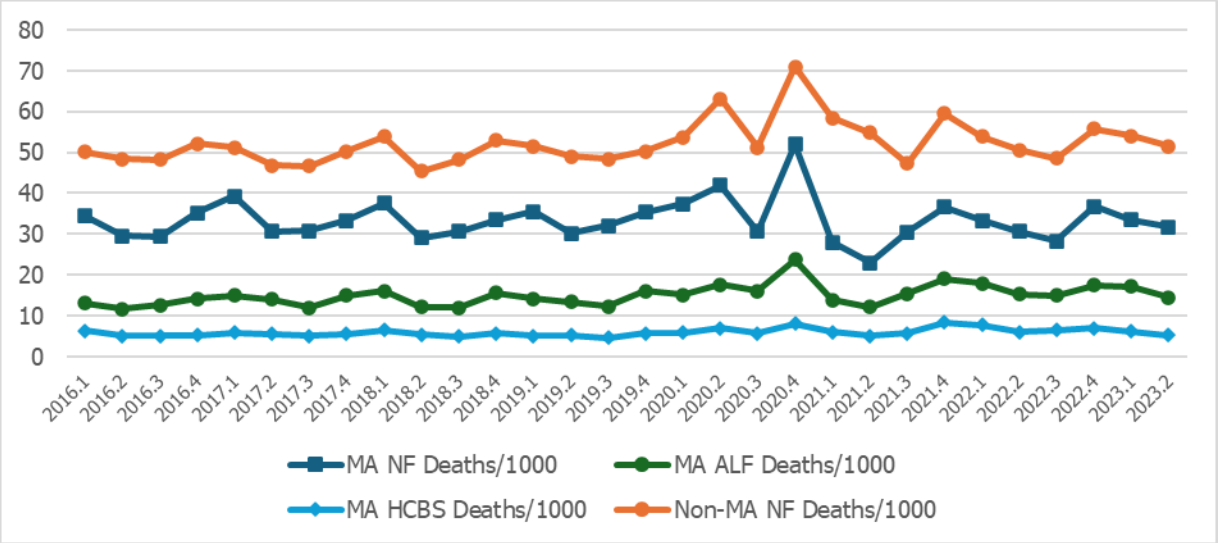
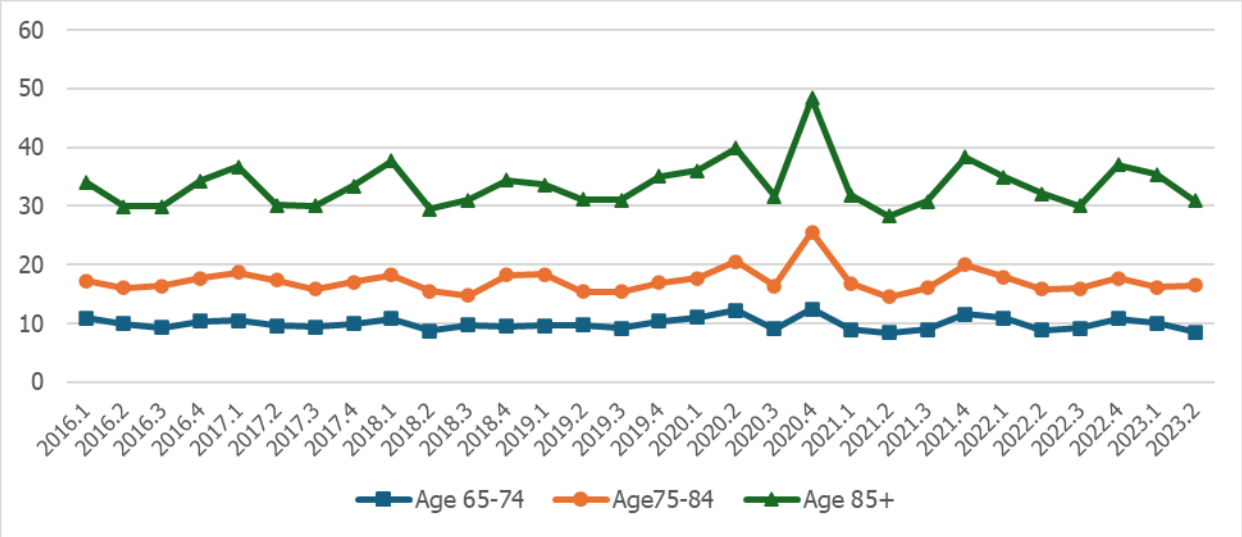


Figure 8. Monthly Deaths/1,000 for LTSS Users by Type of LTSS (Averaged Across Calendar Quarters)



Among LTSS users, mortality was strongly related to age with people age 85 and older having a much higher death rate than younger age groups (Figure 9). Also, the spike in death rates during the COVID period was highest among people age 85 and older, which is an indication of their heightened risk of severe symptoms and death compared to younger age groups. Table A1 in the Appendix contains detailed mortality figures by LTSS type.

Figure 9. Monthly Deaths/1,000 for LTSS Users by Age (Averaged Across Calendar Quarters)

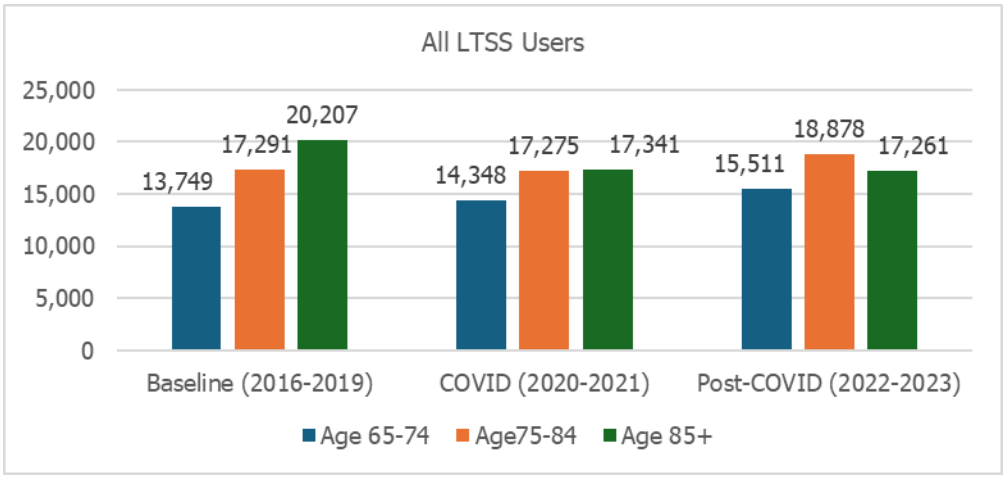


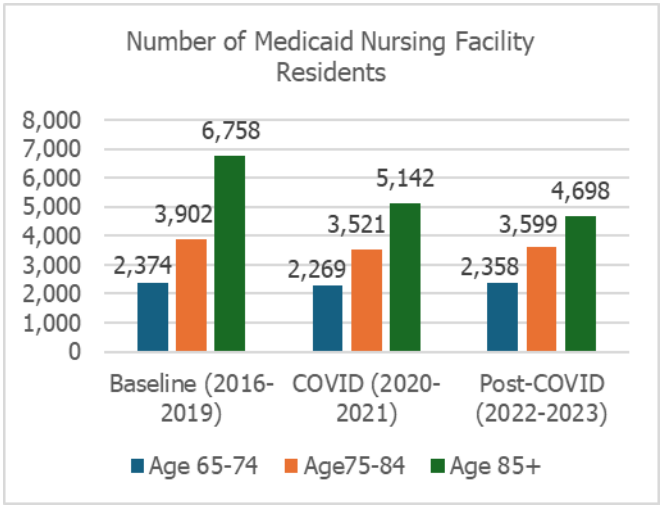
Changes in Demographic Characteristics Across Periods

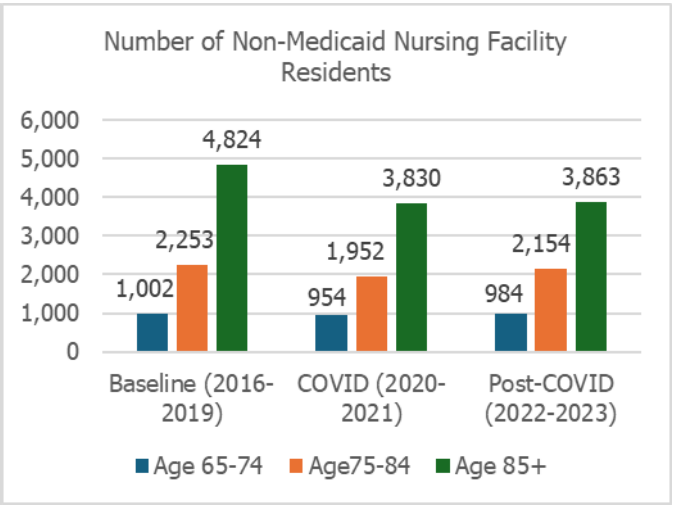
LTSS Users by Age Group and Period

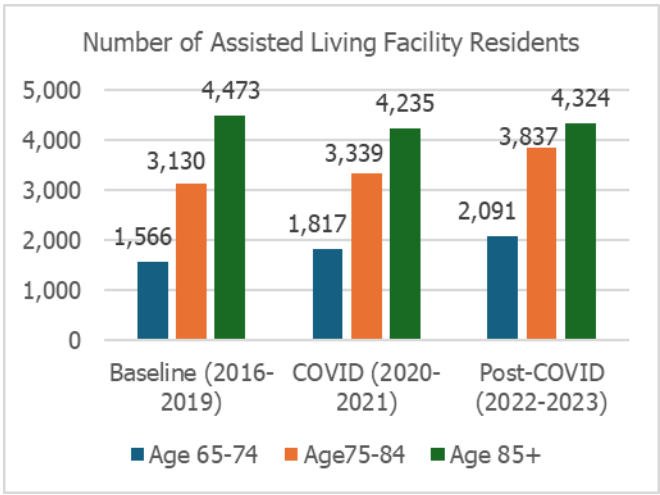
Panel 2 shows the number, and Panel 3 the percentages, of LTSS users by age group in the Pre-COVID, COVID and Post-COVID periods. Across all three periods, nursing facilities had the oldest residents, assisted facility residents were somewhat younger and HCBS users were the youngest. However, the LTSS population tended to become younger over time. Both the total number and percentage of LTSS users age 85 and older declined steadily across periods. In contrast, the number and percentage of LTSS users age 75-84 steadily increased across periods, while the number and percentage age 65-74 remained roughly the same across periods. More detailed figures are in the Appendix Table A2.

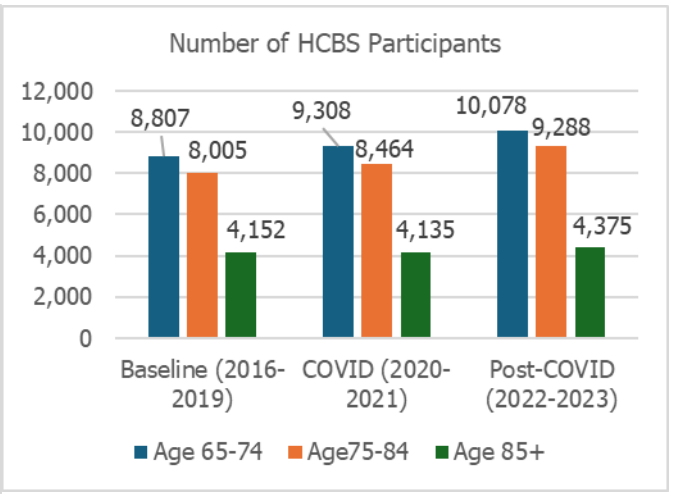
Panel 2. Number of Monthly LTSS Users by Age and Period



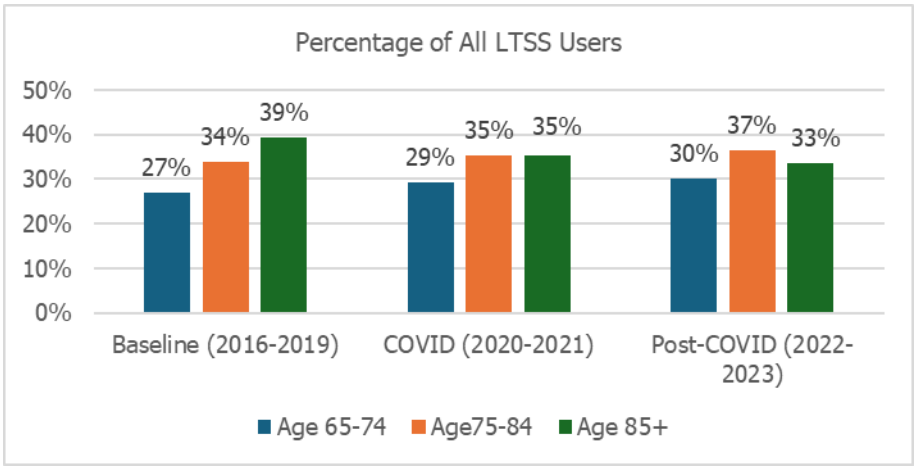


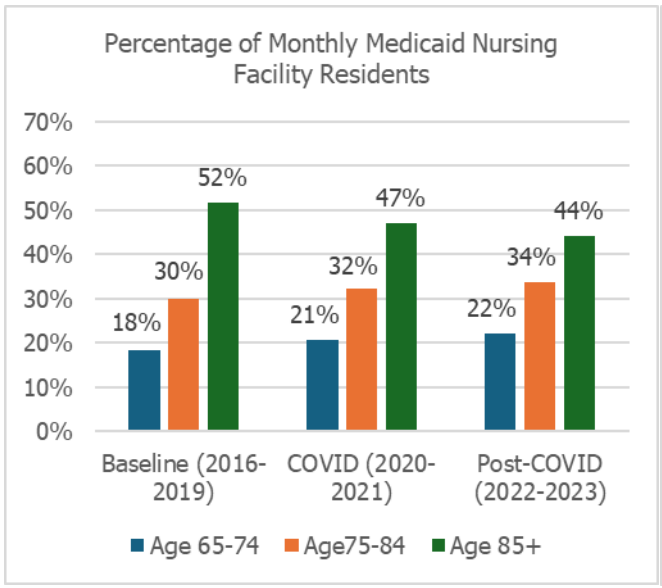


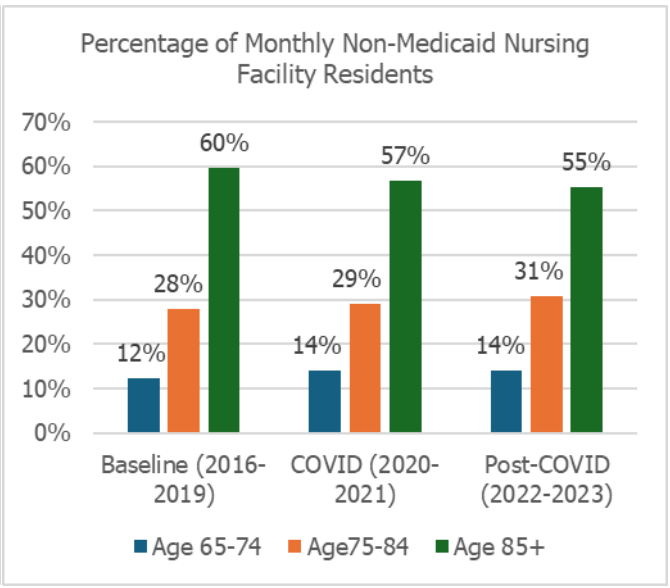


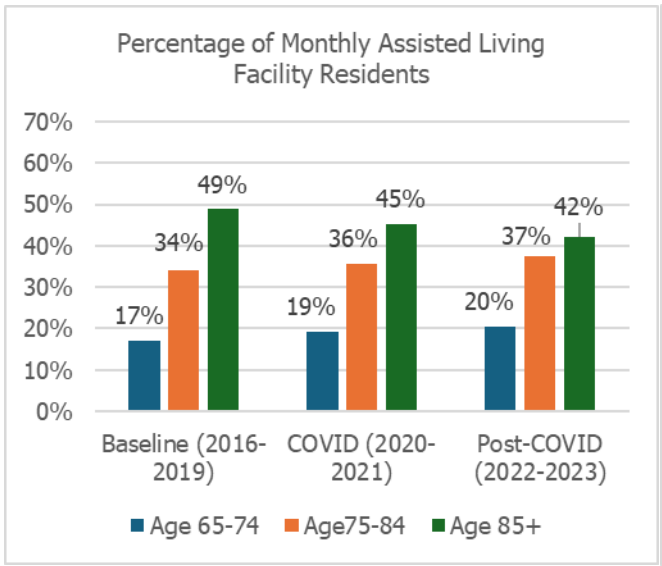


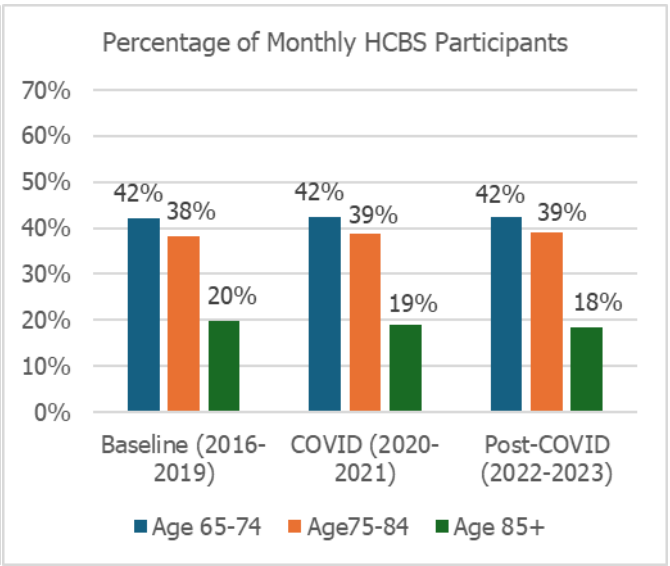
Panel 3. Percentage of LTSS Users by Age and Period







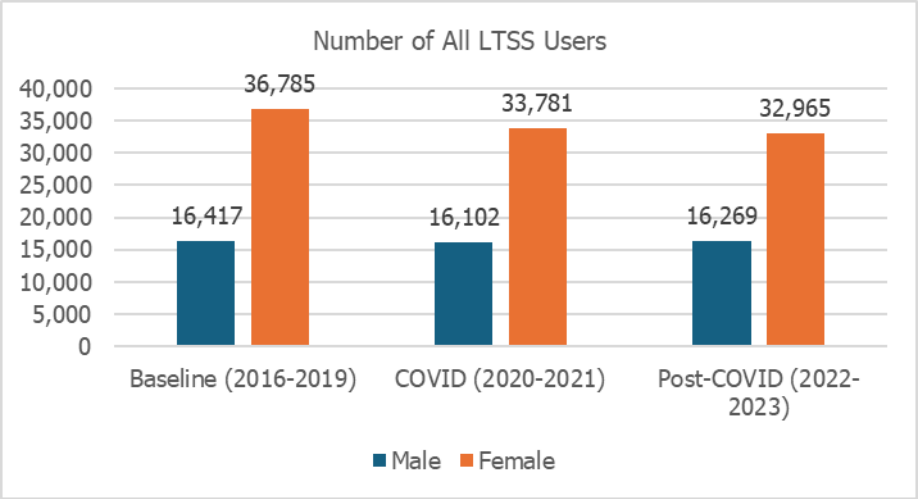


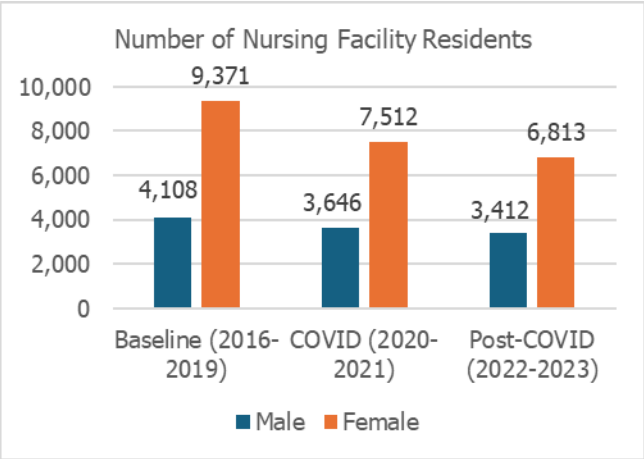


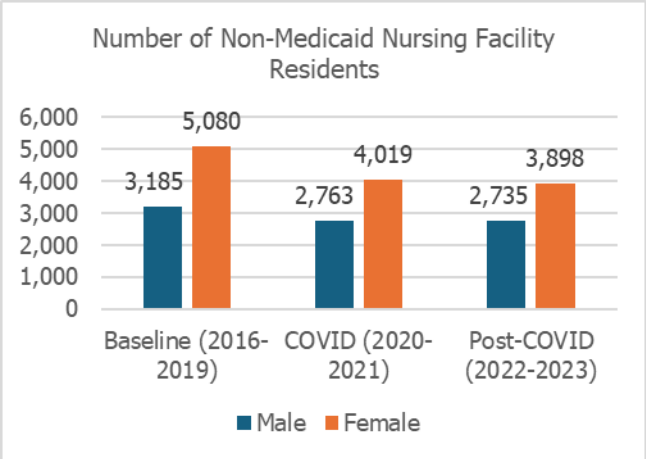
LTSS Use by Gender and Period

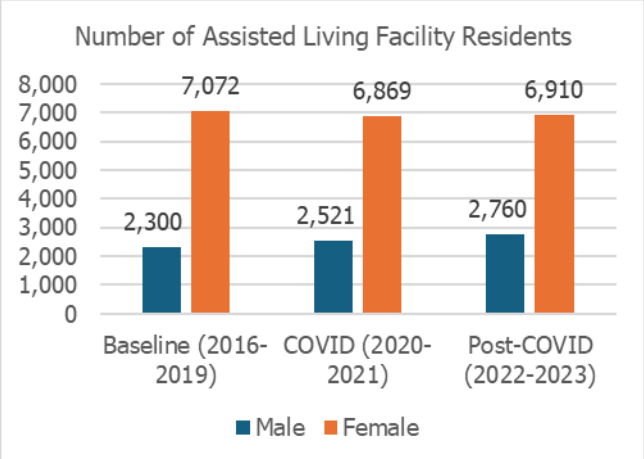
Women outnumbered men in all LTSS settings during all three periods (Panel 4 and Panel 5). The percentage of females was lowest among nursing home users not enrolled in Medicaid, and highest among assisted living facility residents. The number of female LTSS users declined across COVID periods with most of the decline occurring among female nursing facility residents. On the other hand, the percentage of females did not change appreciably across periods in any of the other LTSS settings. More detailed figures are in the Appendix Table A2.

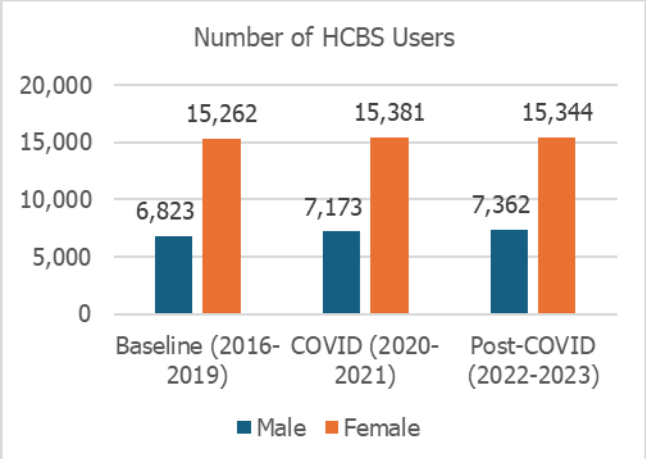
Panel 4. Number of LTSS Users by Gender and Period



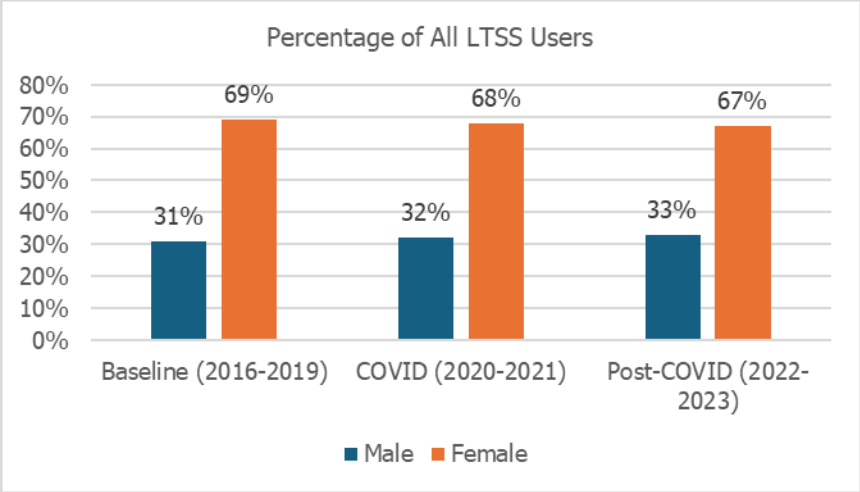


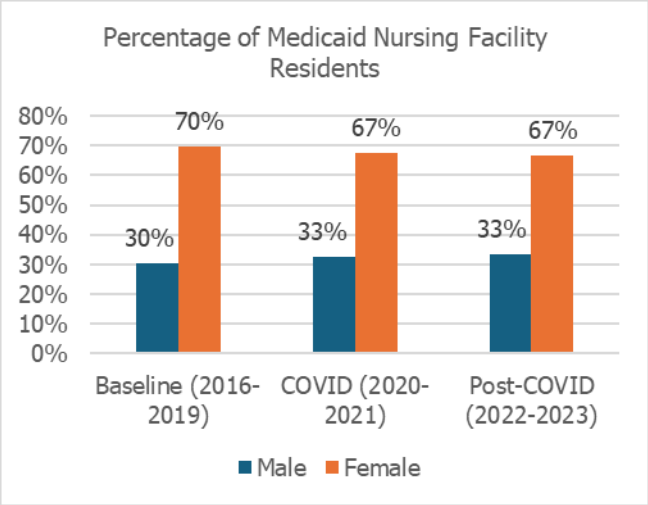


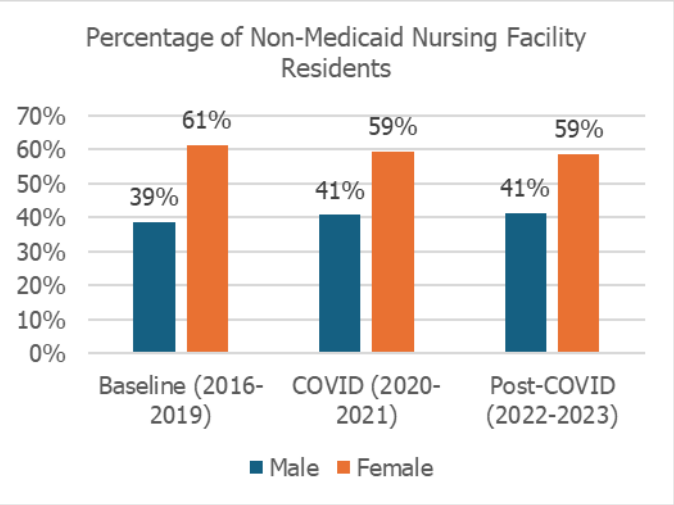


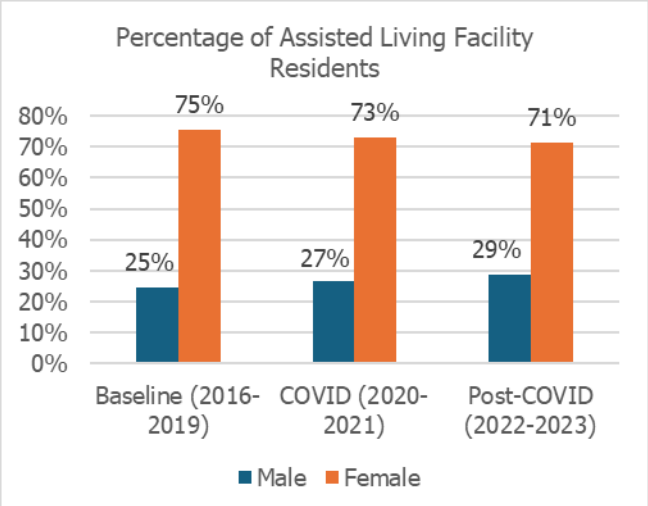


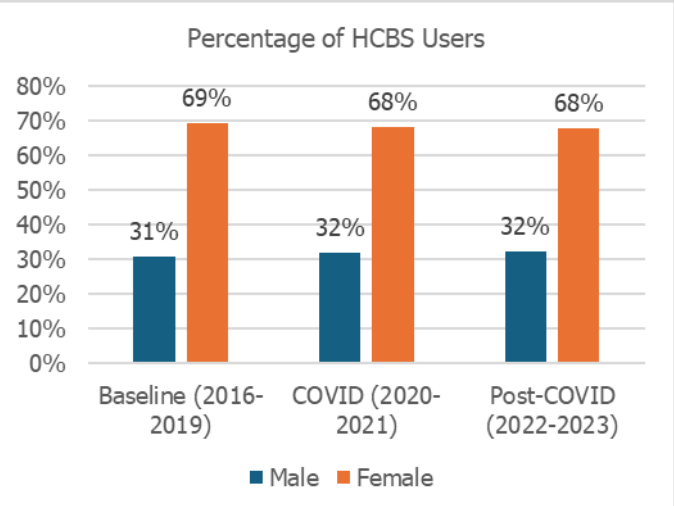
Panel 5. Percentage of All LTSS Users by Gender & Period











Trends in LTSS Use by Age

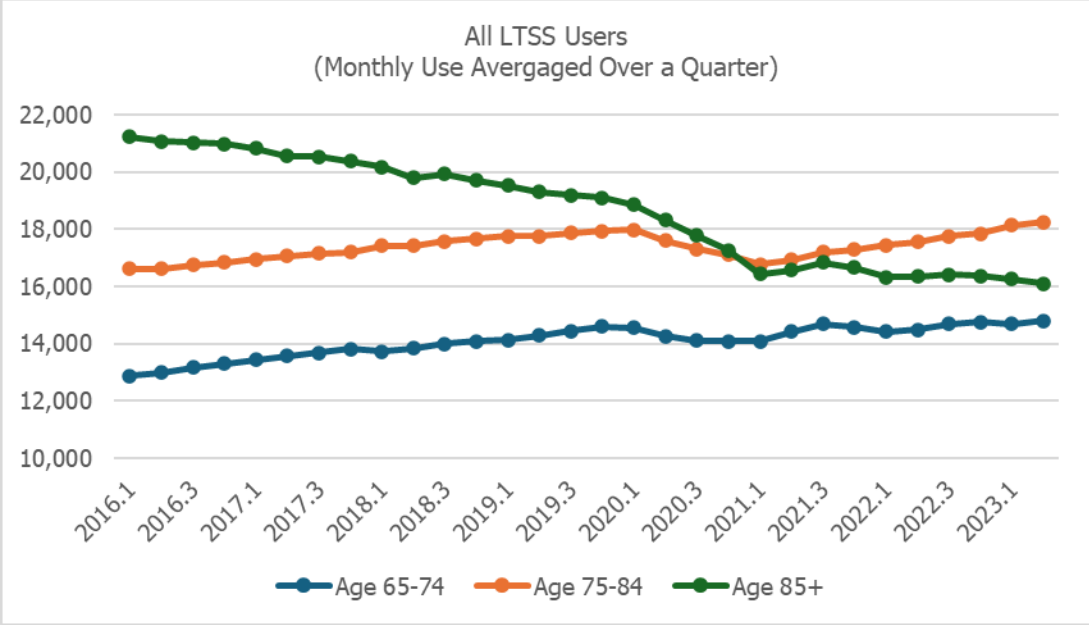
In addition to changes by age in LTSS use between periods, we were interested in trends in LTSS by age within periods. In particular, we wanted to see if trends in the Pre-COVID period would resume in the Post-COVID period. Table A3 in the Appendix shows the annual trends in average monthly LTSS use.

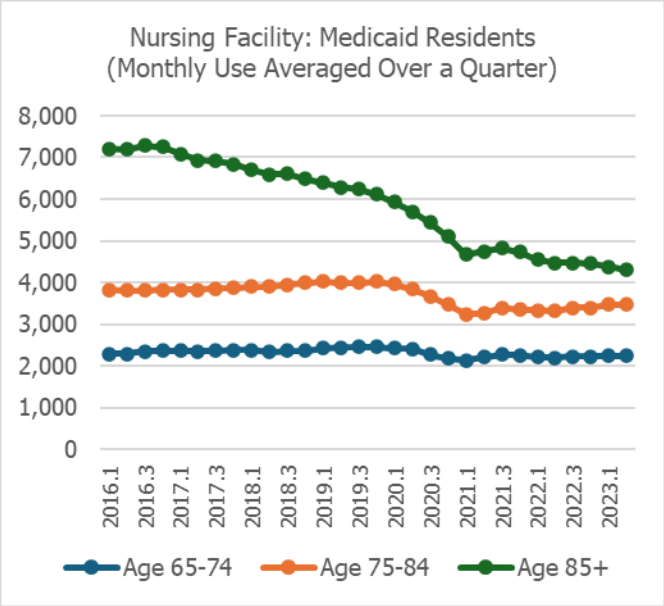
Panel 6 shows the average monthly use of LTSS by calendar quarter from Q1 2016 to Q2 2023. There was an appreciable downward trend in monthly LTSS use during the pre-COVID period among people age 85 and older. During the same period, LTSS use trended steadily upward among people age 65-74 and 75-84.

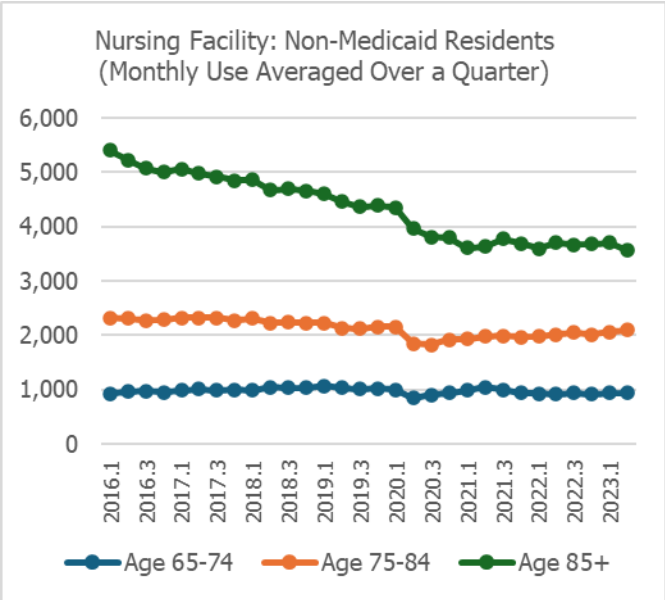
The Pre-COVID period downward trend in LTSS users age 85 and older was most pronounced among nursing facility residents. The decline in nursing facility residents age 85 and older was largely responsible for the overall decline among nursing home residents during the pre-COVID period. This downward trend continued into the COVID and Post-COVID period. Among assisted living facility residents, the trend in number of residents age 85 and older showed only a small decline, while among HCBS residents it held steady across periods.

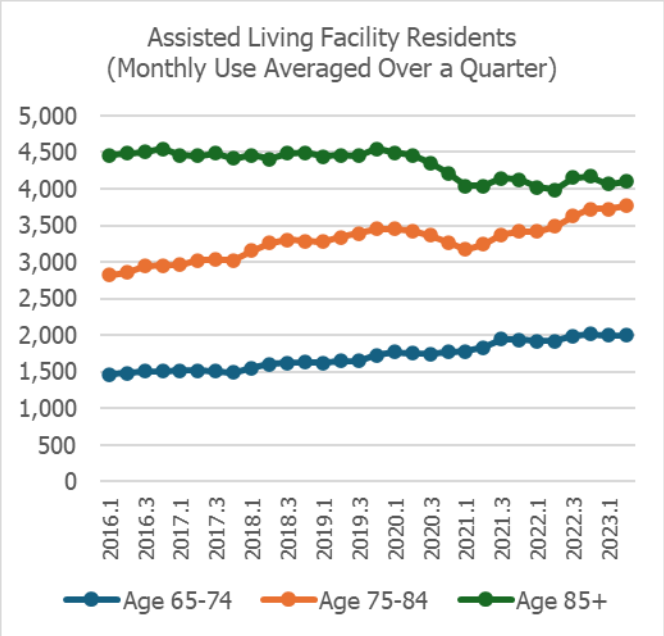
The number of nursing facility residents age 75-84 and 65-74 showed a modest increase during the Pre-COVID period but then held steady during the COVID and Post-COVID periods. Among HCBS participants age 75-84 and 65-74, the numbers trended steadily upward across the Pre-COVID, COVID, and Post-COVID periods.

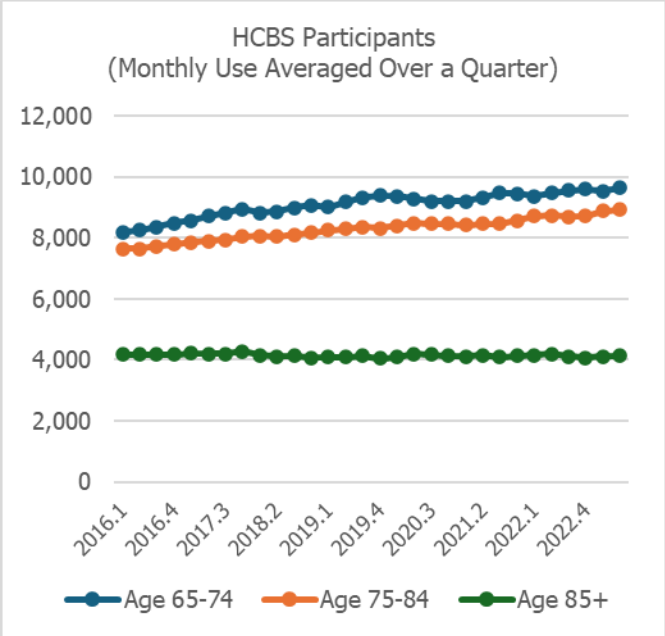
Panel 6. LTSS Users by Age Group and Calendar Quarter (Monthly Use Averaged Over a Quarter)




Nursing Facility: Medicaid Residents
(Monthly Use Averaged Over a Quarter)
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
2016.1
2016.3
2017.1
2017.3
2018.1
2018.3
2019.1
2019.3
2020.1
2020.3
2021.1
2021.3
2022.1
2022.3
2023.1
Age 65-74
Age 75-84
Age 85+


Nursing Facility: Non-Medicaid Residents
(Monthly Use Averaged Over a Quarter)
6,000
5,000
4,000
3,000
2,000
1,000
0
2016.1
2016.3
2017.1
2017.3
2018.1
2018.3
2019.1
2019.3
2020.1
2020.3
2021.1
2021.3
2022.1
2022.3
2023.1
Age 65-74
Age 75-84
Age 85+


Assisted Living Facility Residents
(Monthly Use Averaged Over a Quarter)
5,000
4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
2016.1
2016.3
2017.1
2017.3
2018.1
2018.3
2019.1
2019.3
2020.1
2020.3
2021.1
2021.3
2022.1
2022.3
2023.1
Age 65-74
Age 75-84
Age 85+


HCBS Participants
(Monthly Use Averaged Over a Quarter)
12,000
10,000
8,000
6,000
4,000
2,000
0
2016.1
2016.4
2017.3
2018.2
2019.1
2019.4
2020.3
2021.2
2022.1
2022.4
Age 65-74
Age 75-84
Age 85+

Minnesota Older Population and Rates of LTSS Use by Periods

Estimating Rates of LTSS Use

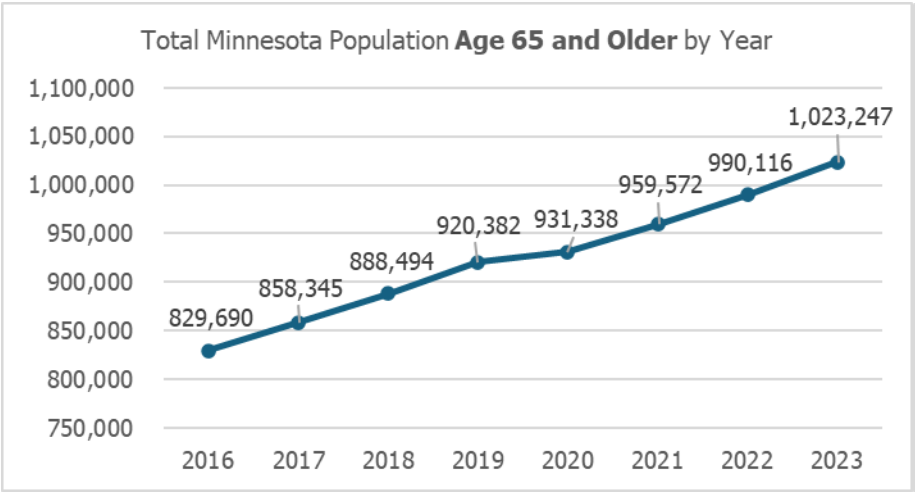
Estimating rates of LTSS use during the baseline period (2016-2023) establishes the context for the LTSS projections in the next section of the report. Underlying the numbers of people entering LTSS system is the change in the total older population at risk of LTSS. When understanding historical trends in LTSS, we need to consider not only change in use of care each month or year, but also change in the total population at risk of using care. When making projections about LTSS we must consider both the future population at risk of LTSS and the future rate of LTSS use among people at risk at each point in time. For example, if the rate of LTSS use remains constant, we would expect the number of LTSS users to increase each year as the population at risk increases.

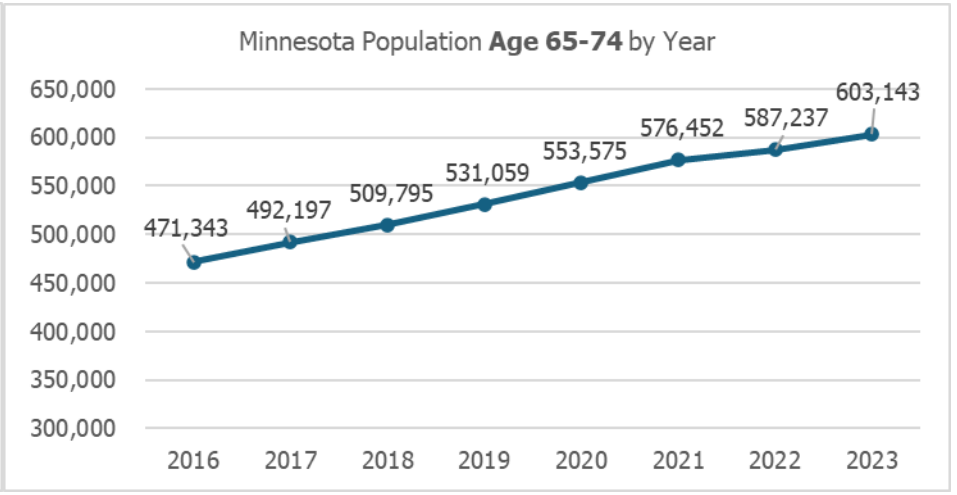
Straight-line projections about LTSS use, described in the next section of the report, rely on assumptions about: (1) growth each year in the population at risk for LTSS by age group (65-74, 75-84, and Age 85+), gender (male or female) and types of LTSS (nursing facility, assisted living, and HCBS); and (2) future rates of LTSS use by these same categories of users. Future population growth is based on State Demographic projections for the Minnesota older population. We will use the data at hand, LTSS use from 2016-2019 and from 2022-2023, to estimate future LTSS use under the assumption that past experience can inform what will happen in the future.

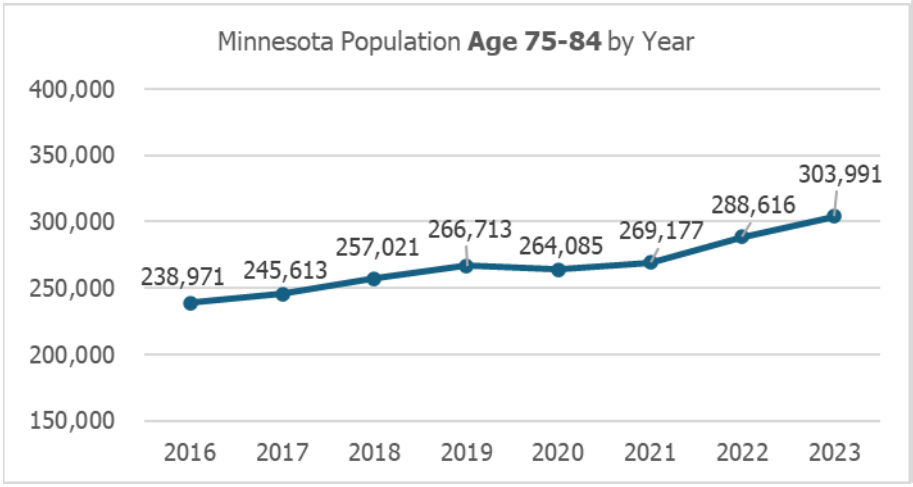
Minnesota Population by Age from 2016-2023

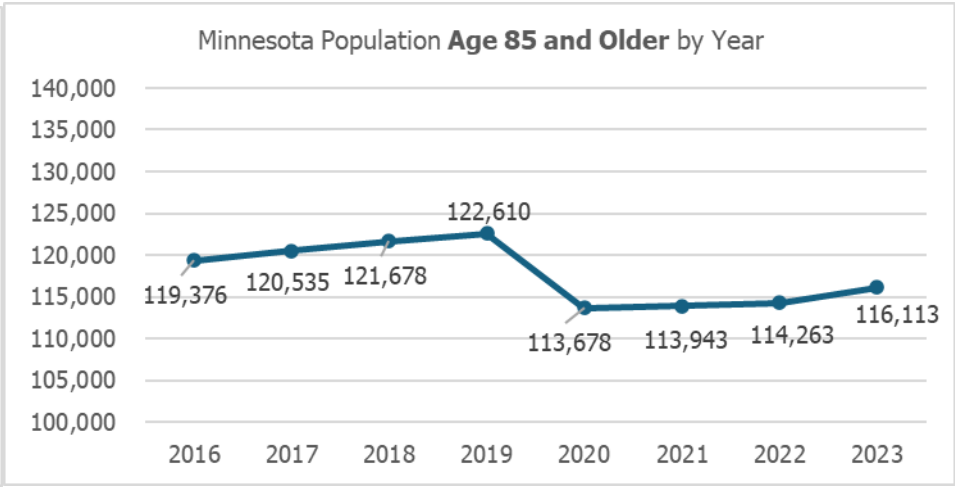
Panel 7 shows the estimated number of older people in Minnesota on January 1 of each year from 2016-2023 by age group and gender. All three age groups, both males and females, show steady growth from 2016-2019. In the COVID period (2020 and 2021), the population age 65-74 continues to grow at the pre-COVID rate; the population age 75-84 plateaus; and the population age 85 and older declines. These changes in growth patterns are a reflection of the population losses due to COVID-19 mortality, which had its greatest effect on the 85 and older age group. Males and females in these age groups followed a similar pattern. By 2022, all three age groups resumed their pre-COVID growth rates. These patterns in population growth over time have implications for the risk of LTSS and rates of LTSS use. Appendix Table A4 contains detailed figures on the total population by age and gender each year from 2016-2023.

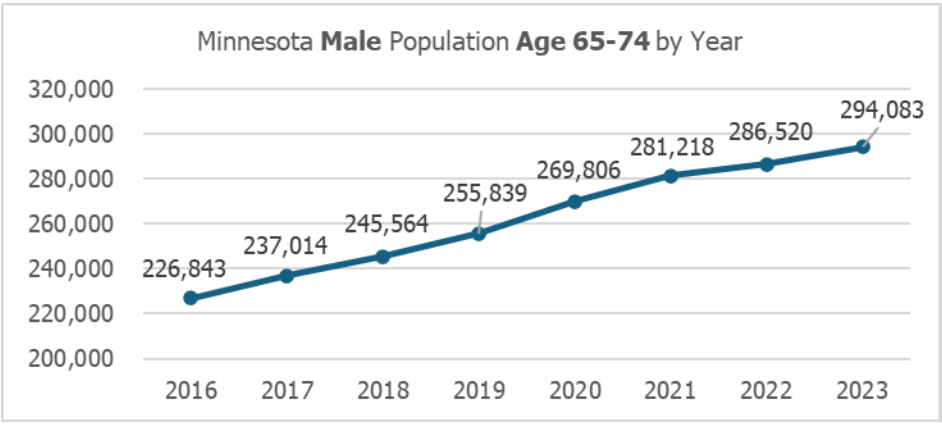
Panel 7. Minnesota Older Population 2016-2023 by Age, Gender, and Year

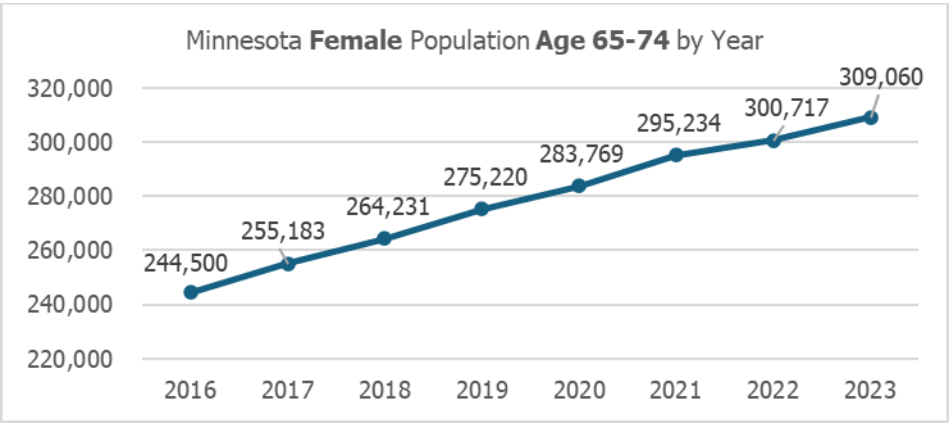


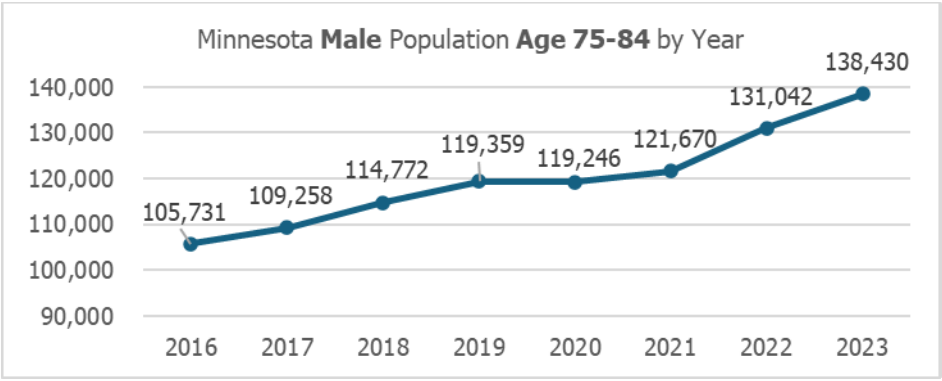


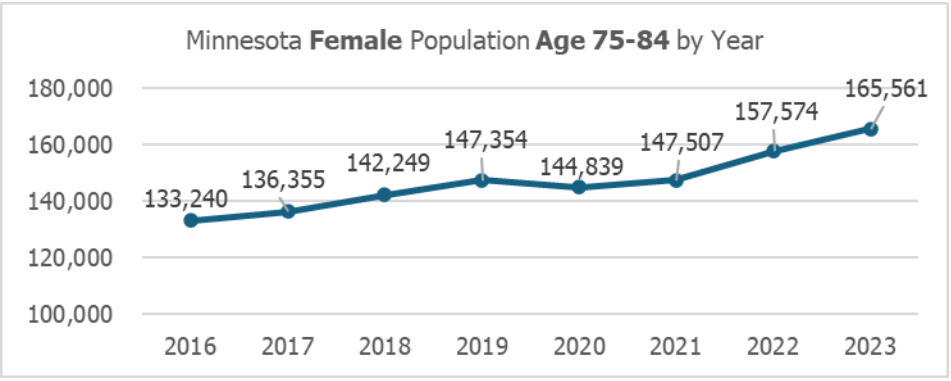


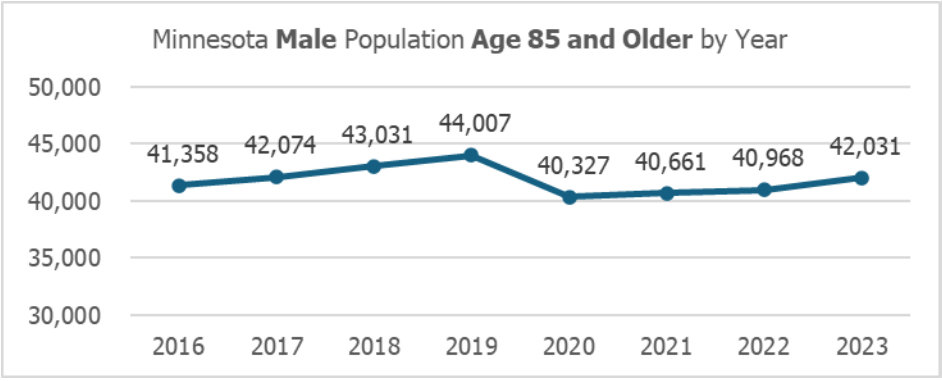


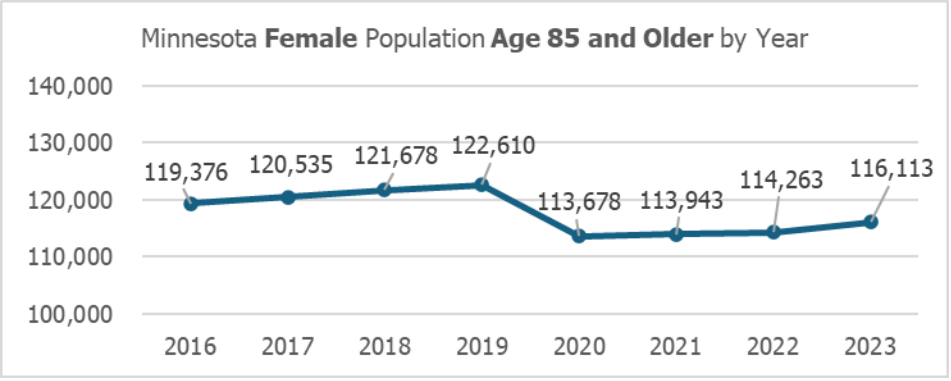

Minnesota **Male** Population **Age 65-74** by Year
320,000
300,000
280,000
260,000
240,000
220,000
200,000
226,843
237,014
245,564
255,839
269,806
281,218
286,520
294,083
2016
2017
2018
2019
2020
2021
2022
2023


Minnesota **Female** Population **Age 65-74** by Year
320,000
300,000
280,000
260,000
240,000
220,000
244,500
255,183
264,231
275,220
283,769
295,234
300,717
309,060
2016
2017
2018
2019
2020
2021
2022
2023


Minnesota **Male** Population **Age 75-84** by Year
140,000
130,000
120,000
110,000
100,000
90,000
105,731
109,258
114,772
119,359
119,246
121,670
131,042
138,430
2016
2017
2018
2019
2020
2021
2022
2023


Minnesota **Female** Population **Age 75-84** by Year
180,000
160,000
140,000
120,000
100,000
133,240
136,355
142,249
147,354
144,839
147,507
157,574
165,561
2016
2017
2018
2019
2020
2021
2022
2023


Minnesota **Male** Population **Age 85 and Older** by Year
50,000
45,000
40,000
35,000
30,000
41,358
42,074
43,031
44,007
40,327
40,661
40,968
42,031
2016
2017
2018
2019
2020
2021
2022
2023


Minnesota **Female** Population **Age 85 and Older** by Year
140,000
130,000
120,000
110,000
100,000
119,376
120,535
121,678
122,610
113,678
113,943
114,263
116,113
2016
2017
2018
2019
2020
2021
2022
2023

Rates of LTSS Use from 2016-2023

Table 4 and Panel 8 show rates of LTSS use per 1,000 people in the overall Minnesota population overall and by LTSS type, age and gender. The numbers of users per year are contained in Table A3 in the Appendix. These rates are calculated by dividing the number of monthly users of LTSS by the number of people in the general population according to their age group and gender. Rates take into account changes in the population each year. As the population grows, the number of people at risk of entering LTSS increases.

Table 4 summarizes the rates per 1000 by age and LTSS type in the beginning of the pre-COVID period (2016) through the full year of the post-COVID period (2022). The overall rate of nursing facility utilization declined by 59% for Medicaid residents and 52% for non-Medicaid residents. The rate trended steadily downward for all three age groups. The overall rate of assisted living facility utilization declined by 10%. However, the decline was mainly among people aged 85 and older; the rate increased by small percentages for residents aged 65-74 and 75-84. The overall rate of utilization for participants in home and community-based service programs declined by 8%. The rate among HCBS participants aged 85 and older increased by a small percentage, while the rate among participants aged 65-74 and 75-84 declined by a small percentage.

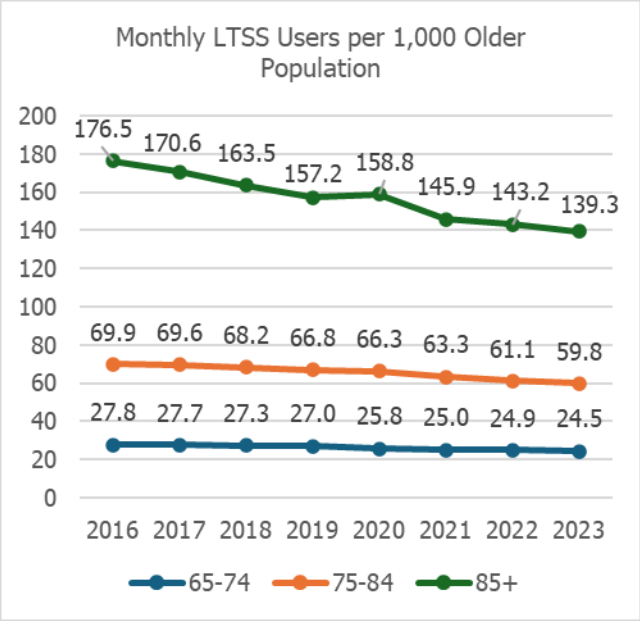
Table 4. Rates of LTSS use per 1,000 people in the general population by age group and type of LTSS

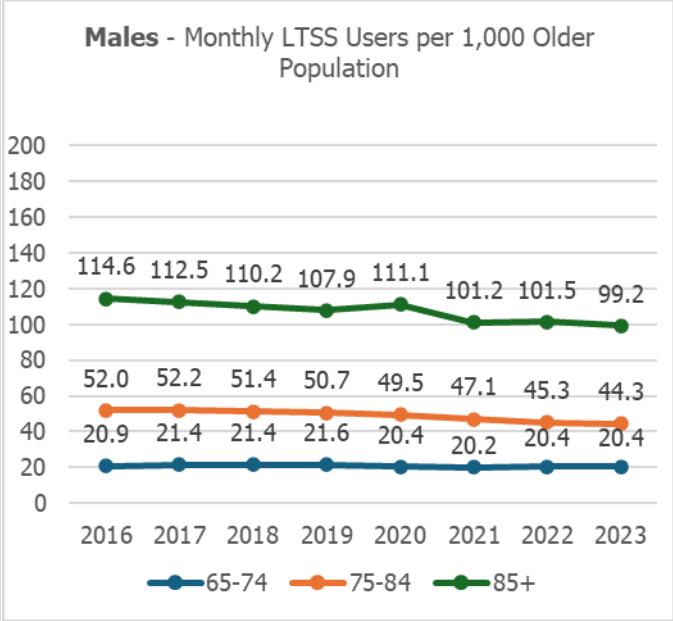
Type of LTSS	Age group	2016	2022	% Change
MA NF	65-74	4.93	3.78	-31%
	75-84	15.98	11.65	-37%
	85+	60.57	39.23	-54%
	Total	16.12	10.16	-59%
Non-MA NF	65-74	2.0	1.6	-29%
	75-84	9.6	7.0	-38%
	85+	43.3	32.0	-35%
	Total	10.2	6.7	-52%
Assisted Living	65-74	3.2	3.3	5%
	75-84	12.1	12.3	2%
	85+	37.7	35.7	-5%
	Total	10.7	9.7	-10%
HCBS	65-74	17.6	16.2	-9%
	75-84	32.2	30.2	-7%
	85+	34.9	36.2	3%
	Total	24.3	22.6	-8%

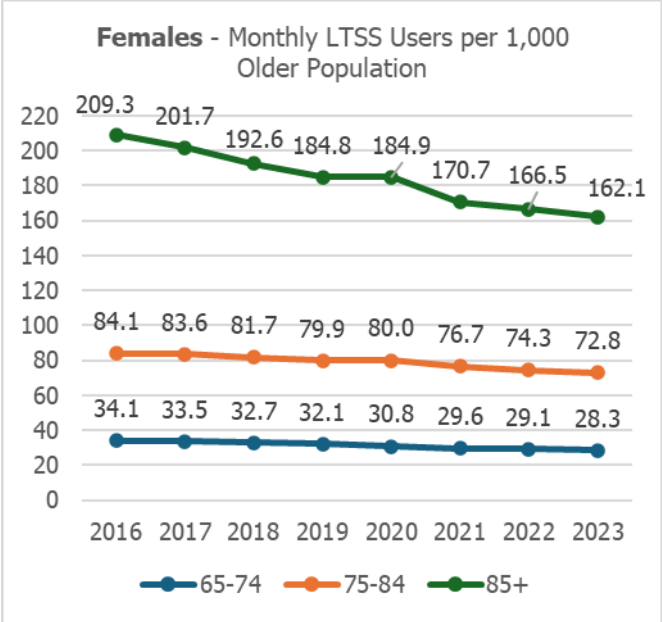
Trends in Rates of LTSS Use Overall and by Age

The trends in overall LTSS use are shown in Panel 8. After adjusting for population changes, these rates show a steady downward trend across pre-COVID, COVID, and post-COVID years for all age groups, for both males and females. The decline is steepest among females age 85 and older. Since older females are the largest users of LTSS, the downward trend in this group has the greatest impact on LTSS use.

Panel 8. Rates of LTSS Use per 1,000 People in the Minnesota Population by Age and Gender







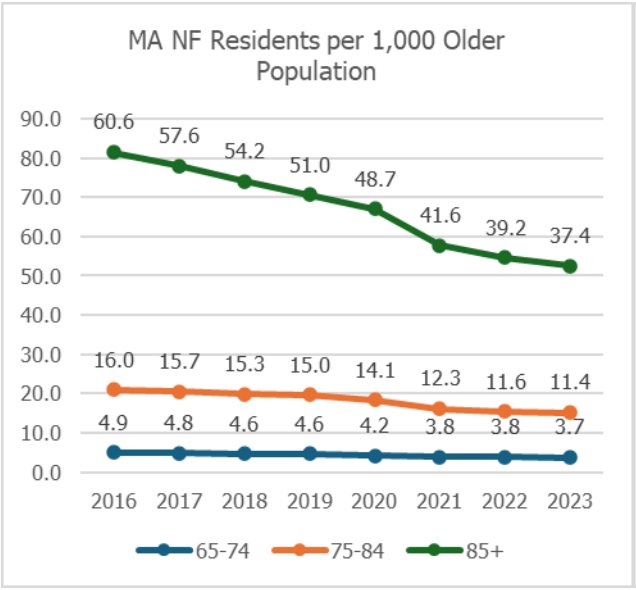
Trends in Rates of LTSS Use by LTSS Type, Age and Gender

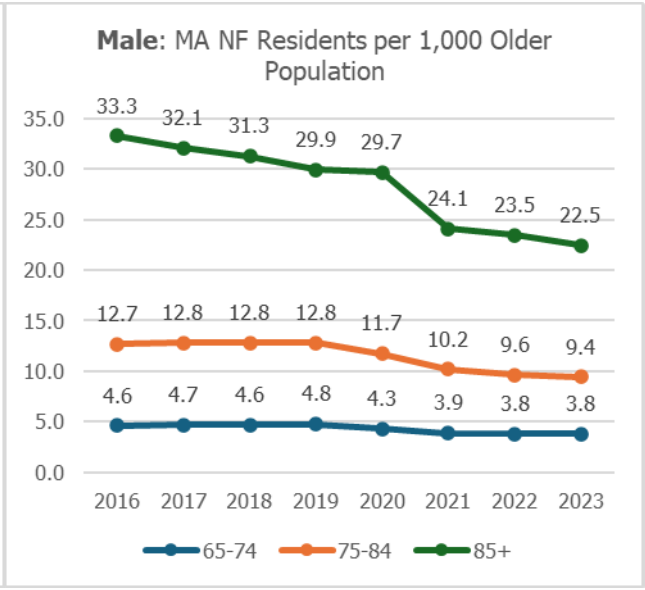
Trends in rates of LTSS use by type of LTSS, age, and gender are shown in Panel 9 and Table A5 in the Appendix. Medicaid nursing facility residents 85 and older, both male and female, displayed a steady downward trend from 2016 thru 2023. The rates for Medicaid residents age 65-74 and 75-84 also trended downward but more gradually. The overall rates of nursing facility use by non-Medicaid residents age 85 and older also trended downward. However, this downward trend was evident for females but not for males age 85 and older. The rates of nursing facility use for Non-Medicaid residents age 65-74, both male and female, trended downward but more gradually than residents age 85 and older. Among non-Medicaid residents age 75-84, females trended downward while males trended upward.

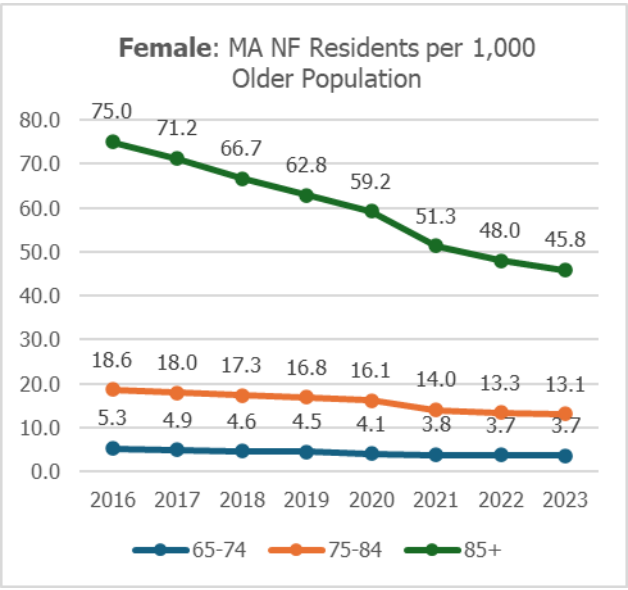
The rate of monthly assisted living facility use remained generally constant from 2016 to 2023 for residents overall and by gender. The exception was in 2020 when rate of use increased among residents age 85 and older. In that year, the number of users did not increase but the number of people at risk (denominator in the rate calculations) declined due to COVID-related mortality among people age 85 and older in the general population.

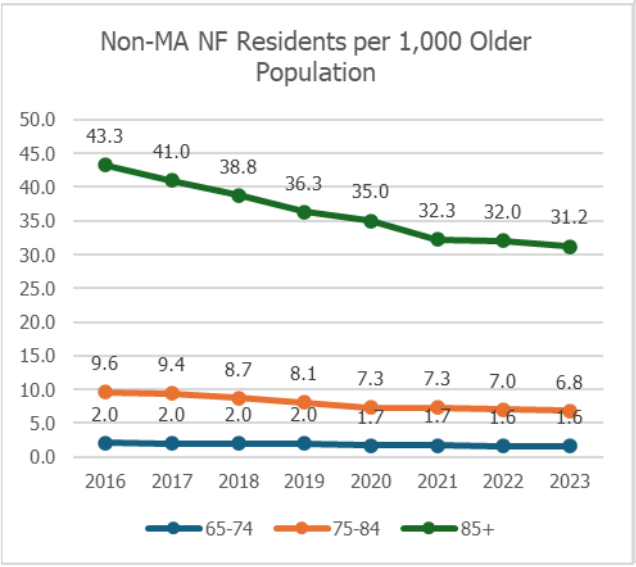
The rate of HCBS use among males 85 and older was constant from 2016-2019, but then increased in 2020 and held steady 2021-2023. In contrast, the rate of HCBS use among females age 85 and older had a slight downward trend from 2016-2023 with a slight increase in 2020. The rate of HCBS use by males aged 75-84 held steady from 2016-2019, then started a slight downward trend from 2020-2023. The rate of HCBS use by females age 75-84 remained constant from 2016-2020, as did the rates among both males and females age 65-74.

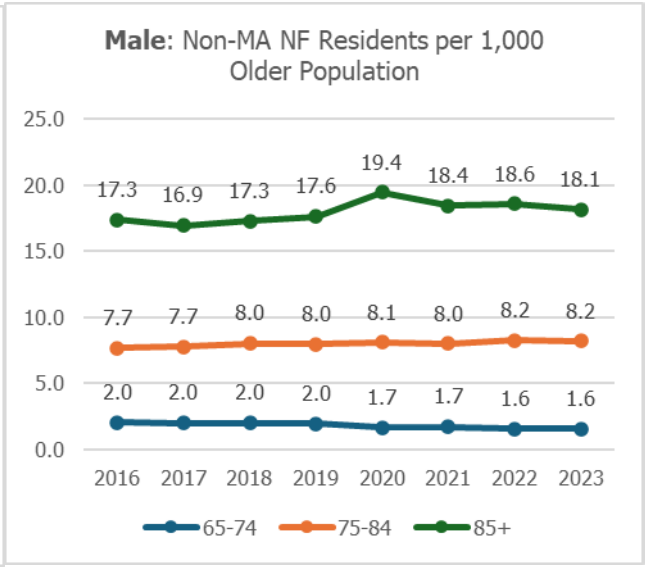
Panel 9. Rates of LTSS Use per 1,000 People in the Minnesota Population by LTSS Type, Age and Gender

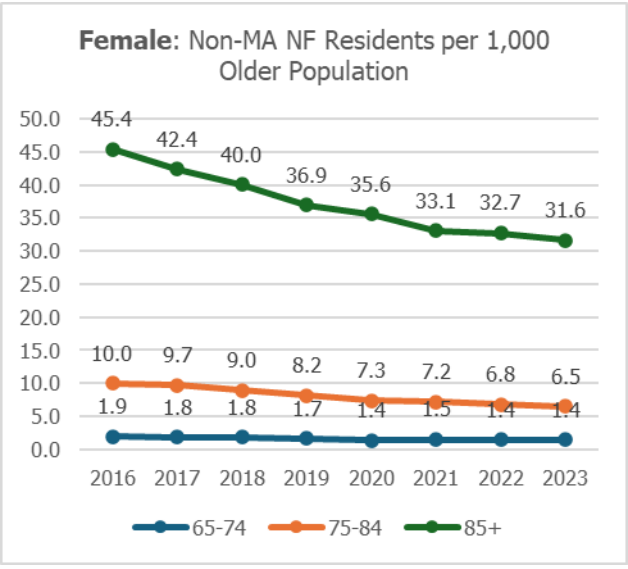


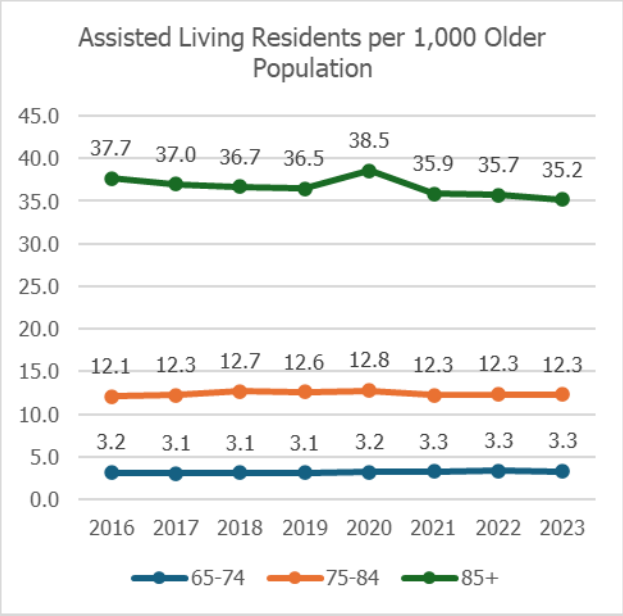


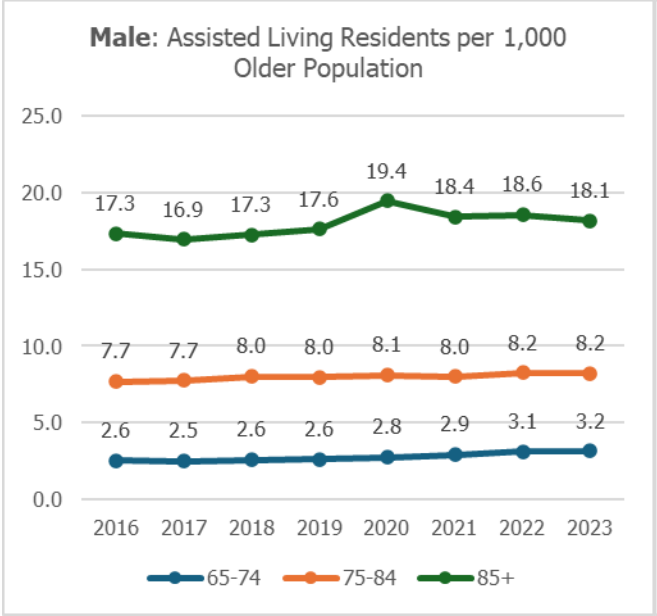


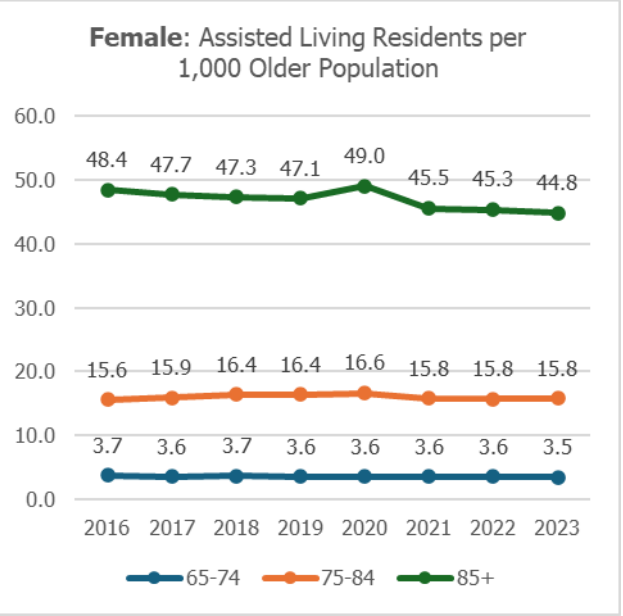


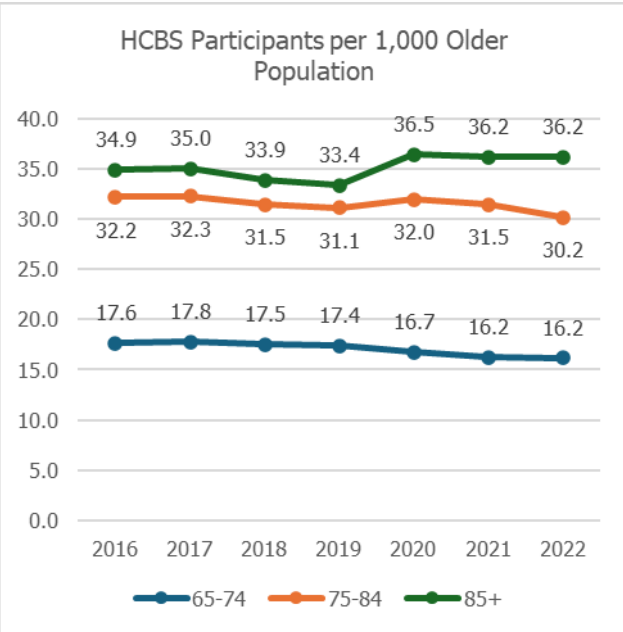


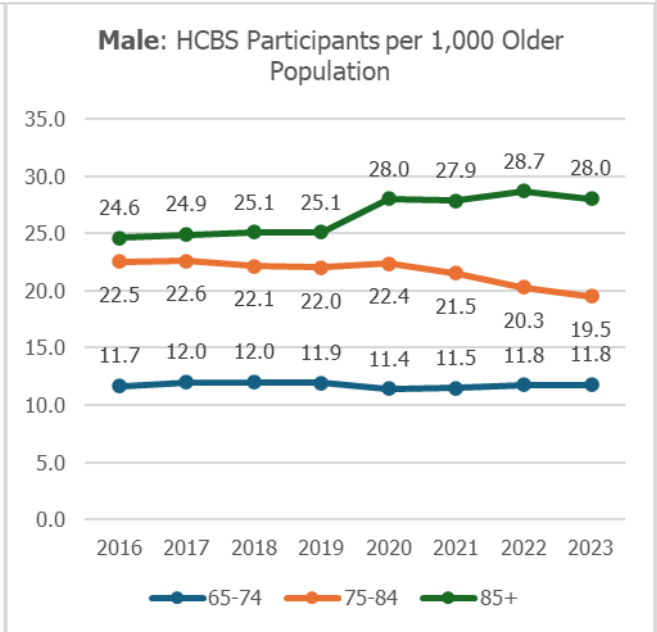


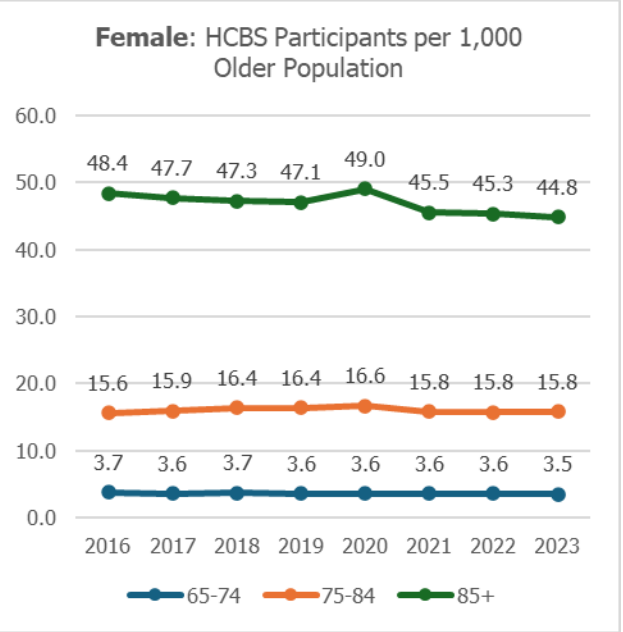

Assisted Living Residents per 1,000 Older Population
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
37.7 37.0 36.7 36.5 38.5 35.9 35.7 35.2
12.1 12.3 12.7 12.6 12.8 12.3 12.3 12.3
3.2 3.1 3.1 3.1 3.2 3.3 3.3 3.3
2016 2017 2018 2019 2020 2021 2022 2023
65-74 75-84 85+


Male: Assisted Living Residents per 1,000 Older Population
25.0
20.0
15.0
10.0
5.0
0.0
17.3 16.9 17.3 17.6 19.4 18.4 18.6 18.1
7.7 7.7 8.0 8.0 8.1 8.0 8.2 8.2
2.6 2.5 2.6 2.6 2.8 2.9 3.1 3.2
2016 2017 2018 2019 2020 2021 2022 2023
65-74 75-84 85+


Female: Assisted Living Residents per 1,000 Older Population
60.0
50.0
40.0
30.0
20.0
10.0
0.0
48.4 47.7 47.3 47.1 49.0 45.5 45.3 44.8
15.6 15.9 16.4 16.4 16.6 15.8 15.8 15.8
3.7 3.6 3.7 3.6 3.6 3.6 3.6 3.5
2016 2017 2018 2019 2020 2021 2022 2023
65-74 75-84 85+


HCBS Participants per 1,000 Older Population
40.0
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
34.9 35.0 33.9 33.4 36.5 36.2 36.2
32.2 32.3 31.5 31.1 32.0 31.5 30.2
17.6 17.8 17.5 17.4 16.7 16.2 16.2
2016 2017 2018 2019 2020 2021 2022
65-74 75-84 85+


Male: HCBS Participants per 1,000 Older Population
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
24.6 24.9 25.1 25.1 28.0 27.9 28.7 28.0
22.5 22.6 22.1 22.0 22.4 21.5 20.3 19.5
11.7 12.0 12.0 11.9 11.4 11.5 11.8 11.8
2016 2017 2018 2019 2020 2021 2022 2023
65-74 75-84 85+


Female: HCBS Participants per 1,000 Older Population
60.0
50.0
40.0
30.0
20.0
10.0
0.0
48.4 47.7 47.3 47.1 49.0 45.5 45.3 44.8
15.6 15.9 16.4 16.4 16.6 15.8 15.8 15.8
3.7 3.6 3.7 3.6 3.6 3.6 3.6 3.5
2016 2017 2018 2019 2020 2021 2022 2023
65-74 75-84 85+

Medicaid LTSS Service Use and Payments

In setting the stage for the LTSS projections, we calculated the annual rate of LTSS use and Medicaid payments per person during the selected pre-COVID and post-COVID periods by age group, gender, and type of LTSS services. The figures exclude non-Medicaid nursing home users. The Medicaid services, which come directly from Medicaid claims, are divided into specific categories reflecting the range of HCBS services, including personal care, homemaker and chore services, home delivered meals, nursing care, adult days services and other forms of daily living assistance in the home or community.

Calculations for average monthly Medicaid payments are based on the total payments across all users during the period divided by the total number of months of LTSS use during the period. The average monthly Medicaid payments are multiplied by the average number of months of LTSS use per user during the period to obtain total payments for each service during the period. The following tables differ from Table 3 (above) because of the more detailed breakdown of Medicaid HCBS services, and because they show the cumulative number of users during the year, while Table 3 presents the average number of users each month during the year rather than the cumulative number.

Overall Medicaid LTSS Services Use, Rate of Use, and Annual Payments in pre-COVID and post-COVID Periods

Table 5 summarizes the number of users of LTSS services during the year, months per user, payments per service and total payments per user. Between the pre-COVID and post-COVID periods the overall number of annual LTSS users, rate of LTSS users per 1000, and months of service use declined, while the average monthly and annual payments per user went up. The count of months can exceed 12 for in-home and/or PCA services and any service during the year because an individual may be using more than one service during the month.

The largest decline in number of LTSS users by age groups was for people age 85 and older. The number of LTSS users age 85 and older fell by 17%. However, the rate of use per 1000 dropped by only 11%, which was a similar percentage to the other age groups. The decline in the rate of LTSS use for people age 85 and older was tempered by the high mortality for people in this age group during 2020 which meant relatively fewer people age 85 and older were at risk of using LTSS in 2022.

The sharpest decline in LTSS service use was among nursing home residents. The number of nursing home residents fell by 22% and the rate per 1000 fell by 29%. The number of assisted living residents went up slightly by 1%; however, the rate of use per 1,000 fell by 8%. The number of users of in-home services and/or PCA fell by 4%, while the rate of use per 1000 fell by 12%.

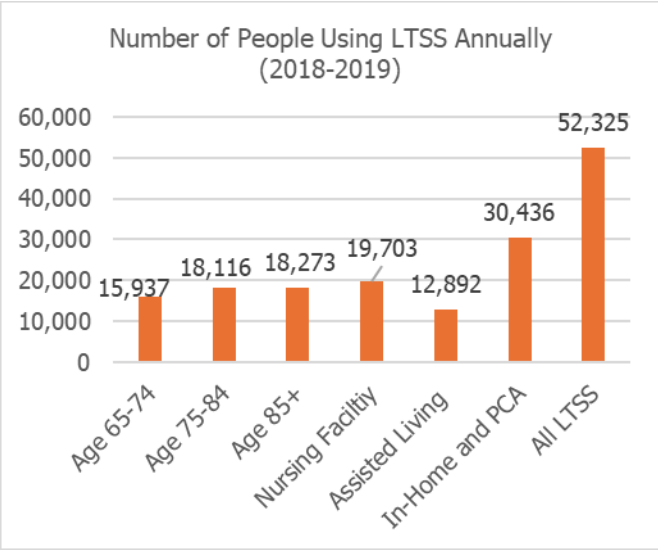
Monthly and annual Medicaid payments per person rose between periods. Total annual payments per person rose by 19% from $34,926 in the pre-COVID period to $41,440 in the post-COVID period. Average annual payment increases were substantial across age groups and type of LTSS. The steepest annual increases in payments were for nursing facility residents (32%) and assisted living facility residents (31%), although in-home and/or PCA services were close behind with a 25% increase.

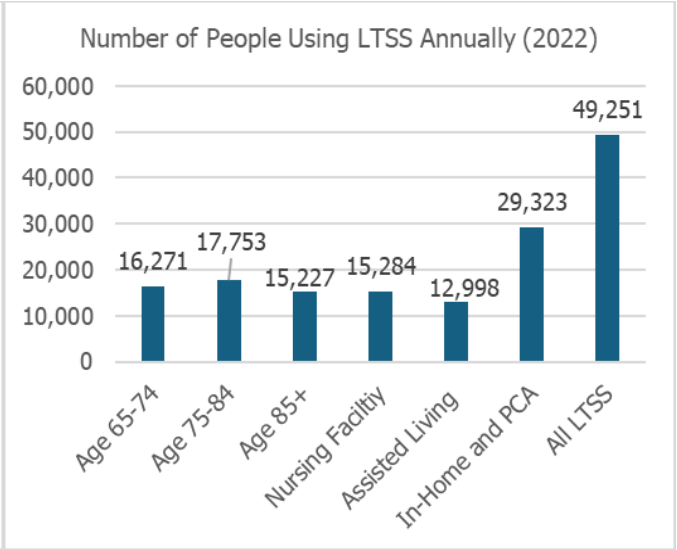
Table 5. Medicaid service users and payments for their care in pre-COVID and post-COVID periods

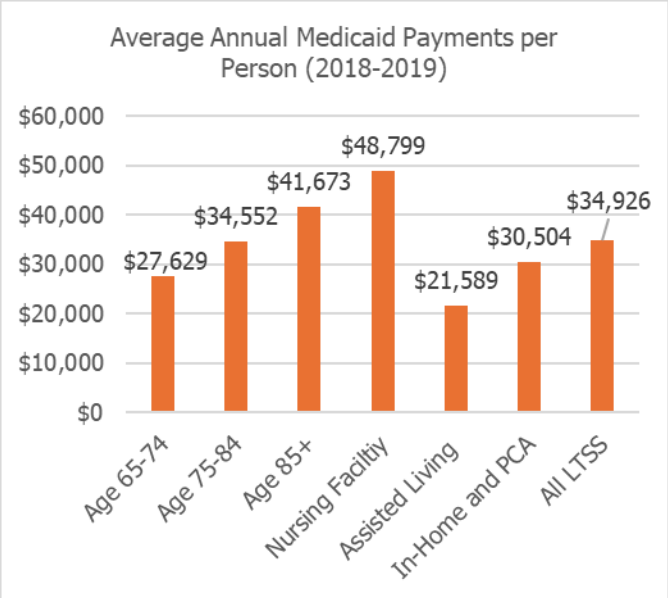
Time Period	Age Group	People using the Service	Users per 1000	Months of LTSS Use	Payment per Month	Payment per User per Year
2018-2019	**Age 65-74**	15,937	30.6	17.4	$1,583	$27,629
	Age 75-84	18,116	69.2	18.4	$1,879	$34,552
	Age 85+	18,273	149.6	15.4	$2,709	$41,673
	Nursing Facility	19,703	21.8	7.4	$6,566	$48,799
	Assisted Living	12,892	14.3	8.6	$2,503	$21,589
	In-Home and PCA	30,436	33.7	22.3	$2,921	$30,504
	All LTSS	52,325	57.9	17.1	$2,048	$34,926
2022	**Age 65-74**	16,271	27.7	15.4	$2,140	$32,917
	Age 75-84	17,753	61.5	17.1	$2,426	$41,423
	Age 85+	15,227	133.3	14.9	$3,402	$50,569
	Nursing Facility	15,284	15.4	7.4	$8,730	$64,199
	Assisted Living	12,998	13.1	8.8	$3,232	$28,343
	In-Home and PCA	29,323	29.6	21.8	$3,668	$38,139
	All LTSS	49,251	49.7	15.8	$2,618	$41,440
% Change	**Age 65-74**	2%	-10%	-12%	35%	19%
	Age 75-84	-2%	-11%	-7%	29%	20%
	Age 85+	-17%	-11%	-3%	26%	21%
	Nursing Facility	-22%	-29%	-1%	33%	32%
	Assisted Living	1%	-8%	2%	29%	31%
	In-Home and PCA	-4%	-12%	-2%	26%	25%
	All LTSS	-6%	-14%	-7%	28%	19%

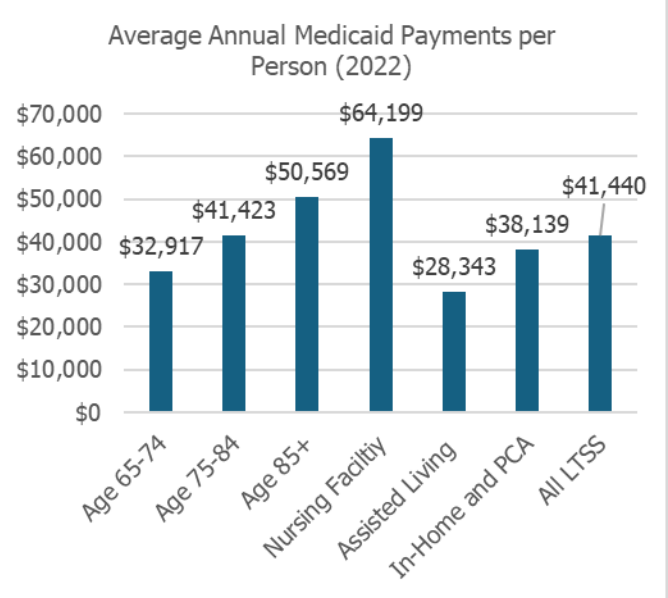
% Change = (post COVID – pre COVID) / pre COVID

Panel 10. Number of Annual LTSS Users and Payments for Care in Pre-COVID and Post-COVID Periods









Medicaid Service Use and Payments by Type of LTSS Service

Table 6 and Table 7 show the detailed number of Medicaid LTSS users in the Pre-COVID (2018-2019) and post-COVID (2022) periods along with rates of utilization per 1000 people in the older population in the same age range and gender. Figures are presented separately by category of Medicaid LTSS service and for anyone using LTSS during the year. The number of people using LTSS and the rates of LTSS use per 1000 older people are higher in the pre-COVID than in the post-COVID period overall and for each type of service.

Although use of most services declined between pre-COVID and post-COVID periods, the patterns by age and gender remained similar. In each age group, females tended to have a higher rate of LTSS use than males. Females age 85 and older had the highest rate of use for most types of Medicaid LTSS services, while males 65-74 tended to have the lowest rate. More detailed figures on LTSS use and payments for the two periods are presented in Appendix Tables 6 and 7.

Table 6. Pre-COVID Medicaid LTSS Use and Payments by LTSS Service, Age, and Gender

LTSS Service	Age and Gender	LTSS Users 2018-2019	Rate of LTSS/ 1000	Annual Months per User	Payment per Month	Annual Pay per User
Access	Male 65-74	2,828	11.3	4.44	$173	$768
	Male 75-84	2,618	22.4	4.39	$143	$627
	Male 85+	1,383	31.8	3.88	$131	$509
	Female 65-74	4,722	17.5	4.94	$148	$732
	Female 75-84	4,914	33.9	4.69	$135	$632
	Female 85+	4,062	51.7	3.43	$106	$363
	All Users	20,527	22.7	4.37	$140	$612
Case Mgmt.	Male 65-74	1,715	6.8	5.59	$279	$1,562
	Male 75-84	1,906	16.3	6.05	$259	$1,568
	Male 85+	1,297	29.8	5.68	$237	$1,348
	Female 65-74	2,926	10.8	6.14	$268	$1,646
	Female 75-84	4,284	29.6	6.35	$243	$1,545
	Female 85+	5,097	64.8	5.98	$226	$1,351
	All Users	17,224	19.0	6.04	$247	$1,494
Asst Living	Male 65-74	948	3.8	7.92	$2,330	$18,459
	Male 75-84	1,307	11.2	8.37	$2,479	$20,756
	Male 85+	1,105	25.4	8.16	$2,413	$19,695
	Female 65-74	1,394	5.2	8.23	$2,404	$19,788
	Female 75-84	3,203	22.1	8.73	$2,514	$21,959
	Female 85+	4,936	62.8	8.97	$2,577	$23,112
	All Users	12,892	14.3	8.62	$2,503	$21,589

In-Home	**Male 65-74**	**2,562**	**10.2**	**11.06**	**$509**	**$5,633**
	Male 75-84	2,292	19.6	12.99	$553	$7,181
	Male 85+	955	21.9	13.28	$559	$7,427
	Female 65-74	5,316	19.7	11.57	$464	$5,366
	Female 75-84	5,056	34.9	12.86	$478	$6,144
	Female 85+	2,682	34.1	12.58	$413	$5,198
	All Users	18,862	20.9	12.25	$483	$5,911
HH	Male 65-74	1,516	6.0	5.52	$820	$4,531
	Male 75-84	1,531	13.1	6.24	$826	$5,155
	Male 85+	834	19.2	5.69	$791	$4,501
	Female 65-74	2,866	10.6	5.82	$817	$4,755
	Female 75-84	3,512	24.3	6.16	$824	$5,078
	Female 85+	2,882	36.6	5.38	$842	$4,530
	All Users	13,139	14.5	5.82	$824	$4,797
PCA	Male 65-74	1,779	7.1	9.43	$2,438	$22,986
	Male 75-84	1,386	11.8	10.17	$2,405	$24,461
	Male 85+	605	13.9	11.04	$2,592	$28,605
	Female 65-74	3,470	12.9	9.72	$2,319	$22,547
	Female 75-84	2,894	20.0	10.38	$2,395	$24,852
	Female 85+	1,442	18.3	10.70	$2,702	$29,181
	All Users	11,575	12.8	10.09	$2,439	$24,593
Hospice	Male 65-74	386	1.5	2.66	$5,115	$13,628
	Male 75-84	591	5.0	2.93	$5,528	$16,196
	Male 85+	667	15.3	2.83	$5,403	$15,280
	Female 65-74	475	1.8	2.79	$5,366	$14,988
	Female 75-84	999	6.9	2.91	$5,387	$15,651
	Female 85+	2,373	30.2	3.24	$5,539	$17,967
	All Users	5,490	6.1	3.02	$5,456	$16,465
MA NF	Male 65-74	1,966	7.8	6.80	$6,517	$44,322
	Male 75-84	2,284	19.5	7.33	$6,618	$48,537
	Male 85+	1,971	45.3	7.44	$6,383	$47,509
	Female 65-74	2,325	8.6	6.26	$6,870	$42,979
	Female 75-84	4,061	28.0	7.25	$6,756	$49,003
	Female 85+	7,096	90.3	8.12	$6,434	$52,270
	All Users	19,703	21.8	7.43	$6,566	$48,799
Any	Male 65-74	6,031	24.1	16.17	$1,815	$29,351
	Male 75-84	5,977	51.1	17.71	$1,987	$35,200
	Male 85+	4,000	91.9	15.60	$2,503	$39,051
	Female 65-74	9,906	36.7	18.23	$1,458	$26,581
	Female 75-84	12,139	83.8	18.72	$1,828	$34,232
	Female 85+	14,274	181.5	15.32	$2,768	$42,409
	All Users	52,325	57.9	17.05	$2,048	$34,926

Table 7. Post-COVID Period (2022) LTSS Service Use and Payments

LTSS Service	Age and Gender	LTSS Users 2022	Rate of LTSS / 1000	Annual Months per User	Pay per Month	Annual Pay per User
Access	Male 65-74	2,661	10.6	4.02	$191	$770
	Male 75-84	2,078	17.8	4.10	$174	$715
	Male 85+	1,03,9	23.9	3.94	$167	$659
	Female 65-74	3,973	14.7	4.48	$175	$784
	Female 75-84	4,130	28.5	4.34	$156	$678
	Female 85+	2,865	36.4	3.26	$135	$441
	All Users	16,746	18.5	4.08	$167	$681
Case Mgmt.	Male 65-74	1,848	7.4	5.12	$303	$1,552
	Male 75-84	1,786	15.3	5.60	$277	$1,553
	Male 85+	1,066	24.5	5.33	$247	$1,318
	Female 65-74	2,731	10.1	5.53	$296	$1,639
	Female 75-84	4,054	28.0	5.93	$271	$1,604
	Female 85+	4,213	53.6	5.31	$249	$1,324
	All Users	15,698	17.4	5.52	$272	$1,503
Asst Living	Male 65-74	1,278	5.1	8.21	$3,089	$25,364
	Male 75-84	1,441	12.3	8.80	$3,217	$28,316
	Male 85+	1,036	23.8	8.72	$3,238	$28,230
	Female 65-74	1,531	5.7	8.29	$3,117	$25,850
	Female 75-84	3,296	22.8	8.93	$3,251	$29,022
	Female 85+	4,416	56.2	8.98	$3,296	$29,599
	All Users	12,998	14.4	8.77	$3,232	$28,343
In-Home Svs.	Male 65-74	2,477	9.9	10.27	$695	$7,141
	Male 75-84	2,220	19.0	12.17	$788	$9,594
	Male 85+	919	21.1	13.87	$772	$10,701
	Female 65-74	4,687	17.4	10.93	$636	$6,955
	Female 75-84	4,822	33.3	12.53	$650	$8,146
	Female 85+	2,325	29.6	12.12	$634	$7,686
	All Users	17,450	19.3	11.75	$676	$7,941
Home Health	Male 65-74	1,221	4.9	5.43	$767	$4,170
	Male 75-84	1,249	10.7	5.96	$782	$4,663
	Male 85+	625	14.4	5.51	$819	$4,512
	Female 65-74	2,089	7.7	5.51	$782	$4,310
	Female 75-84	2,946	20.3	5.99	$790	$4,733
	Female 85+	2,078	26.4	5.22	$854	$4,456
	All Users	10,208	11.3	5.64	$799	$4,501

LTSS Service	Age and Gender	LTSS Users 2022	Rate of LTSS / 1000	Annual Months per User	Pay per Month	Annual Pay per User
PCA	Male 65-74	1,944	7.8	9.24	$2,935	$27,125
	Male75-84	1,349	11.5	10.11	$3,041	$30,742
	Male 85+	649	14.9	11.25	$3,146	$35,387
	Female 65-74	3,471	12.9	9.58	$2,846	$27,267
	Female 75-84	2,958	20.4	10.61	$2,968	$31,495
	Female 85+	1,502	19.1	10.86	$3,285	$35,660
	All Users	11,873	13.1	10.09	$2,992	$30,198
Hospice	Male 65-74	348	1.4	2.83	$6,565	$18,563
	Male 75-84	534	4.6	3.19	$7,260	$23,126
	Male 85+	607	13.9	3.14	$7,147	$22,464
	Female 65-74	418	1.5	2.92	$6,631	$19,339
	Female 75-84	958	6.6	3.23	$6,969	$22,494
	Female 85+	1,975	25.1	3.52	$7,369	$25,933
	All Users	4,840	5.4	3.28	$7,146	$23,408
Medicaid Nursing Facility	Male 65-74	1,855	7.4	6.75	$8,550	$57,725
	Male 75-84	1,902	16.2	7.29	$8,593	$62,680
	Male 85+	1,345	30.9	7.47	$8,470	$63,305
	Female 65-74	2,045	7.6	6.45	$8,928	$57,561
	Female 75-84	3,334	23.0	7.30	$8,924	$65,164
	Female 85+	4,803	61.1	8.00	$8,715	$69,709
	All Users	15,284	16.9	7.35	$8,730	$64,199
Any Medicaid LTSS Use	Male 65-74	6,540	26.1	14.41	$2,403	$34,615
	Male 75-84	5,819	49.7	16.30	$2,585	$42,141
	Male 85+	3,479	79.9	15.60	$3,055	$47,639
	Female 65-74	9,731	36.1	16.03	$1,982	$31,776
	Female 75-84	11,934	82.4	17.45	$2,353	$41,072
	Female 85+	11,748	149.4	14.65	$3,512	$51,436
	All Users	49,251	54.5	15.83	$2,618	$41,440

Projections of LTSS Use and Medicaid Payments in 2025-2035

Projections of future LTSS use and Medicaid payments drew on population projections of older Minnesotans from the Minnesota State Demographic Center, and rates of LTSS use and average Medicaid payments from the pre-COVID and post-COVID periods. Projections were made separately for Medicaid nursing facility, assisted living facility, in-home care and PCA services, adult day services, home health, hospice, case management and access services used by the Medicaid LTSS population. Since an immediate return to the pre-COVID rates of LTSS use is unlikely, we constructed the Blended scenario of a gradual, steady return to pre-COVID patterns of care between 2025 and 2035.

There were three sets of projections from 2025 thru 2035:

- Pre-COVID – return to pre-COVID pattern of LTSS use;
- Post-COVID – extension of the post-COVID pattern of LTSS use; and
- Blending of the Pre-COVID and post-COVID scenarios – beginning with a post-COVID pattern in 2025 and returning to a pre-COVID pattern steadily from 2026 through 2035.

Each scenario relied on the same state demographic projections of population growth by age group (65-74, 75-84, and 85 and older) and gender. Average payments for LTSS services were inflated at 2.5% per year. Findings are presented in current dollars representing payments in the years projected.

Projection Steps

The projections involved several steps.

1. Determine the baseline LTSS users and Medicaid payments for LTSS services by LTSS category, age group and gender in selected years from our study. We selected two periods for the baseline Medicaid LTSS utilization and payments:
    a. Pre-COVID period – years 2018-2019, the immediate two years before the pandemic.
    b. Post-COVID period – year 2022, the most recent full year for which we have complete data.
2. Calculate rates of LTSS use in the pre-COVID and post-COVID periods based on the Minnesota older population in the two baseline periods.
3. Project future annual use of LTSS services by applying the baseline (Pre-COVID and COVID) rates of use to the future population projections by age group and gender. For example, the projected nursing facility use in 2025 for females age 85 and older is calculated based on the projected number of females 85 and older in the general population times the pre-COVID rate of nursing home use for females 85 and older.
4. Calculate mean monthly payments for each LTSS service in a reference year. Inflate these payments from the reference year to each future year through 2035. We selected 2022 as the reference year because it is the most recent year for which we have complete data.

5. To determine payments in future years, multiply the number of projected user months each year times the monthly payment rates for that year. Projections are made by type of LTSS service, age group and gender. For example, the number of projected nursing facility months for females age 85 and older in a year is based on their projected number of nursing facility months times the projected cost of those months.
6. Construct a scenario of a gradual, steady return to pre-COVID patterns of care between 2025 and 2035. Begin in 2025 with the post-COVID LTSS rates and then blend in the pre-COVID pattern each year until the projections are based solely on pre-COVID rates in 2035.

Simplifying Assumptions

LTSS projections are based on simplifying assumptions regarding the future use of care and payments. These assumptions make the projections less complex and more transparent, yet they also represent study limitations.

- The projections rely on patterns of LTSS use and Medicaid payments in the Pre-COVID and Post-COVID periods. Future use and payments could be quite different from historical patterns.
- Rates of LTSS service use for each set of LTSS projections (pre-COVID, post-COVID, and blended) are assumed to follow the same pattern in each future year. The projections do not consider variation in the rate of people entering each type of service from year to year. Also, they do not consider potential shifts from year to year in service use between LTSS categories, e.g., from nursing facility to assisted living facility or HCBS waiver services.
- Demographic change in age groups and gender are the only population characteristics affecting future projections. Potential changes in other population characteristics, such as race, marital status, county of residence, and economic status are not considered in the projections.
- Similarly, the projections do not consider potential future changes in rates of disability or mortality, availability of family or other private means of support, economic conditions or public policies and financing.

Assumptions for the pre-COVID, post-COVID and Blended Scenarios

In constructing the projection scenarios, we multiplied rates of Medicaid LTSS use for the pre-COVID and post-COVID periods by the yearly population projections from 2025-2035, in order to project annual estimates of the number of users for each Medicaid LTSS service from 2025-2035. We then multiplied the projected number of LTSS users each year by the average Medicaid payments per user for each LTSS service to obtain the projected number of Medicaid payments each year. Several assumptions went into the projections (Table 8).

Table 8. Assumptions for the Projection Scenarios

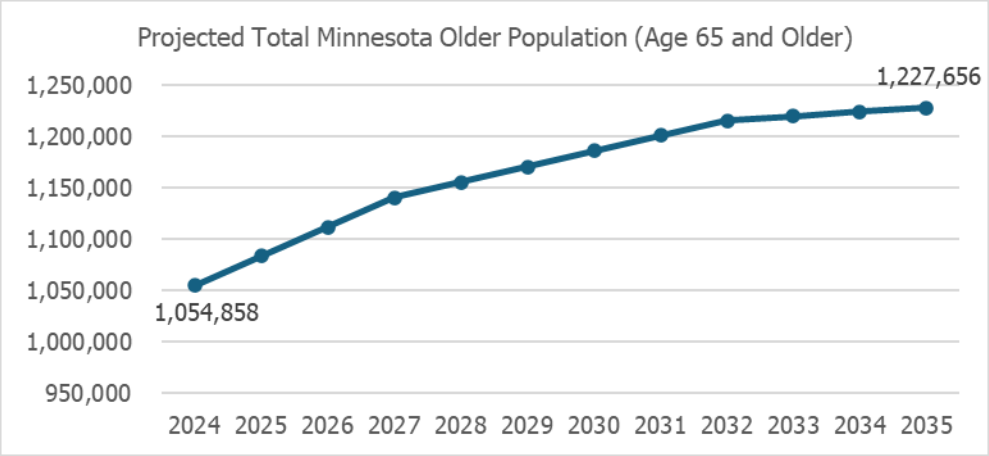
	Pre-COVID Scenario	Post-COVID Scenario
Population Projections	Minnesota population projections by age group and gender from the State Demographer.	Minnesota population projections by age group and gender from the State Demographer.
Rate of LTSS use by age group, gender, and type of LTSS for the Base-Case period.	Average annual number of Medicaid LTSS users in 2018-2019 divided by the number of people in the Minnesota population in 2018-2019.	Number of Medicaid LTSS users in 2022 divided by the number of people in the Minnesota population in 2022.
Number of future LTSS users	Rate of LTSS use for the Base Case period times the number of people in the general population projected for future years.	Rate of LTSS use for the Base Case period times the number of people in the general population projected for future years.
Starting 2025 payments per year per user	2022 Medicaid LTSS payment rates indexed forward to 2025 at 2.5% per year.	2022 Medicaid LTSS payment rates indexed forward to 2025 at 2.5% per year.
Rate of annual LTSS Payment Growth 2025 – 2035	Indexed forward at 2.5% per year.	Indexed forward at 2.5% per year.
Blended Rate	Beginning with the post-COVID scenario at 100% in 2025, blending in the pre-COVID scenario increasing uniformly at 9% per year, and then ending with pre-COVID scenario at 100% in 2035. We chose a uniform (9%) increase in the proportion of the pre-COVID rates each year to represent a middle estimate between a rapid return and no return to the higher pre-COVID rates.	

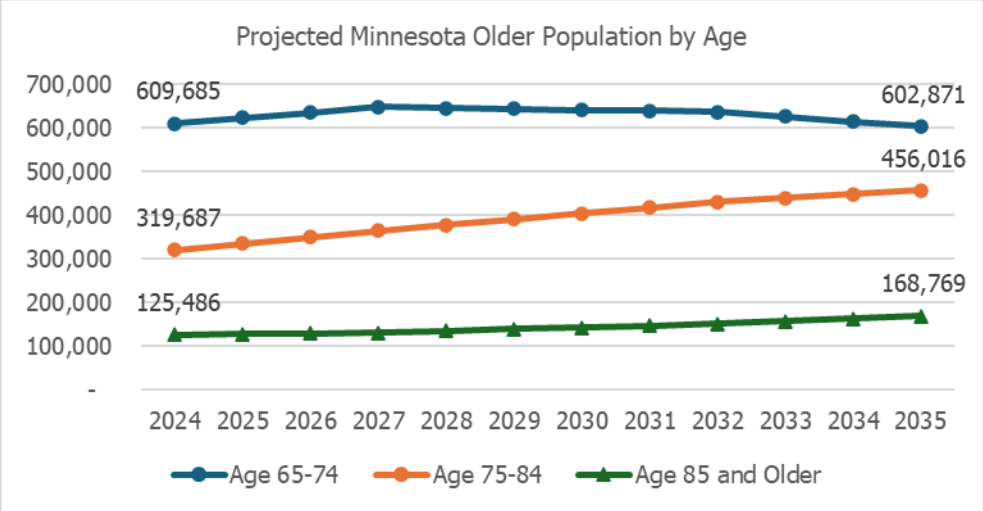
In deciding on average monthly Medicaid payments for purposes of the projections, we chose the monthly payment rate for 2022 as the starting payment for both the pre-COVID and COVID periods. We made this decision for two reasons. First, we wanted to use the most recent payment rate, after payment increases associated with the COVID-19 period and legislative payment increases between 2019 and 2022. Second, we wanted a common starting point for both sets of projections, which makes comparisons between periods more interpretable.

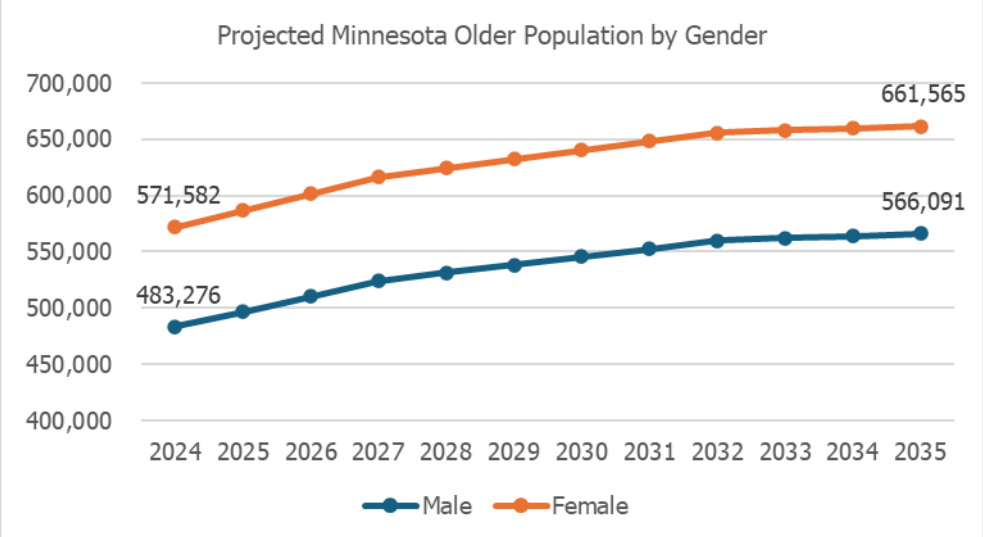
Projections of the Minnesota Older Population 2025-2035

Increase in the older population is a major driver of future LTSS use and payments. More people using care, particularly of advanced age, translates into more LTSS users and higher total Medicaid payments. The projected annual increase in Minnesota's older population from 2024 to 2035 is shown in Panel 11 and Table A-8 in the Appendix. The total population is projected to increase from 1.05 million in 2024 to 1.23 million in 2035. The largest increase will be among people age 75-84 as members of the "Baby Boom" population move through that age range (Panel 11). The population age 85 and older is also projected to increase, while the population age 65-74 is projected to show a small decease as more people leave that age range and fewer people enter it. The numbers of females and males are also projected to increase with larger numbers of females in each year due to their longer life expectancy.

Panel 11. Minnesota Older Adult Population Projections by Age and Gender







Projections for LTSS Use in 2025 thru 2035

Table 9 and Panel 12 show the projected annual use of Medicaid LTSS from 2025 through 2035 with two scenarios: post-COVID scenario and a Blended scenario beginning with the post-COVID scenario in 2025 and then blending in a pre-COVID scenario from 2025 thru 2035. The post-COVID and Blended scenarios start with a similar number of LTSS users in 2025 and then steadily diverge between 2026 and 2035 with the blended scenario having increasingly more users each year.

In the post-COVID scenario from 2025 to 2035, the total number of people using Medicaid LTSS is projected to increase by 22% from 54,897 to 67,231. The number of users age 65-74 is projected to decline by 3% from 17,234 to 16,704; the number age 75-84 is projected to increase by 37% from 20,546 to 28,050; and the number age 85 and older is projected to increase by 33% from 16,939 to 22,491.

In the Blended scenario from 2025-2035, the number of LTSS users is projected to increase by 35% from 55,472 to 75,054. The number of users age 65-74 age is projected to increase by 6% from 17,399 to 18,461; the number age 75-84 is projected to increase by 52% from 20,779 to 31,546; and the number 85 and older is projected to increase 47% from 17,127 to 25,248.

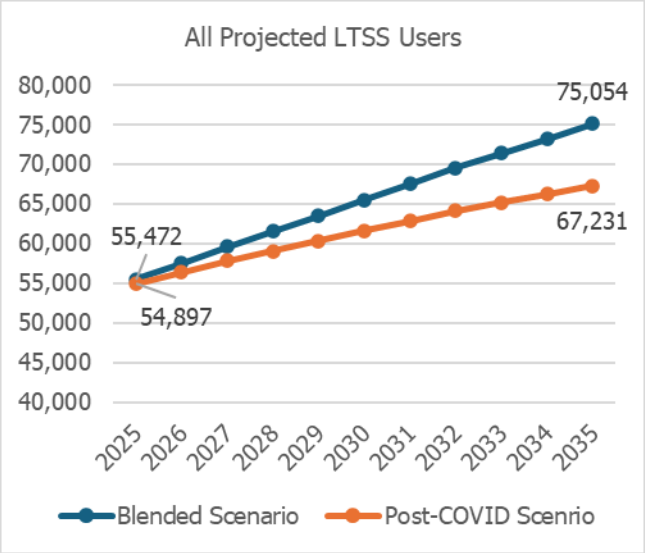
In the post-COVID scenario from 2025 and 2035, nursing facility residents are projected to increase by 25% from 17,030 to 21,357; assisted living facility residents are projected to increase by 27% from 14,523 to 18,421; in-home care users are projected to increase by 20% from 19,374 to 23,273; and PCA users are projected to increase by 19% from 13,113 to 15,541.

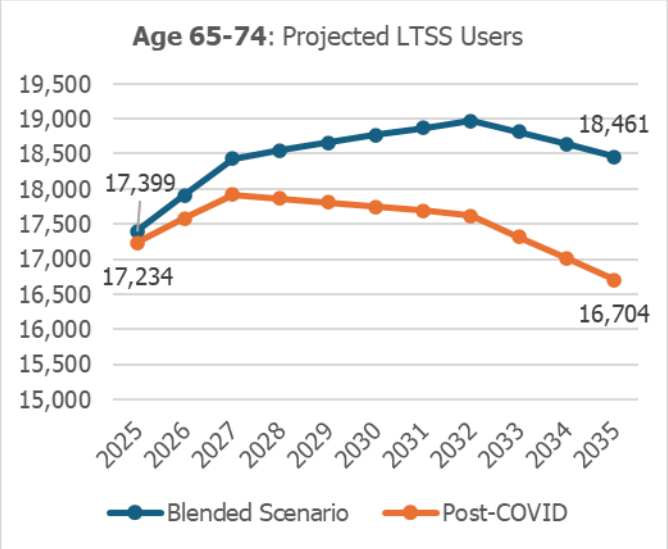
In the Blended scenario, nursing facility residents are projected to increase by 63% from 17,541 to 28,547; assisted living facility residents are projected to increase by 30% from 14,551 to 18,912; in-home care users are projected to increase by 37% from 19,640 to 26,945; and PCA users are projected to increase by 24% from 13,181 to 16,360. Detailed annual projections are in Appendix Tables A9 and A11.

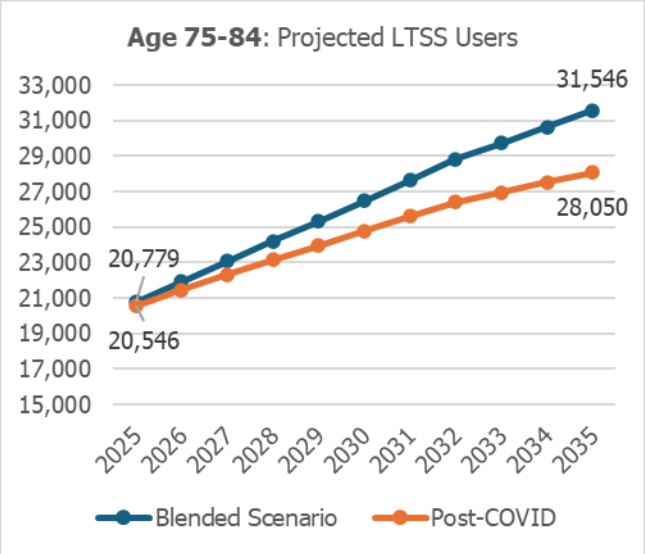
Table 9. Projected Medicaid LTSS Use with Post-COVID and Blended Scenarios

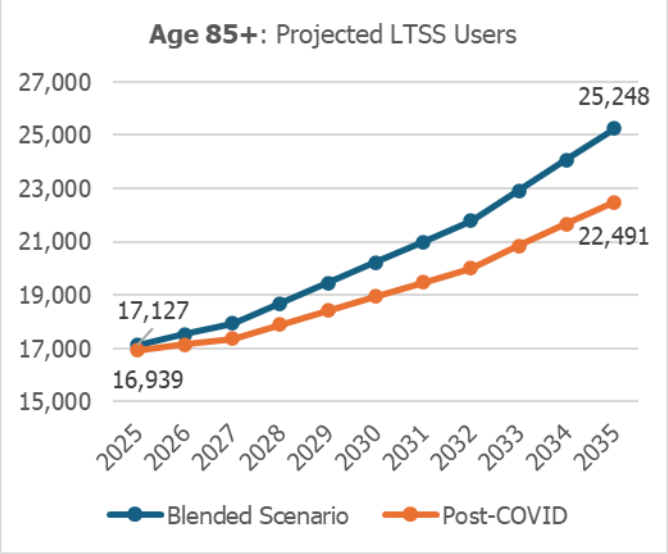
Scenario	Age group	2025	2030	2035	% Change
Post-Covid	All Users	54,897	61,576	67,231	22%
	Age 65-74	17,234	17,749	16,704	-3%
	Age 75-84	20,546	24,772	28,050	37%
	Age 85+	16,939	18,946	22,491	33%
	Nursing Facility	17,030	19,210	21,357	25%
	Assisted Living	14,523	16,458	18,421	27%
	In Home Care	19,347	21,677	23,273	20%
	PCA	13,113	14,593	15,541	19%
Blended	All Users	55,472	65,463	75,054	35%
	Age 65-74	17,399	18,767	18,461	6%
	Age75-84	20,779	26,456	31,546	52%
	Age 85+	17,127	20,213	25,248	47%
	Nursing Facility	17,541	22,691	28,547	63%
	Assisted Living	14,551	16,671	18,912	30%
	In Home Care	19,640	23,615	26,945	37%
	PCA	13,181	15,046	16,360	24%

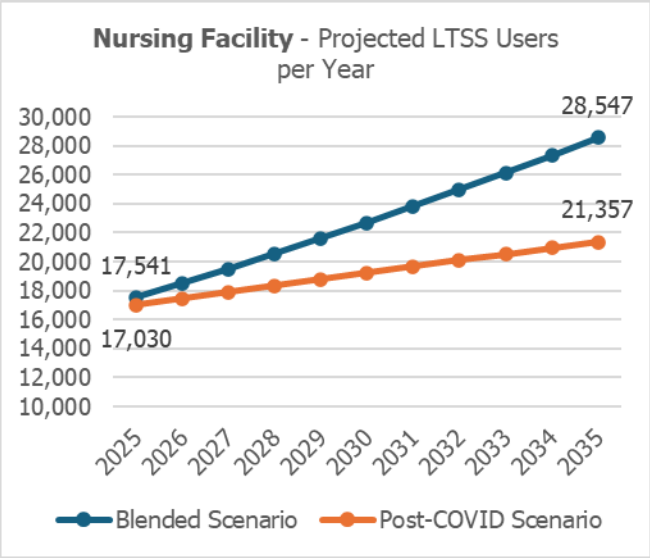
Panel 12. Projected Number of LTSS Users by Age Group, Scenario, and Type of LTSS

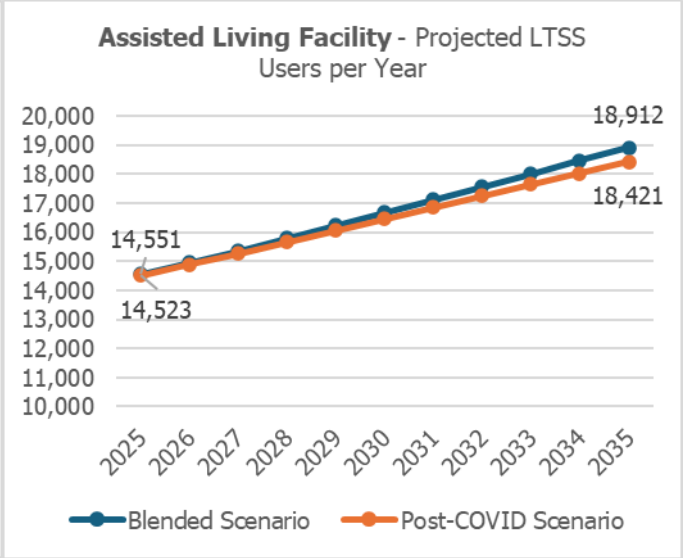


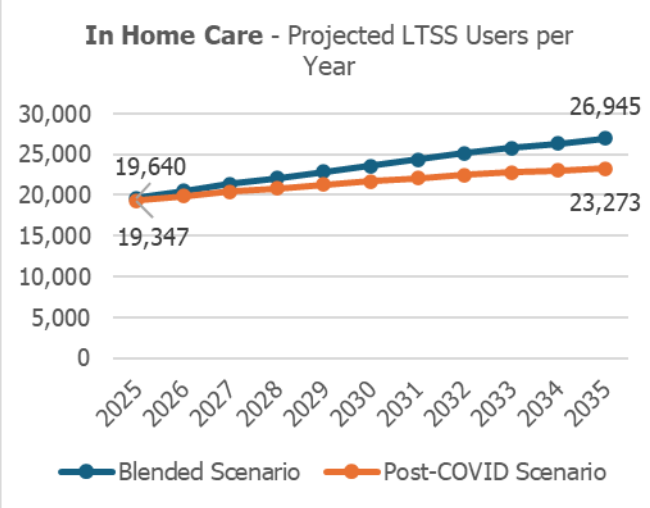


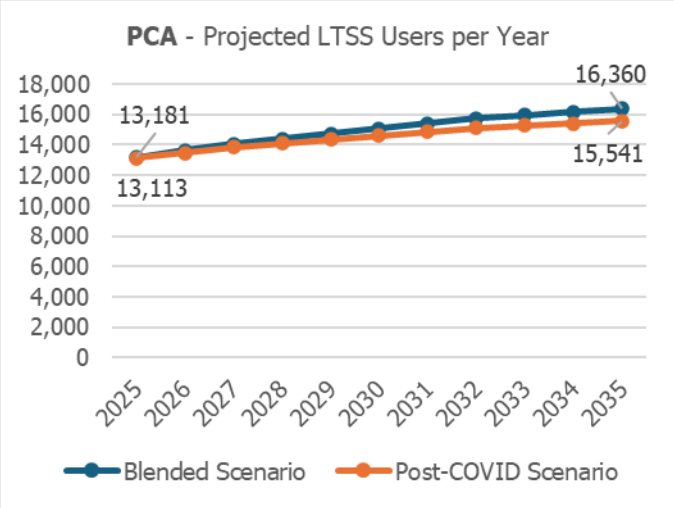





Nursing Facility - Projected LTSS Users per Year
30,000
28,000
26,000
24,000
22,000
20,000
18,000
16,000
14,000
12,000
10,000
28,547
21,357
17,541
17,030
2025
2026
2027
2028
2029
2030
2031
2032
2033
2034
2035
Blended Scenario
Post-COVID Scenario


Assisted Living Facility - Projected LTSS Users per Year
20,000
19,000
18,000
17,000
16,000
15,000
14,000
13,000
12,000
11,000
10,000
18,912
18,421
14,551
14,523
2025
2026
2027
2028
2029
2030
2031
2032
2033
2034
2035
Blended Scenario
Post-COVID Scenario


In Home Care - Projected LTSS Users per Year
30,000
25,000
20,000
15,000
10,000
5,000
0
26,945
23,273
19,640
19,347
2025
2026
2027
2028
2029
2030
2031
2032
2033
2034
2035
Blended Scenario
Post-COVID Scenario


PCA - Projected LTSS Users per Year
18,000
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
16,360
15,541
13,181
13,113
2025
2026
2027
2028
2029
2030
2031
2032
2033
2034
2035
Blended Scenario
Post-COVID Scenario

Projections for Annual Medicaid Payments in 2025 thru 2035

Detailed annual projections are in Appendix Tables A10 and A12.

Table 10 and Panel 13 show the projected total annual Medicaid payments in millions of current dollars for LTSS for the pre-COVID and Blended scenarios. Figures are presented overall and by age group and major types of Medicaid LTSS. The post-COVID and Blended scenarios starts with very close Medicaid payment levels in 2025 and then steadily diverge between 2026 and 2035 with the blended scenario having increasingly higher payments each year.

In the post-COVID scenario, total LTSS payments increase by 58% from $2,527 million to $3,996 million between 2025 and 2035. Projected LTSS payments for people age 65-74 are projected to increase by 24% from $603 million to $748 million; payments for people age 75-84 are projected to increase by 74% from $914 million to $1,587 million; and payments for people age 85 and older are projected to increase by 68% from $942 million to $1,587 million.

The Blended scenario has substantially larger projected increases in LTSS payments between 2025 and 2035. Total projected LTSS payments increase by 87% from $2,573 million to $4,813 million. Payments for people age 65-74 are projected to increase by 43% from $612 million to $874 million; payments for people age 75-84 are projected to increase by 105% from $931 million to $1,910 million; and payments for people age 85 and older are projected to increase by 102% from $961 million to $1,938 million.

Panel 13 also shows Medicaid payment projections by major LTSS categories of nursing facilities, assisted living facilities, and in-home care or PCA. By far the largest projected payments in future years are for nursing facilities in both the post-COVID and Blended scenarios.

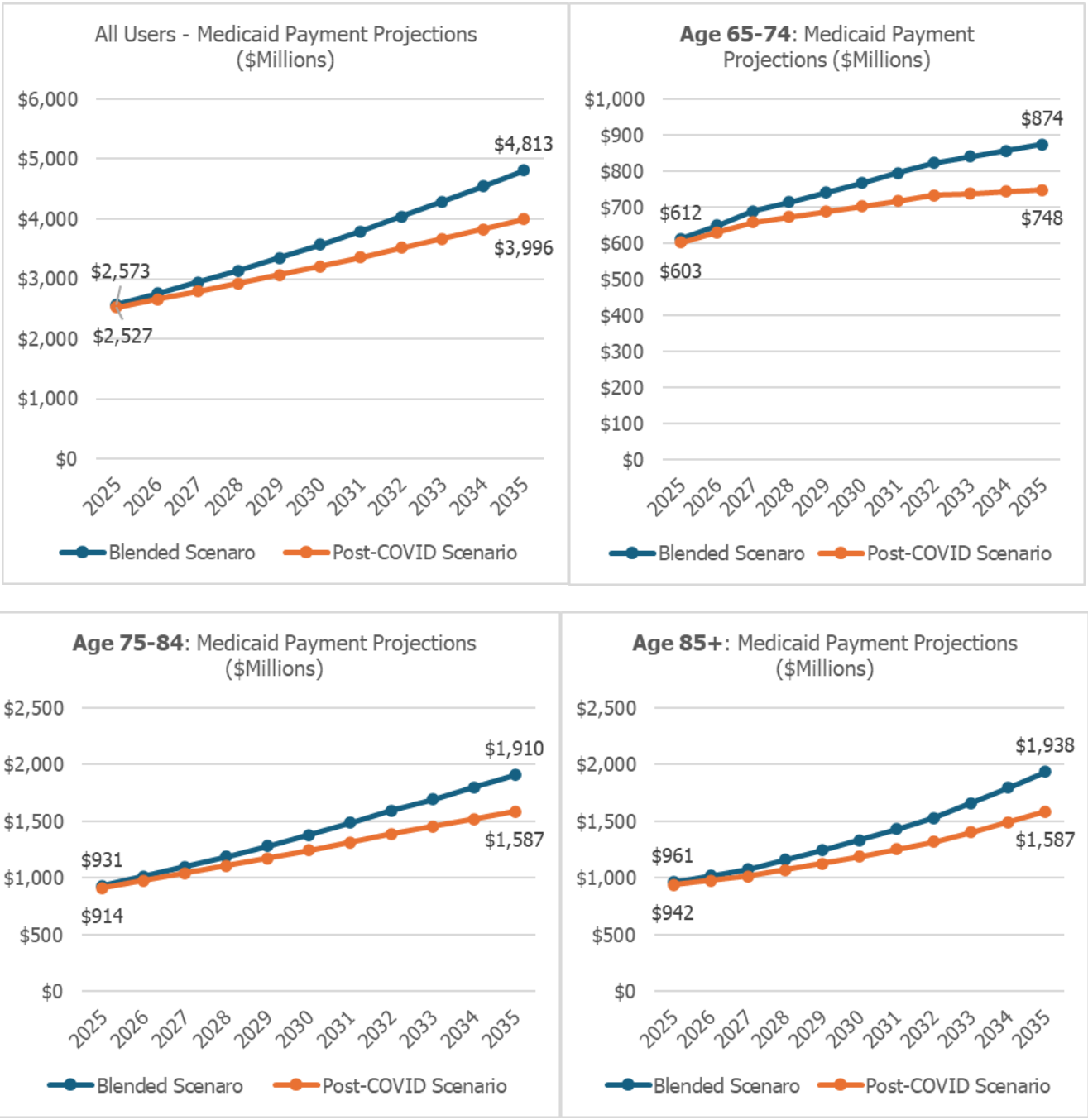
In the post-COVID scenario from 2025 to 2035, payments for nursing facility residents are projected to increase by 61% from $1,117 million to $1,890 million; payments for assisted living facility residents are projected to increase by 62% from $443 million to $720 million; and combined payments for in-home care and PCA are projected to increase by 52% from $592 million to $902 million.

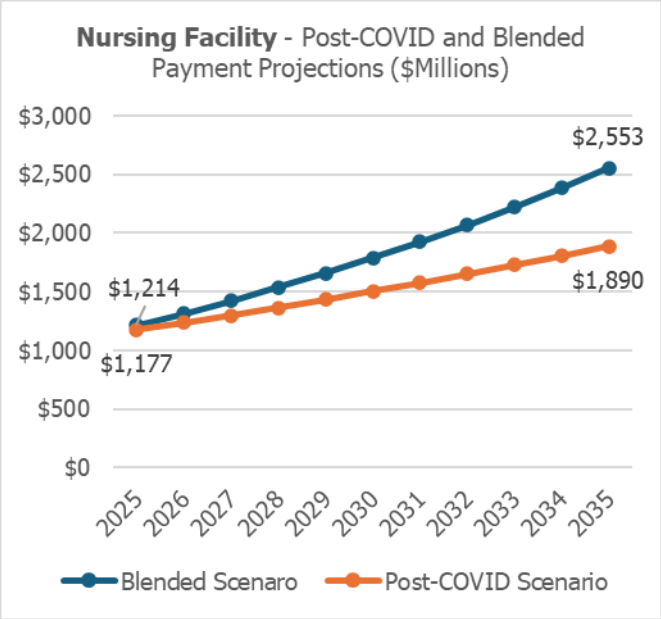
In the Blended scenario from 2025 to 2035, payments for nursing facility residents are projected to increase by 110% from $1,201 million to $2,553 million; payments for assisted living facility residents are projected to increase by 64% from $437 million to $727 million; and combined payments for in-home care and PCA are projected to increase by 65% from $592 million to $988 million.

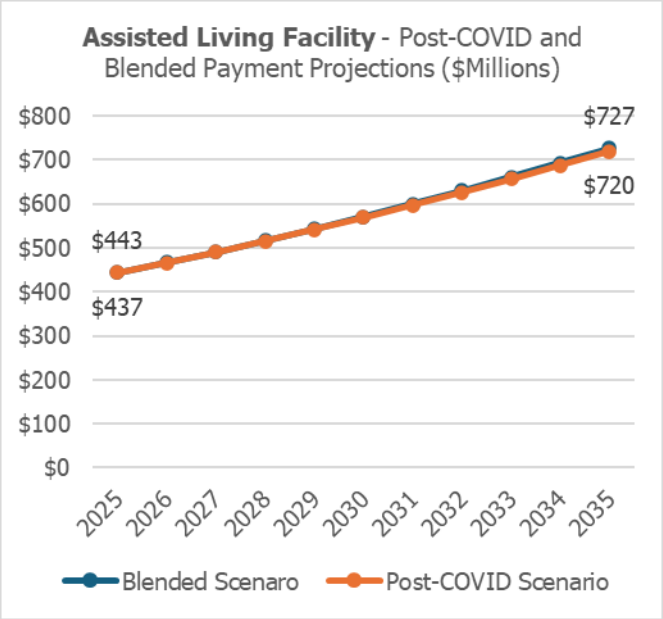
Table 10. Projected Medicaid LTSS Payments with Post-COVID and Blended Scenarios
($ Millions)

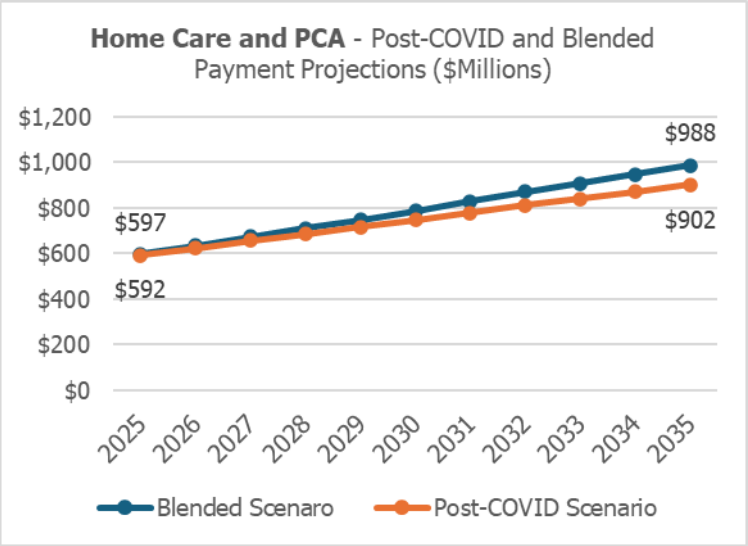
Scenario	Age Group	2025	2030	2035	% Change
Post-Covid	All Users	$2,527	$3,210	$3,996	58%
	Age 65-74	$603	$702	$748	24%
	Age75-84	$914	$1,243	$1,587	74%
	Age 85+	$942	$1,189	$1,587	68%
	Nursing Facility	$1,177	$1,503	$1,890	61%
	Assisted Living	$443	$568	$720	62%
	In Home Care or PCA	$592	$747	$902	52%
Blended	All Users	$2,573	$3,567	$4,813	87%
	Age 65-74	$612	$767	$874	43%
	Age75-84	$931	$1,381	$1,910	105%
	Age 85+	$961	$1,333	$1,938	102%
	Nursing Facility	$1,201	$1,787	$2,553	110%
	Assisted Living	$437	$570	$727	64%
	In Home Care or PCA	$592	$787	$988	65%

Panel 13. Projected Medicaid Payments for LTSS Use by Scenario, Age Group, and Type of LTSS




Nursing Facility - Post-COVID and Blended Payment Projections ($Millions)
$3,000
$2,500
$2,000
$1,500
$1,000
$500
$0
$2,553
$1,214
$1,890
$1,177
2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035
Blended Scenaro
Post-COVID Scenario


Assisted Living Facility - Post-COVID and Blended Payment Projections ($Millions)
$800
$700
$600
$500
$400
$300
$200
$100
$0
$727
$720
$443
$437
2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035
Blended Scenaro
Post-COVID Scenario


Home Care and PCA - Post-COVID and Blended Payment Projections ($Millions)
$1,200
$1,000
$800
$600
$400
$200
$0
$988
$597
$902
$592
2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035
Blended Scenaro
Post-COVID Scenario