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

2024 LTSS Projections Study Appendix

Prepared by Greg Arling and Zachary Hass, Purdue University, Mark Woodhouse and Lynn Blewett, University of Minnesota, for the Minnesota Department of Human Services, Aging and Disability Services Administration

August 18, 2025

Table of Contents

Tables and Figures

Summary of Methods

LTSS Population

The study covers a subset of Minnesota's older population that utilize long-term services and supports (LTSS), which consists of people aged 65 and older who have used LTSS or demonstrate a need for this care, and for whom we have available data. The population consists of Medicaid and non-Medicaid nursing facility (NF) users, Medicaid Elderly Waiver (EW) program participants (EW – Assisted Living, EW – HCBS), Alternative Care waiver participants, and a Medicaid Personal Care Assistant (PCA) without a waiver. The population is divided into these categories representing types of LTSS that are referred to throughout the report.

- Nursing facility residents enrolled in Medicaid (MA NF).
- Nursing facility residents NOT enrolled in Medicaid (Non-MA NF), includes all other nursing facility residents.
- Medicaid EW - Assisted Living (MA Assisted Living) – residents of assisted living facilities who receive a package of Medicaid LTSS through the Elderly Waiver (primarily Customized Living).
- Medicaid EW - Home and Community (MA HCBS) – home and community-based services for people living in a non-residential setting (not in nursing facility or assisted living). These services include adult day services, chore services, homemaker, personal care, home delivered meals, and consumer-directed community supports.
- Medicaid PCA without a Waiver – care from a personal care assistant outside of an Elderly Waiver program.
- Alternative Care (AC) – Medicaid waiver program which provides Medicaid-funded, non-residential HCBS to older people not enrolled in Medicaid but who meet financial eligibility criteria in a limited range above the Medicaid threshold.

Users of Nursing Facility Care while Not Enrolled in Medicaid

Although the LTSS population can be broadly defined to include users of all types of nursing facility care, findings regarding Medicaid LTSS costs exclude nursing facility residents who were not enrolled in Medicaid because no cost data were available for them. However, we track these individuals and include them in utilization and cost analysis if they become Medicaid enrolled while in the nursing home, assisted living, or a community setting.

Older Participants on Disability Waivers

People aged 65 and older participating on a disability waiver were excluded from the analysis. This population tends to have significantly different characteristics and service use patterns than EW participants or other members of the LTSS population. Although it would have been informative to conduct a sub-group analysis of the older disabled population, it was not feasible within the scope of the study or available resources.

Gaps in Information about Private Sources of LTSS

We have a gap in data on people aged 65 and older who have significant long-term care needs but who have no history of nursing facility use or enrollment in Medicaid. They may be receiving care in the community exclusively through family or other informal sources, formal HCBS that is paid for privately, or privately paid for assisted living, memory center, or other residential setting. We also do not have information about care received for privately paying nursing facility users if they return to a community setting without becoming enrolled in Medicaid.

Racial and Ethnic Categories

The racial and ethnic categories in the report described below are based on information collected through the Medicaid administrative system. These categories are the same as those used in the US Census. We recognize that designations for "race" and "ethnicity" are overly simplistic. The concept of race has a questionable biological foundation. Even as cultural categorization, race is an anachronism. Moreover, there are important social and cultural differences between people in each of the arbitrarily defined racial and ethnic categories. A major limitation of the study is our inability to consider the rich cultural differences among ethnic groups.

Major Variables and Data Sources

LTSS Program and Setting

The LTSS population was categorized into mutually exclusive programs and settings for ease of analysis. These categories (also listed above) are nursing facility (Medicaid or non-Medicaid); Medicaid EW – Assisted Living; Medicaid EW – HCBS; Medicaid PCA without a waiver; and Alternative Care waiver. The Medicaid claims and other administrative files from the Medicaid Management Information System (MMIS) were used to categorize Medicaid enrollees (see Appendix – Chapter 2 Methods), while the Nursing Home Minimum Data Set (MDS) was the major source of information about nursing facility residents not Medicaid enrolled. Information on Medicaid enrollment came from Medicaid enrollment files.

Demographic Characteristics and Functional Need of the Older LTSS Population

Information on demographic characteristics and functional needs of individual members of the LTSS are drawn from the MMIS, MNChoices Long-Term Care Screening Document[1], or nursing home Minimum Data Set (MDS)[2]. Demographic characteristics came from the MMIS for Medicaid enrollees and MDS for nursing facility residents not enrolled in Medicaid. Information on functional needs came from the MDS for people with a nursing facility stay, while information for users of Medicaid waiver services or

[1] MNChoices Long-Term Care Screening Documents

[2] Nursing Home Minimum Data Set (MDS) Assessment Instrument

PCA came from the MNChoices screening document. The two sources required harmonization because the MDS and MNChoices screening documents use a similar but not exact set of items.

Demographic Characteristics

- Age
- Gender
- Race/ethnicity -White non-Hispanic, Black/African American, Asian or Pacific Islander, American Indian or Alaska native, Hispanic, Multiple races/ethnicities
- Urban or rural county of residence: Twin Cities, other metropolitan area, or rural

Functional Needs

- Dependency in activities of daily living: extensive assistance or total dependence in eating, bed mobility, transferring, walking, toileting, bathing, dressing, and grooming (MDS and MNChoices)
- Cognitive status – diagnosis of Alzheimer's disease or other dementia (MDS or MMIS), impaired cognition (MNChoices), or moderate to severe cognitive impairment on the Cognitive Function Scale (MDS)
- Behaviorally challenged – frequent history of behavioral symptoms (MNChoices) or overall presence of behavioral symptoms (MDS)

LTSS Services and Medicaid Payments

Minnesota's MMIS was the primary source of information on LTSS service use and Medicaid payments. The individual categories of service for the individual Medicaid claims were grouped into the following categories.

- Nursing Facilities (COS 89 and 122)
- EW Assisted Living Facility (customized living COS 108)
- EW HCBS – adult day services (COS 102), chore services (COS 93), home delivered meals (COS 95), personal care (COS 38), homemaker (COS 96), and consumer-directed community supports (COS 21).
- PCA outside of an Elderly Waiver (COS 119)
- Home Health and Skilled Nursing (COS 89, 122, 20, and 114)
- Hospice (COS 72)
- Case Management (COS 44 and 71)
- Access Services (COS 100)

Service category definitions can be found in Minnesota DHS Provider Manual.[3]

[3] Minnesota DHS Provider Manual

Population Projections for Minnesota's Older Population 2025-2039.

Annual state demographic projections by age and gender for 2025-2039 (May 2024 projections), were downloaded from the Minnesota State Demographic Center.[4]

Study Time Periods

The study had four major time periods:

We began with a pre-COVID period from 2016 to 2019. We chose this period because the available data were consistent over this period, it allowed enough time to assess multiyear trends in LTSS, and it represented the LTSS experience prior to disruption caused by the COVID-19 pandemic.

The COVID period from 2020 to 2021 took into account changes in LTSS taking place during the peak years of the COVID-19 pandemic.

The post-COVID period from 2022 to June 2024 represented use of care and costs to Medicaid during the 30 months following the approximate end of the pandemic.

The straight-line projections of LTSS use and costs to Medicaid covered the period from 2025 to 2035. The micro-simulations included an additional 5 years from 2035 to 2039 for cohorts beginning in 2035.

Analysis Strategies

We conducted both cross-sectional and longitudinal/cohort analyses. The cross-sectional analyses describe characteristics of the LTSS population and their use of care at a point in time, such as January 1 of each year, or on average during a month, calendar quarter or year. In the longitudinal analysis we followed individuals from a specific time point to a future time point, such as the month they entered LTSS until they died or the data period ended.

We tracked their use of different types of LTSS, Medicaid conversion, and survival. Chapter 3 of the main report presents findings from a combination of cross-sectional and longitudinal analyses. We draw comparisons between quarterly, annual and period cross-sections. We also report on care outcomes tracked longitudinally. The figures presented in Chapters 3 are mainly in the form of descriptive graphics (line or bar graphs) or tables. The micro-simulations relied on multivariable statistical analysis, semi-Markov transition modeling, and survival analysis.

Straight Line Projections

The straight-line projections of future LTSS service use and payments, reported in the LTSS Projections Phase 2 Report , took place in steps.

1. Calculate the average annual per person months of Medicaid LTSS use and average monthly payments for users of LTSS by age group (age 65-74, 75-84, and 85 and older) and categories of service in the baseline period of 2016-2019.

[4] Minnesota State Demographic Center Population Projections

2. Estimate the annual rate of Medicaid LTSS use per 1000 persons by age group in the Minnesota population in 2019.
3. Apply the annual rates of LTSS use to the annual population projections from 2025-2035, to estimate the annual number of user months for LTSS.
4. Using patterns of LTSS service use during the baseline, allocate the projected increase in total user months across categories of service to project the total user months of LTSS services per year from 2025-2035.
5. Estimate annual projected Medicaid payments by multiplying projected annual Medicaid LTSS costs per user by projected months of use of future LTSS services.

Micro-Simulation

The micro-simulation used the data described above to build models of the movement of individuals between different LTSS subgroups. The models were trained to learn the patterns of how likely individuals were to move between specific subgroups and given that they were going between two specific subgroups, how many months the transition tends to take. Multinomial logistic regression models which adjusted for individual characteristics were used to model transition patterns. Right skewed probability distributions were used to model the amount of time individuals took to transition.

The micro-simulation generated case histories for LTSS utilization beginning in 2025, 2030, and 2035 and extending for 5 years each. Simulations were organized around two main questions: How do the assumptions around usage rates impact the number of users and costs to Medicaid? How would expanding the AC program in terms of number of users impact overall Medicaid usage, costs to Medicaid, and privately paid nursing facility usage?

The usage rate question comprised three scenarios:

- Base case assuming LTSS usage rates would remain at post-COVID levels (2022-June 2023).
- A return to the pre-COVID level of LTSS usage rates (2019), which begin at the post-COVID rates and returned linearly to the pre-COVID rates over a 10 year period (blended scenario).
- The nursing facility decline scenario assumed a decline in nursing facility usage rates (estimated from observed data) and a shift to other LTSS settings, which were the two main changes observed during the pandemic.

Case histories were generated under the base case (150 full simulations). Each simulation was bootstrapped to follow the assumed usage rates under the three scenarios and summarized across simulations for the final results.

The AC expansion question was comprised of 7 scenarios which tested questions about the size of the expansion and the effect of the LTSS subgroups from which new enrollees were drawn:

- Base case with no AC expansion and post-COVID usage rates.

- 100 additional AC enrollees per year with 70% drawn from individuals with no prior nursing facility use, 15% from individuals discharged from the nursing facility to the community and not enrolled in Medicaid, and 15% from individuals currently in the nursing facility.
- 150 additional AC enrollees per year with 70% drawn from individuals with no prior nursing facility use, 15% from individuals discharged from the nursing facility to the community and not enrolled in Medicaid, and 15% from individuals currently in the nursing facility.
- 300 additional AC enrollees per year with 70% drawn from individuals with no prior nursing facility use, 15% from individuals discharged from the nursing facility to the community and not enrolled in Medicaid, and 15% from individuals currently in the nursing facility.
- 100 additional AC enrollees per year with 25% drawn from individuals with no prior nursing facility use, 35% from individuals discharged from the nursing facility to the community and not enrolled in Medicaid, and 40% from individuals currently in the nursing facility.
- 150 additional AC enrollees per year with 25% drawn from individuals with no prior nursing facility use, 35% from individuals discharged from the nursing facility to the community and not enrolled in Medicaid, and 40% from individuals currently in the nursing facility.
- 300 additional AC enrollees per year with 25% drawn from individuals with no prior nursing facility use, 35% from individuals discharged from the nursing facility to the community and not enrolled in Medicaid, and 40% from individuals currently in the nursing facility.

The number of individuals and the age and gender group distributions in each future year are based on population projections. Each cohort within each scenario was simulated 150 times and results were summarized by means. Costs to Medicaid are based on per user averages for each LTSS subgroup and increased annually using assumptions based on DHS forecasts.

Description of Method for Projecting LTSS Cost Growth

Our method for projecting LTSS cost growth was based on: (1) increases in average monthly and annual per users cost to Medicaid for each service each year, past and future; and (2) average number of people using each LTSS service each year, past and future. Annual Medicaid cost growth is a function of increases in annual per user cost of LTSS services times the number of people using the services.

Percentage increases for future Medicaid LTSS costs are based on cost trends taken from the DHS budget forecast and our study data. Future Medicaid LTSS payments and resulting costs are hypothetical; they depend on future Medicaid budgetary decisions which will determine what is paid for services and resulting costs.

For purposes of our study, cost to Medicaid for LTSS services each year is calculated in these steps (table references are to the main report not to this appendix):

1. Determine the number of Medicaid enrollees using services during the year and the average number of months that they use each service. Table 3.1 in the report shows the number of LTSS users overall, by age group, and by type of LTSS in the years before (average of 2018-2019) and after (2022) the COVID pandemic. Table 3.2 shows the same figures by specific services in these years.
2. Calculate the average monthly Medicaid cost per LTSS user for each type of LTSS. We calculated average monthly cost from analysis of individual claims for each person for each type of service during the year. (see Tables 3.1 and 3.2).
3. Calculate the annual per user cost to Medicaid for each LTSS service. The average annual cost per user of LTSS in a given year is the average monthly cost of the LTSS service multiplied by the number of months that enrollees use this LTSS service during the year. (See tables 3.1 and 3.2)
4. Calculate the total annual cost to Medicaid for LTSS services. Multiply the annual per user cost for LTSS for each service times the number of LTSS users of that service each year. Sum the totals for individual services across age groups and general categories of LTSS.

Example for nursing facility costs in 2022 (from Tables 3.1):

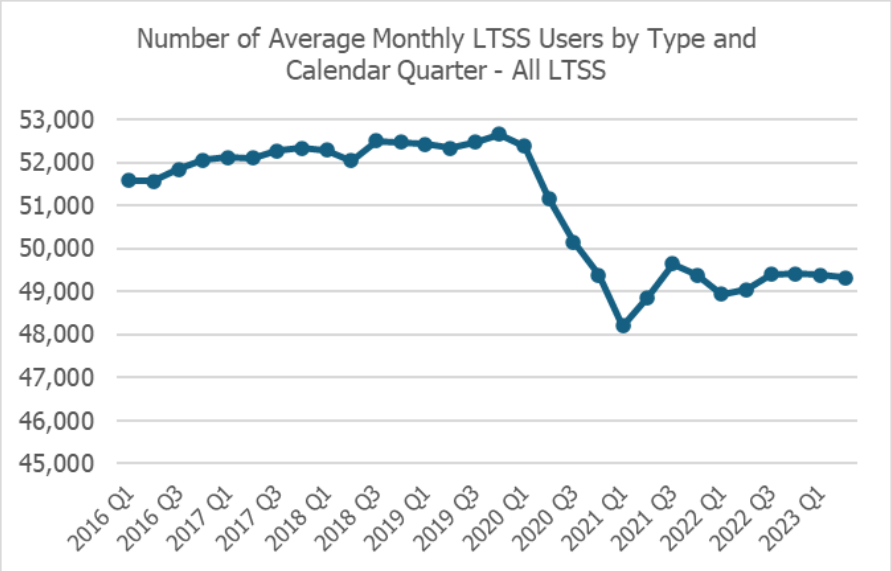
- Number of nursing facility users = 15,284
- Average months of nursing facility use per user = 7.4
- Average monthly cost to Medicaid for nursing facility care = $8,730
- Average annual cost per nursing facility = $64,199
- Total annual cost = 15,284 x $64,199 = $981,217,516

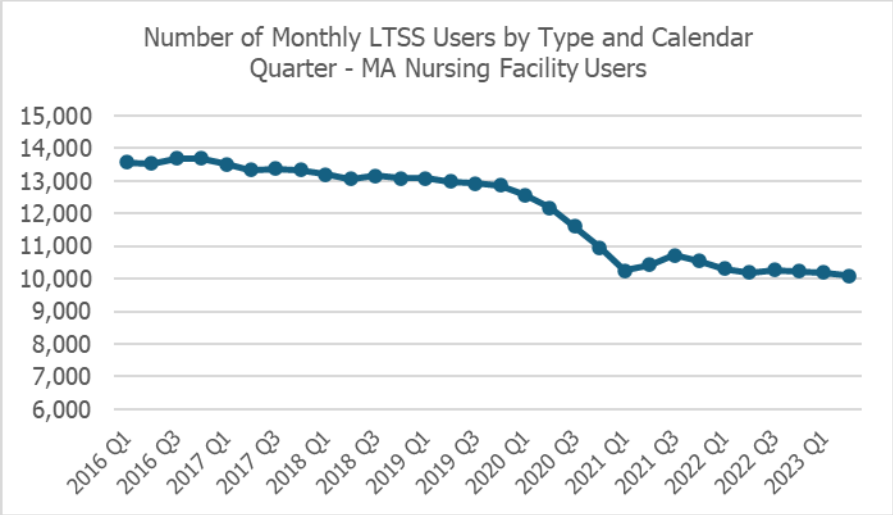
Note that these cost figures are based on number of units for service (e.g., hours or days) actually used by Medicaid enrollees and paid for by the Medicaid program. In the nursing facility example, Medicaid enrollees may not spend the full month in the nursing home. Also, annual costs are based on average nursing facility use during the year (e.g., 7.4 months in 2022) and not the full year.

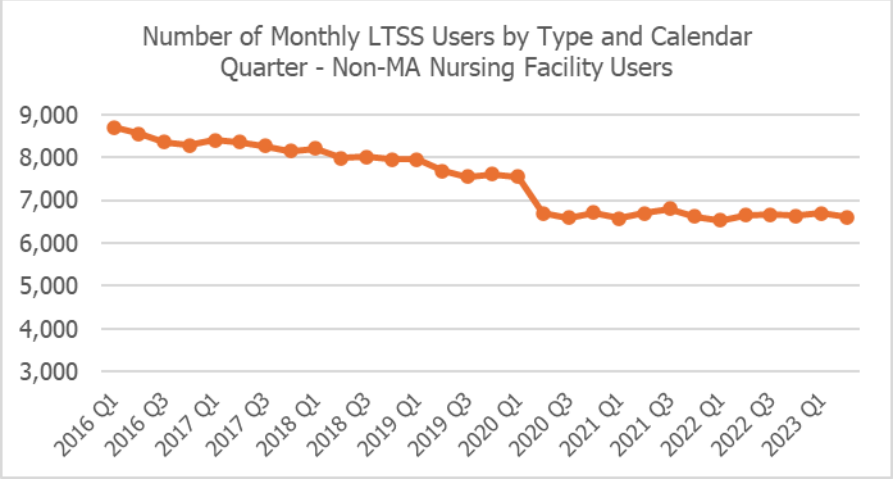
In projecting total annual Medicaid costs for LTSS in future years, we follow these steps:

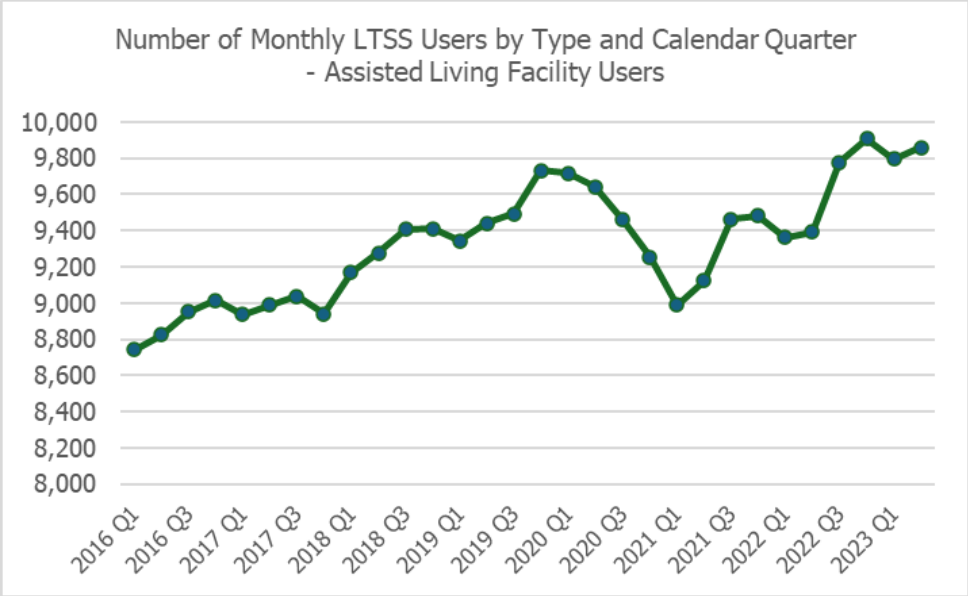
1. Calculate average monthly cost per LTSS service per user in 2022, the most recent year that we have complete figures from our Medicaid claims (see Tables 3.1 and 3.2).
2. Use historical Medicaid cost trends from our study data and from the DHS budget forecast to increase average monthly costs per LTSS user from 2022 through 2025, the starting year for our projections.
3. Develop two scenarios for projecting annual increases in average monthly cost per user for each type of service from 2025 through 2039. For simplicity, scenarios are labeled post-COVID/ 2.5% and 5.0% and Blended/ 2.5% and 5.0% [See Tables 3.4 and 5.3].
4. Project annual per person Medicaid LTSS service costs each year for each scenario according to percentage increases in Table 5.3. (See also Table 4.3)
5. Make separate projections for increases in the number of LTSS users each year from 2025 through 2039 based on growth in the older population and different patterns of future LTSS use, e.g., post-COVID and blended. (See Table 4.2)
6. Use projected Medicaid cost per user in combination with projected number of LTSS users to estimate future annual Medicaid LTSS cost growth. For each scenario:
    a. Calculate the annual projected LTSS cost per user (Table 4.3).
    b. Multiply the projected LTSS cost per user by the number of LTSS users during the year (Table 4.2).
    c. Table 4.4 shows the resulting figures for projected total annual LTSS costs based on straight-line projections.
    d. Tables 5.6 and 5.14 show resulting figures for the simulation which extends through 2039.
7. As an example, we present results for nursing facility care based on straight-line projections for the post-COVID/2.5% scenario. By 2035 projected annual nursing facility costs per user increased to $105,519 (Table 4.3), the number of annual users increased to 22,131 (Table 4.2), and projected total Medicaid LTSS costs grew to $2,335 Million (Table 4.4).

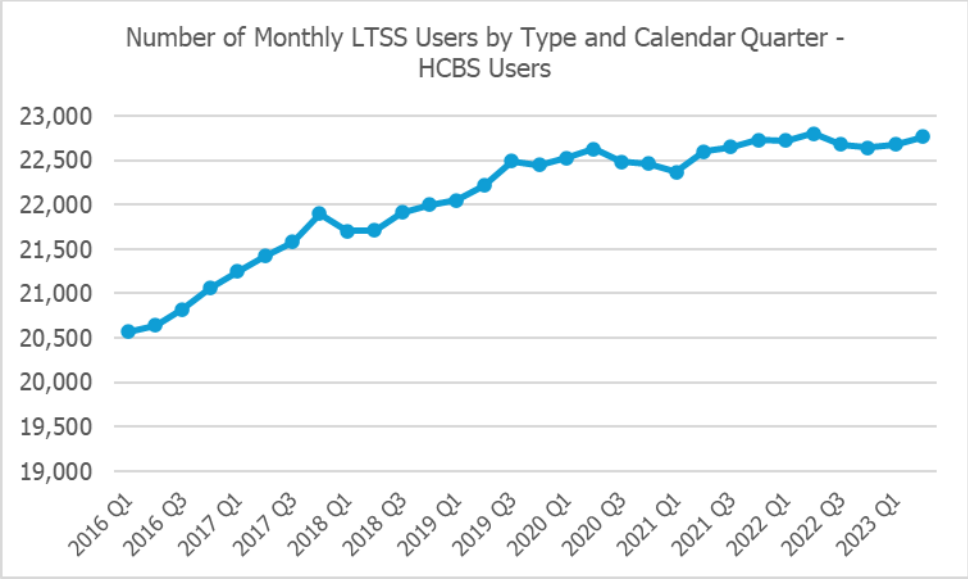
Panel A.1 Number of Average Monthly LTSS Users by Calendar Quarter











Note: HCBS = Home and community-based services Elderly Waiver (community), Alternative Care or PCA

Table A.1 Monthly Deaths/1000 LTSS Users by LTSS Type (averaged across calendar quarters)

Abbreviations
MA NF = Medicaid resident in a nursing facility
ALF = Medicaid resident in assisted living facility with EW
HCBS = HCBS EW (community), Alternative Care or PCA
Non-MA NF = Non-Medicaid resident in a nursing facility

Calendar Quarter	MA NF Deaths	MA NF Residents	MA NF Deaths /1000	ALF Deaths	ALF Residents	MA ALF Deaths/1000
2016.1	467	13,566	34	114	8,742	13
2016.2	400	13,541	30	104	8,824	12
2016.3	403	13,695	29	113	8,953	13
2016.4	481	13,689	35	128	9,015	14
2017.1	530	13,521	39	134	8,937	15
2017.2	408	13,342	31	126	8,989	14
2017.3	411	13,372	31	109	9,037	12
2017.4	444	13,330	33	134	8,939	15
2018.1	496	13,201	38	148	9,167	16
2018.2	381	13,062	29	113	9,275	12
2018.3	404	13,160	31	112	9,408	12
2018.4	439	13,092	34	146	9,413	16
2019.1	464	13,076	36	133	9,345	14
2019.2	392	12,981	30	127	9,439	13
2019.3	415	12,935	32	117	9,494	12
2019.4	456	12,868	35	157	9,734	16
2020.1	471	12,575	37	147	9,716	15
2020.2	511	12,185	42	170	9,643	18
2020.3	356	11,610	31	151	9,461	16
2020.4	569	10,960	52	220	9,253	24
2021.1	288	10,260	28	125	8,988	14
2021.2	240	10,429	23	111	9,124	12
2021.3	328	10,730	31	146	9,462	15
2021.4	386	10,551	37	181	9,484	19
2022.1	344	10,315	33	168	9,361	18
2022.2	312	10,190	31	144	9,394	15
2022.3	291	10,270	28	146	9,777	15
2022.4	377	10,235	37	174	9,908	18
2023.1	342	10,201	33	168	9,795	17
2023.2	322	10,124	32	144	9,854	15

Table A.1 (cont.) Monthly Deaths/1000 LTSS Users by LTSS Type (averaged across calendar quarters)

Year/Quarter	HCBS Deaths	HBCS Users	HCBS Death/ 1000	Non-MA NF Deaths	Non-MA NF Residents	Non-MA NF Deaths/ 1000	Total LTSS Deaths	Total LTSS	Total LTSS Deaths/ 1000
2016.1	132	20,566	6	435	8,702	50	1,149	51,576	22
2016.2	106	20,641	5	414	8,552	48	1,024	51,559	20
2016.3	105	20,823	5	404	8,366	48	1,024	51,837	20
2016.4	112	21,058	5	432	8,289	52	1,154	52,051	22
2017.1	126	21,247	6	430	8,405	51	1,221	52,110	23
2017.2	120	21,420	6	391	8,355	47	1,045	52,107	20
2017.3	111	21,584	5	386	8,274	47	1,017	52,268	19
2017.4	122	21,899	6	410	8,159	50	1,110	52,327	21
2018.1	140	21,702	6	442	8,211	54	1,225	52,282	23
2018.2	116	21,712	5	363	7,991	45	973	52,041	19
2018.3	109	21,914	5	386	8,013	48	1,012	52,494	19
2018.4	126	22,000	6	422	7,960	53	1,132	52,464	22
2019.1	111	22,048	5	409	7,952	51	1,117	52,422	21
2019.2	116	22,216	5	377	7,689	49	1,012	52,326	19
2019.3	104	22,491	5	365	7,552	48	1,002	52,471	19
2019.4	128	22,444	6	383	7,609	50	1,124	52,655	21
2020.1	133	22,529	6	406	7,552	54	1,156	52,372	22
2020.2	159	22,628	7	423	6,706	63	1,264	51,162	25
2020.3	130	22,486	6	337	6,591	51	975	50,148	19
2020.4	181	22,462	8	476	6,707	71	1,447	49,383	29
2021.1	133	22,365	6	384	6,580	58	931	48,193	19
2021.2	117	22,598	5	368	6,706	55	835	48,857	17

2021.3	130	22,648	6	322	6,801	47	926	49,642	19
2021.4	192	22,727	8	393	6,616	59	1,153	49,379	23
2022.1	176	22,719	8	352	6,534	54	1,040	48,929	21
2022.2	138	22,800	6	336	6,654	50	930	49,037	19
2022.3	147	22,680	6	324	6,668	49	909	49,395	18
2022.4	160	22,642	7	370	6,631	56	1,080	49,417	22
2023.1	142	22,680	6	362	6,702	54	1,014	49,378	21
2023.2	119	22,725	5	340	6,600	51	923	49,303	19

Table A.2 Number and Percentage of Monthly LTSS Users by Age Group, Gender and Period

Abbreviations
MA NF = Medicaid resident in a nursing facility
ALF = Medicaid resident in assisted living facility with an Elderly Waiver
HCBS = Home and community-based services Elderly Waiver (Community), Alternative Care or PCA
Non-MA NF = Non-Medicaid resident in a nursing facility

Table A.2.1 Number Monthly LTSS Users by Age Group and Period

LTSS	Age Group	Pre-COVID (2016-2019)	COVID (2020-2021)	Post-COVID (2022-2023)
MA NF	Age 65-74	1,806	1,706	1,631
	Age75-84	3,511	3,243	3,187
	Age 85+	8,169	6,213	5,411
	Total	13,486	11,163	10,228
ALF	Age 65-74	911	1,028	1,142
	Age75-84	2,833	3,135	3,443
	Age 85+	5,631	5,229	5,086
	Total	9,375	9,391	9,671
HCBS	Age 65-74	6,811	7,041	6,895
	Age75-84	9,124	9,491	9,719
	Age 85+	6,152	6,024	6,092
	Total	22,086	22,556	22,707
Non-MA NF	Age 65-74	720	623	588
	Age75-84	1,821	1,674	1,779
	Age 85+	5,726	4,485	4,267
	Total	8,268	6,782	6,633
All LTSS	Age 65-74	10,249	10,398	10,256
	Age75-84	17,289	17,544	18,128
	Age 85+	25,678	21,950	20,855
	Total	53,215	49,892	49,240

Table A.2.2. Percentage of Monthly LTSS Users by Age Group and Period

LTSS	Age Group	Pre-COVID (2016-2019)	COVID (2020-2021)	Post-COVID (2022-2023)
MA NF	Age 65-74	13%	15%	16%
	Age75-84	26%	29%	31%
	Age 85+	61%	56%	53%
	Total	100%	100%	100%
ALF	Age 65-74	10%	11%	12%
	Age75-84	30%	33%	36%
	Age 85+	60%	56%	53%
	Total	100%	100%	100%
HCBS	Age 65-74	31%	31%	30%
	Age75-84	41%	42%	43%
	Age 85+	28%	27%	27%
	Total	100%	100%	100%
Non-MA NF	Age 65-74	9%	9%	9%
	Age75-84	22%	25%	27%
	Age 85+	69%	66%	64%
	Total	100%	100%	100%
All LTSS	Age 65-74	19%	21%	21%
	Age75-84	32%	35%	37%
	Age 85+	48%	44%	42%
	Total	100%	100%	100%

Table A.2.3. Number of LTSS Users by Gender and Period

LTSS	Gender	Pre-COVID (2016-2019)	COVID (2020-2021)	Post-COVID (2022-2023)
MA NF	Male	4,108	3,646	3,412
	Female	9,371	7,512	6,813
	Total	13,479	11,157	10,225
ALF	Male	2,300	2,521	2,760
	Female	7,072	6,869	6,910
	Total	9,372	9,390	9,670
HCBS	Male	6,823	7,173	7,362
	Female	15,262	15,381	15,344
	Total	22,085	22,553	22,706
Non-MA NF	Male	3,185	2,763	2,735
	Female	5,080	4,019	3,898
	Total	8,265	6,782	6,633
All LTSS	Male	16,417	16,102	16,269
	Female	36,785	33,781	32,965
	Total	53,201	49,883	49,234

Table A.2.4. Percentage of LTSS Users by Gender and Period

LTSS	Gender	Pre-COVID (2016-2019)	COVID (2020-2021)	Post-COVID (2022-2023)
MA NF	Male	30%	33%	33%
	Female	70%	67%	67%
	Total	100%	100%	100%
ALF	Male	25%	27%	29%
	Female	75%	73%	71%
	Total	100%	100%	100%
HCBS	Male	31%	32%	32%
	Female	69%	68%	68%
	Total	100%	100%	100%
Non-MA NF	Male	39%	41%	41%
	Female	61%	59%	59%
	Total	100%	100%	100%
All LTSS	Male	31%	32%	33%
	Female	69%	68%	67%
	Total	100%	100%	100%

Table A.3 Monthly LTSS Users per Year in 2016-2023 by LTSS Category, Age, and Gender

Nursing Facility Medicaid Residents

Gender	Year	65-74	75-84	85+	Total
Male	2016	1,040	1,340	1,378	3,757
	2017	1,112	1,397	1,351	3,861
	2018	1,142	1,470	1,347	3,959
	2019	1,218	1,524	1,317	4,058
	2020	1,163	1,400	1,197	3,760
	2021	1,086	1,239	980	3,305
	2022	1,090	1,261	963	3,314
	2023	1,111	1,302	944	3,358
Female	2016	1,284	2,479	5,854	9,617
	2017	1,255	2,448	5,587	9,290
	2018	1,215	2,463	5,243	8,921
	2019	1,225	2,482	4,937	8,643
	2020	1,159	2,334	4,343	7,836
	2021	1,129	2,068	3,757	6,955
	2022	1,127	2,101	3,520	6,748
	2023	1,135	2,171	3,397	6,702
Total	2016	2,324	3,819	7,231	13,374
	2017	2,367	3,845	6,939	13,151
	2018	2,356	3,934	6,590	12,880
	2019	2,442	4,006	6,254	12,702
	2020	2,321	3,734	5,540	11,595
	2021	2,215	3,307	4,737	10,259
	2022	2,217	3,362	4,483	10,061
	2023	2,246	3,473	4,341	10,060

Assisted Living Facility Residents

Gender	Year	65-74	75-84	85+	Total
Male	2016	579	812	718	2,109
	2017	595	847	713	2,155
	2018	636	921	742	2,299
	2019	675	950	775	2,400
	2020	745	966	784	2,495
	2021	823	975	749	2,547
	2022	893	1,081	760	2,734
	2023	931	1,135	763	2,828
Female	2016	910	2,082	3,777	6,770
	2017	912	2,163	3,741	6,817
	2018	966	2,331	3,718	7,014
	2019	987	2,415	3,699	7,101
	2020	1,015	2,410	3,597	7,022
	2021	1,052	2,326	3,337	6,716
	2022	1,070	2,483	3,322	6,875
	2023	1,068	2,609	3,320	6,997
Total	2016	1,490	2,894	4,495	8,879
	2017	1,507	3,010	4,454	8,971
	2018	1,601	3,252	4,460	9,313
	2019	1,662	3,365	4,474	9,501
	2020	1,760	3,377	4,381	9,517
	2021	1,875	3,301	4,086	9,263
	2022	1,963	3,563	4,083	9,609
	2023	1,999	3,744	4,083	9,826

HCBS - Elderly Waiver – Community, Alternative Care or PCA

Gender	Year	65-74	75-84	85+	Total
Male	2016	2,647	2,380	1,017	6,044
	2017	2,845	2,466	1,048	6,359
	2018	2,947	2,541	1,080	6,569
	2019	3,049	2,625	1,105	6,779
	2020	3,080	2,666	1,130	6,876
	2021	3,229	2,619	1,133	6,981
	2022	3,369	2,655	1,175	7,199
	2023	3,467	2,702	1,179	7,348
Female	2016	5,669	5,315	3,154	14,138
	2017	5,913	5,467	3,173	14,553
	2018	5,985	5,550	3,042	14,577
	2019	6,172	5,674	2,989	14,835
	2020	6,177	5,782	3,016	14,974
	2021	6,129	5,857	2,990	14,976
	2022	6,120	6,052	2,961	15,133
	2023	6,110	6,197	2,945	15,252
Total	2016	8,316	7,695	4,170	20,182
	2017	8,758	7,932	4,221	20,912
	2018	8,932	8,091	4,122	21,146
	2019	9,222	8,299	4,094	21,614
	2020	9,257	8,448	4,145	21,851
	2021	9,358	8,475	4,124	21,957
	2022	9,489	8,707	4,136	22,332
	2023	9,577	8,899	4,124	22,600

Nursing Facility – Non-Medicaid Residents

Gender	Year	65-74	75-84	85+	Total
Male	2016	485	968	16,26	3,079
	2017	525	989	16,20	3,135
	2018	537	972	15,73	3,082
	2019	578	953	15,52	3,083
	2020	520	874	13,72	2,766
	2021	550	903	12,54	2,707
	2022	496	941	12,61	2,698
	2023	499	999	12,83	2,781
Female	2016	471	1,331	3,543	5,345
	2017	467	1,319	3,326	5,111
	2018	486	1,275	3,147	4,908
	2019	458	1,206	2,901	4,565
	2020	400	1,063	2,610	4,073
	2021	438	1,063	2,423	3,924
	2022	428	1,073	2,399	3,900
	2023	439	1,076	2,343	3,858
Total	2016	956	2,298	5,169	8,424
	2017	992	2,309	4,946	8,247
	2018	1,023	2,247	4,720	7,990
	2019	1,036	2,159	4,453	7,648
	2020	920	1,937	3,982	6,839
	2021	988	1,966	3,677	6,630
	2022	925	2,014	3,660	6,598
	2023	938	2,075	3,627	6,639

Table A.4 Minnesota Total Population by Age and Gender

Gender	Year	65-74	75-84	85+	Total
Male	2016	226,843	105,731	41,358	373,932
	2017	237,014	109,258	42,074	388,346
	2018	245,564	114,772	43,031	403,367
	2019	255,839	119,359	44,007	419,205
	2020	269,806	119,246	40,327	429,379
	2021	281,218	121,670	40,661	443,549
	2022	286,520	131,042	40,968	458,530
	2023	294,083	138,430	42,031	474,544
Female	2016	244,500	133,240	78,018	455,758
	2017	255,183	136,355	78,461	469,999
	2018	264,231	142,249	78,647	485,127
	2019	275,220	147,354	78,603	501,177
	2020	283,769	144,839	73,351	501,959
	2021	295,234	147,507	73,282	516,023
	2022	300,717	157,574	73,295	531,586
	2023	309,060	165,561	74,082	548,703
Total	2016	471,343	238,971	119,376	829,690
	2017	492,197	245,613	120,535	858,345
	2018	509,795	257,021	121,678	888,494
	2019	531,059	266,713	122,610	920,382
	2020	553,575	264,085	113,678	931,338
	2021	576,452	269,177	113,943	959,572
	2022	587,237	288,616	114,263	990,116
	2023	603,143	303,991	116,113	1,023,247

Table A.5 Rate of Monthly LTSS Use per 1,000 People in the Population by LTSS Setting and Program, Age, and Gender by Year

Nursing Facility – Medicaid Residents

Gender	Year	65-74	75-84	85+	Total
Male	2016	4.6	12.7	33.3	10.0
	2017	4.7	12.8	32.1	9.9
	2018	4.6	12.8	31.3	9.8
	2019	4.8	12.8	29.9	9.7
	2020	4.3	11.7	29.7	8.8
	2021	3.9	10.2	24.1	7.5
	2022	3.8	9.6	23.5	7.2
	2023	3.8	9.4	22.5	7.1
Female	2016	5.3	18.6	75.0	21.1
	2017	4.9	18.0	71.2	19.8
	2018	4.6	17.3	66.7	18.4
	2019	4.5	16.8	62.8	17.2
	2020	4.1	16.1	59.2	15.6
	2021	3.8	14.0	51.3	13.5
	2022	3.7	13.3	48.0	12.7
	2023	3.7	13.1	45.8	12.2
Total	2016	4.9	16.0	60.6	16.1
	2017	4.8	15.7	57.6	15.3
	2018	4.6	15.3	54.2	14.5
	2019	4.6	15.0	51.0	13.8
	2020	4.2	14.1	48.7	12.4
	2021	3.8	12.3	41.6	10.7
	2022	3.8	11.6	39.2	10.2
	2023	3.7	11.4	37.4	9.8

Assisted Living Facility

Gender	Year	65-74	75-84	85+	Total
Male	2016	2.6	7.7	17.3	5.6
	2017	2.5	7.7	16.9	5.5
	2018	2.6	8.0	17.3	5.7
	2019	2.6	8.0	17.6	5.7
	2020	2.8	8.1	19.4	5.8
	2021	2.9	8.0	18.4	5.7
	2022	3.1	8.2	18.6	6.0
	2023	3.2	8.2	18.1	6.0
Female	2016	3.7	15.6	48.4	14.9
	2017	3.6	15.9	47.7	14.5
	2018	3.7	16.4	47.3	14.5
	2019	3.6	16.4	47.1	14.2
	2020	3.6	16.6	49.0	14.0
	2021	3.6	15.8	45.5	13.0
	2022	3.6	15.8	45.3	12.9
	2023	3.5	15.8	44.8	12.8
Total	2016	3.2	12.1	37.7	10.7
	2017	3.1	12.3	37.0	10.5
	2018	3.1	12.7	36.7	10.5
	2019	3.1	12.6	36.5	10.3
	2020	3.2	12.8	38.5	10.2
	2021	3.3	12.3	35.9	9.7
	2022	3.3	12.3	35.7	9.7
	2023	3.3	12.3	35.2	9.6

HCBS - Elderly Waiver – Community, Alternative Care or PCA

Gender	Year	65-74	75-84	85+	Total
Male	2016	11.7	22.5	24.6	16.2
	2017	12.0	22.6	24.9	16.4
	2018	12.0	22.1	25.1	16.3
	2019	11.9	22.0	25.1	16.2
	2020	11.4	22.4	28.0	16.0
	2021	11.5	21.5	27.9	15.7
	2022	11.8	20.3	28.7	15.7
	2023	11.8	19.5	28.0	15.5
Female	2016	23.2	39.9	40.4	31.0
	2017	23.2	40.1	40.4	31.0
	2018	22.6	39.0	38.7	30.0
	2019	22.4	38.5	38.0	29.6
	2020	21.8	39.9	41.1	29.8
	2021	20.8	39.7	40.8	29.0
	2022	20.4	38.4	40.4	28.5
	2023	19.8	37.4	39.8	27.8
Total	2016	17.6	32.2	34.9	24.3
	2017	17.8	32.3	35.0	24.4
	2018	17.5	31.5	33.9	23.8
	2019	17.4	31.1	33.4	23.5
	2020	16.7	32.0	36.5	23.5
	2021	16.2	31.5	36.2	22.9
	2022	16.2	30.2	36.2	22.6
	2023	15.9	29.3	35.5	22.1

Nursing Facility – Non-Medicaid Residents

Gender	Year	65-74	75-84	85+	Total
Male	2016	2.1	9.2	39.3	8.2
	2017	2.2	9.1	38.5	8.1
	2018	2.2	8.5	36.6	7.6
	2019	2.3	8.0	35.3	7.4
	2020	1.9	7.3	34.0	6.4
	2021	2.0	7.4	30.8	6.1
	2022	1.7	7.2	30.8	5.9
	2023	1.7	7.2	30.5	5.9
Female	2016	1.9	10.0	45.4	11.7
	2017	1.8	9.7	42.4	10.9
	2018	1.8	9.0	40.0	10.1
	2019	1.7	8.2	36.9	9.1
	2020	1.4	7.3	35.6	8.1
	2021	1.5	7.2	33.1	7.6
	2022	1.4	6.8	32.7	7.3
	2023	1.4	6.5	31.6	7.0

Table A.6 Pre-COVID Period (2018-2019) Average Annual Users and Medicaid Payments by LTSS Service, Age, and Gender

LTSS Service	Age Category	Total Payments per Year	Total Months of LTSS Use per Year	People using the Service during the Year	Months per User	Payment per Month	Payment per User per Year
Access	Male 65-74	$2,171,240	12,567	2,828	4.44	$173	$768
	Male 75-84	$1,639,730	11,489	2,618	4.39	$143	$627
	Male 85+	$704,429	5,361	1,383	3.88	$131	$509
	Male Total	$4,515,399	29,417	6,829	4.31	$154	$661
	Female 65-74	$3,459,934	23,337	4,722	4.94	$148	$732
	Female 75-84	$3,108,175	23,029	4,914	4.69	$135	$632
	Female 85+	$1,476,403	13,947	4,062	3.43	$106	$363
	Female Total	$8,044,512	60,313	13,698	4.40	$133	$587
	All 65-74	$5,631,174	35,904	7,550	4.76	$157	$746
	All 75-84	$4,747,905	34,518	7,532	4.58	$138	$630
	All 85+	$2,180,832	19,308	5,445	3.55	$113	$400
	All Users	$12,559,910	89,729	20,527	4.37	$140	$612
Case Mgmt	Male 65-74	$2,676,159	9,581	1,715	5.59	$279	$1,562
	Male 75-84	$2,987,007	11,528	1,906	6.05	$259	$1,568
	Male 85+	$1,747,235	7,368	1,297	5.68	$237	$1,348
	Male Total	$7,410,401	28,476	4,918	5.79	$260	$1,507
	Female 65-74	$4,812,404	17,950	2,926	6.14	$268	$1,646
	Female 75-84	$6,619,409	27,208	4,284	6.35	$243	$1,545
	Female 85+	$6,885,742	30,451	5,097	5.98	$226	$1,351
	Female Total	$18,317,555	75,608	12,307	6.14	$242	$1,489
	All 65-74	$7,488,563	27,530	4,641	5.94	$272	$1,615
	All 75-84	$9,606,417	38,736	6,190	6.26	$248	$1,552
	All 85+	$8,632,977	37,818	6,394	5.92	$228	$1,351
	All Users	$25,727,956	104,084	17,224	6.04	$247	$1,494
Assisted Living Facility	Male 65-74	$17,505,681	7,510	948	7.92	$2,330	$18,459
	Male 75-84	$27,125,150	10,940	1,307	8.37	$2,479	$20,756
	Male 85+	$21,782,538	9,022	1,105	8.16	$2,413	$19,695

LTSS Service	Age Category	Total Payments per Year	Total Months of LTSS Use per Year	People using the Service during the Year	Months per User	Payment per Month	Payment per User per Year
	Male Total	$66,413,369	27,471	3,360	8.18	$2,416	$19,757
	Female 65-74	$27,576,709	11,468	1,394	8.23	$2,404	$19,788
	Female 75-84	$70,356,142	27,973	3,203	8.73	$2,514	$21,959
	Female 85+	$114,061,510	44,271	4,936	8.97	$2,577	$23,112
	Female Total	$211,994,360	83,711	9,532	8.78	$2,532	$22,236
	All 65-74	$45,082,389	18,977	2,342	8.11	$2,375	$19,249
	All 75-84	$97,481,292	38,912	4,510	8.63	$2,504	$21,608
	All 85+	$135,844,047	53,293	6,041	8.82	$2,549	$22,487
	All Users	$278,407,729	111,182	12,892	8.62	$2,503	$21,589
In-Home Care	Male 65-74	$14,427,105	28,319	2,562	11.06	$509	$5,633
	Male 75-84	$16,474,149	29,776	2,292	12.99	$553	$7,181
	Male 85+	$7,093,900	12,679	955	13.28	$559	$7,427
	Male Total	$37,995,153	70,774	5,808	12.19	$537	$6,539
	Female 65-74	$28,532,295	61,488	5,316	11.57	$464	$5,366
	Female 75-84	$31,069,475	65,020	5,056	12.86	$478	$6,144
	Female 85+	$13,924,251	33,749	2,682	12.58	$413	$5,198
	Female Total	$73,526,021	160,256	13,054	12.28	$459	$5,632
	All 65-74	$42,959,400	89,807	7,877	11.40	$478	$5,453
	All 75-84	$47,543,623	94,795	7,348	12.90	$501	$6,468
	All 85+	$21,018,151	46,428	3,637	12.77	$453	$5,784
	All Users	$111,521,174	231,030	18,862	12.25	$483	$5,911
Home Health	Male 65-74	$6,861,139	8,366	1,516	5.52	$820	$4,531
	Male 75-84	$7,888,985	9,546	1,531	6.24	$826	$5,155
	Male 85+	$3,751,256	4,742	834	5.69	$791	$4,501
	Male Total	$18,501,380	22,654	3,880	5.84	$817	$4,770
	Female 65-74	$13,622,826	16,679	2,866	5.82	$817	$4,755
	Female 75-84	$17,831,205	21,639	3,512	6.16	$824	$5,078
	Female 85+	$13,057,791	15,511	2,882	5.38	$842	$4,530
	Female Total	$44,511,823	53,829	9,259	5.81	$827	$4,808

LTSS Service	Age Category	Total Payments per Year	Total Months of LTSS Use per Year	People using the Service during the Year	Months per User	Payment per Month	Payment per User per Year
	All 65-74	$20,483,965	25,045	4,381	5.72	$818	$4,677
	All 75-84	$25,720,190	31,185	5,043	6.18	$825	$5,102
	All 85+	$16,809,048	20,253	3,715	5.45	$830	$4,523
	All Users	$63,013,203	76,483	13,139	5.82	$824	$4,797
PCA	Male 65-74	$40,883,439	16,768	1,779	9.43	$2,438	$22,986
	Male 75-84	$33,899,101	14,094	1,386	10.17	$2,405	$24,461
	Male 85+	$17,303,409	6,677	605	11.04	$2,592	$28,605
	Male Total	$92,085,950	37,539	3,770	9.96	$2,453	$24,429
	Female 65-74	$78,261,819	33,736	3,470	9.72	$2,319	$22,547
	Female 75-84	$71,917,614	30,026	2,894	10.38	$2,395	$24,852
	Female 85+	$42,413,410	15,427	1,442	10.70	$2,749	$29,424
	Female Total	$192,592,843	79,188	7,805	10.15	$2,432	$24,672
	All 65-74	$119,145,259	50,504	5,249	9.62	$2,359	$22,696
	All 75-84	$105,816,715	44,120	4,280	10.31	$2,398	$24,726
	All 85+	$59,716,819	22,103	2,047	10.80	$2,702	$29,181
	All Users	$284,678,792	116,727	11,575	10.09	$2,439	$24,593
Hospice	Male 65-74	$5,243,756	1,024	386	2.66	$5,115	$13,628
	Male 75-84	$9,553,835	1,726	591	2.93	$5,528	$16,196
	Male 85+	$10,229,813	1,888	667	2.83	$5,403	$15,280
	Male Total	$25,027,404	4,638	1,644	2.83	$5,386	$15,216
	Female 65-74	$7,104,980	1,324	475	2.79	$5,366	$14,988
	Female 75-84	$15,661,463	2,900	999	2.91	$5,387	$15,651
	Female 85+	$42,698,541	7,696	2,373	3.24	$5,539	$17,967
	Female Total	$65,464,984	11,920	3,846	3.10	$5,483	$16,999
	All 65-74	$12,348,736	2,348	861	2.74	$5,257	$14,379
	All 75-84	$25,215,298	4,626	1,590	2.91	$5,439	$15,847
	All 85+	$52,928,354	9,584	3,039	3.15	$5,512	$17,380
	All Users	$90,492,388	16,557	5,490	3.02	$5,456	$16,465
	Male 65-74	$87,258,429	13,374	1,966	6.80	$6,517	$44,322

LTSS Service	Age Category	Total Payments per Year	Total Months of LTSS Use per Year	People using the Service during the Year	Months per User	Payment per Month	Payment per User per Year
Nursing Facility	Male 75-84	$110,884,663	16,752	2,284	7.33	$6,618	$48,537
	Male 85+	$93,570,970	14,673	1,971	7.44	$6,383	$47,509
	Male Total	$291,714,062	44,799	6,221	7.20	$6,511	$46,886
	Female 65-74	$99,927,471	14,544	2,325	6.26	$6,870	$42,979
	Female 75-84	$198,968,141	29,450	4,061	7.25	$6,756	$49,003
	Female 85+	$370,488,572	57,649	7,096	8.12	$6,434	$52,270
	Female Total	$669,384,185	101,643	13,482	7.54	$6,590	$49,680
	All 65-74	$187,185,899	27,918	4,291	6.51	$6,701	$43,599
	All 75-84	$309,852,805	46,202	6,345	7.28	$6,706	$48,836
	All 85+	$464,059,542	72,321	9,067	7.98	$6,423	$51,234
	All Users	$961,098,246	146,441	19,703	7.43	$6,566	$48,799
Total any Use	Male 65-74	$177,026,947	97,508	6,031	16.17	$1,815	$29,351
	Male 75-84	$210,452,621	105,850	5,977	17.71	$1,987	$35,200
	Male 85+	$156,183,549	62,408	4,000	15.60	$2,503	$39,051
	Male Total	$543,663,117	265,765	16,008	16.60	$2,045	$33,956
	Female 65-74	$263,298,438	180,524	9,906	18.23	$1,458	$26,581
	Female 75-84	$415,531,624	227,244	12,139	18.72	$1,828	$34,232
	Female 85+	$605,006,220	218,699	14,274	15.32	$2,768	$42,409
	Female Total	$1,283,836,282	626,466	36,318	17.25	$2,050	$35,354
	All 65-74	$440,325,385	278,032	15,937	17.45	$1,583	$27,629
	All 75-84	$625,984,246	333,093	18,116	18.39	$1,879	$34,552
	All 85+	$761,189,769	281,106	18,273	15.38	$2,709	$41,673
	All Users	$1,827,499,400	892,231	52,325	17.05	$2,048	$34,926

Table A.7 Post-COVID Period (2022) Average Annual Users and Medicaid Payments by LTSS Service , Age, and Gender

LTSS Service	Age Category	Total Payments per Year	Total Months of LTSS Use per Year	People using the Service during the Year	Months per User	Payment per Month	Payment per User per Year
Access	Male 65-74	$2,047,844	10,706	2,661	4.02	$191	$770
	Male 75-84	$1,486,081	8,517	2,078	4.10	$174	$715
	Male 85+	$684,480	4,094	1,039	3.94	$167	$659
	Male Total	$4,218,405	23,317	5,778	4.04	$181	$730
	Female 65-74	$3,115,678	17,810	3,973	4.48	$175	$784
	Female 75-84	$2,802,079	17,935	4,130	4.34	$156	$678
	Female 85+	$1,264,513	9,339	2,865	3.26	$135	$441
	Female Total	$7,182,269	45,084	10,968	4.11	$159	$655
	All 65-74	$5,163,521	28,516	6,634	4.30	$181	$778
	All 75-84	$4,288,160	26,452	6,208	4.26	$162	$691
	All 85+	$1,948,993	13,433	3,904	3.44	$145	$499
	All Users	$11,400,674	68,401	16,746	4.08	$167	$681
Case Mgmt	Male 65-74	$2,867,462	9,465	1,848	5.12	$303	$1,552
	Male 75-84	$2,773,623	10,000	1,786	5.60	$277	$1,553
	Male 85+	$1,405,298	5,685	1,066	5.33	$247	$1,318
	Male Total	$7,046,383	25,150	4,700	5.35	$280	$1,499
	Female 65-74	$4,475,288	15,114	2,731	5.53	$296	$1,639
	Female 75-84	$6,503,307	24,029	4,054	5.93	$271	$1,604
	Female 85+	$5,576,653	22,378	4,213	5.31	$249	$1,324
	Female Total	$16,555,248	61,521	10,998	5.59	$269	$1,505
	All 65-74	$7,342,750	24,579	4,579	5.37	$299	$1,604
	All 75-84	$9,276,930	34,029	5,840	5.83	$273	$1,589
	All 85+	$6,981,951	28,063	5,279	5.32	$249	$1,323
	All Users	$23,601,631	86,671	15,698	5.52	$272	$1,503

LTSS Service	Age Category	Total Payments per Year	Total Months of LTSS Use per Year	People using the Service during the Year	Months per User	Payment per Month	Payment per User per Year
Assisted Living Facility	Male 65-74	$32,415,320	10,493	1,278	8.21	$3,089	$25,364
	Male 75-84	$40,802,866	12,684	1,441	8.80	$3,217	$28,316
	Male 85+	$29,246,137	9,032	1,036	8.72	$3,238	$28,230
	Male Total	$102,464,324	32,209	3,755	8.58	$3,181	$27,287
	Female 65-74	$39,575,965	12,698	1,531	8.29	$3,117	$25,850
	Female 75-84	$95,655,783	29,427	3,296	8.93	$3,251	$29,022
	Female 85+	$130,709,454	39,663	4,416	8.98	$3,296	$29,599
	Female Total	$265,941,202	81,788	9,243	8.85	$3,252	$28,772
	All 65-74	$71,991,285	23,191	2,809	8.26	$3,104	$25,629
	All 75-84	$136,458,650	42,111	4,737	8.89	$3,240	$28,807
	All 85+	$159,955,591	48,695	5,452	8.93	$3,285	$29,339
	All Users	$368,405,526	113,997	12,998	8.77	$3,232	$28,343
In-Home Care	Male 65-74	$17,689,451	25,449	2,477	10.27	$695	$7,141
	Male 75-84	$21,297,843	27,014	2,220	12.17	$788	$9,594
	Male 85+	$9,834,392	12,745	919	13.87	$772	$10,701
	Male Total	$48,821,686	65,208	5,616	11.61	$749	$8,693
	Female 65-74	$32,598,865	51,217	4,687	10.93	$636	$6,955
	Female 75-84	$39,279,414	60,435	4,822	12.53	$650	$8,146
	Female 85+	$17,870,612	28,187	2,325	12.12	$634	$7,686
	Female Total	$89,748,891	139,839	11,834	11.82	$642	$7,584
	All 65-74	$50,288,316	76,666	7,164	10.70	$656	$7,020
	All 75-84	$60,577,257	87,449	7,042	12.42	$693	$8,602
	All 85+	$27,705,005	40,932	3,244	12.62	$677	$8,540
	All Users	$138,570,577	205,047	17,450	11.75	$676	$7,941
Home Health	Male 65-74	$5,091,278	6,636	1,221	5.43	$767	$4,170
	Male 75-84	$5,824,109	7,449	1,249	5.96	$782	$4,663
	Male 85+	$2,819,980	3,443	625	5.51	$819	$4,512

LTSS Service	Age Category	Total Payments per Year	Total Months of LTSS Use per Year	People using the Service during the Year	Months per User	Payment per Month	Payment per User per Year
	Male Total	$13,735,367	17,528	3,095	5.66	$784	$4,438
	Female 65-74	$9,003,673	11,520	2,089	5.51	$782	$4,310
	Female 75-84	$13,944,398	17,645	2,946	5.99	$790	$4,733
	Female 85+	$9,259,532	10,838	2,078	5.22	$854	$4,456
	Female Total	$32,207,603	40,003	7,113	5.62	$805	$4,528
	All 65-74	$14,094,951	18,156	3,310	5.49	$776	$4,258
	All 75-84	$19,768,507	25,094	4,195	5.98	$788	$4,712
	All 85+	$12,079,512	14,281	2,703	5.28	$846	$4,469
	All Users	$45,942,969	57,531	10,208	5.64	$799	$4,501
PCA	Male 65-74	$52,730,148	17,967	1,944	9.24	$2,935	$27,125
	Male 75-84	$41,470,438	13,635	1,349	10.11	$3,041	$30,742
	Male 85+	$22,966,373	7,300	649	11.25	$3,146	$35,387
	Male Total	$117,166,960	38,902	3,942	9.87	$3,012	$29,723
	Female 65-74	$94,645,249	33,252	3,471	9.58	$2,846	$27,267
	Female 75-84	$93,163,159	31,384	2,958	10.61	$2,968	$31,495
	Female 85+	$53,561,139	16,305	1,502	10.86	$3,285	$35,660
	Female Total	$241,369,547	80,941	7,931	10.21	$2,982	$30,434
	All 65-74	$147,375,397	51,219	5,415	9.46	$2,877	$27,216
	All 75-84	$134,633,597	45,019	4,307	10.45	$2,991	$31,259
	All 85+	$76,527,512	23,605	2,151	10.97	$3,242	$35,578
	All Users	$358,536,507	119,843	11,873	10.09	$2,992	$30,198
Hospice	Male 65-74	$6,459,849	984	348	2.83	$6,565	$18,563
	Male 75-84	$12,349,477	1,701	534	3.19	$7,260	$23,126
	Male 85+	$13,635,760	1,908	607	3.14	$7,147	$22,464
	Male Total	$32,445,087	4,593	1,489	3.08	$7,064	$21,790
	Female 65-74	$8,083,677	1,219	418	2.92	$6,631	$19,339
	Female 75-84	$21,549,414	3,092	958	3.23	$6,969	$22,494

LTSS Service	Age Category	Total Payments per Year	Total Months of LTSS Use per Year	People using the Service during the Year	Months per User	Payment per Month	Payment per User per Year
	Female 85+	$51,217,001	6,950	1,975	3.52	$7,369	$25,933
	Female Total	$80,850,091	11,261	3,351	3.36	$7,180	$24,127
	All 65-74	$14,543,526	2,203	766	2.88	$6,602	$18,986
	All 75-84	$33,898,891	4,793	1,492	3.21	$7,073	$22,720
	All 85+	$64,852,761	8,858	2,582	3.43	$7,321	$25,117
	All Users	$113,295,178	15,854	4,840	3.28	$7,146	$23,408
Nursing Facility	Male 65-74	$107,079,490	12,524	1,855	6.75	$8,550	$57,725
	Male 75-84	$119,216,667	13,874	1,902	7.29	$8,593	$62,680
	Male 85+	$85,145,140	10,053	1,345	7.47	$8,470	$63,305
	Male Total	$311,441,298	36,451	5,102	7.14	$8,544	$61,043
	Female 65-74	$117,711,616	13,185	2,045	6.45	$8,928	$57,561
	Female 75-84	$217,255,171	24,345	3,334	7.30	$8,924	$65,164
	Female 85+	$334,813,456	38,416	4,803	8.00	$8,715	$69,709
	Female Total	$669,780,243	75,946	10,182	7.46	$8,819	$65,781
	All 65-74	$224,791,107	25,709	3,900	6.59	$8,744	$57,639
	All 75-84	$336,471,838	38,219	5,236	7.30	$8,804	$64,261
	All 85+	$419,958,596	48,469	6,148	7.88	$8,664	$68,308
	All Users	$981,221,541	112,397	15,284	7.35	$8,730	$64,199
Total any Use	Male 65-74	$226,380,844	94,224	6,540	14.41	$2,403	$34,615
	Male 75-84	$245,221,105	94,874	5,819	16.30	$2,585	$42,141
	Male 85+	$165,737,561	54,260	3,479	15.60	$3,055	$47,639
	Male Total	$637,339,510	243,358	15,838	15.37	$2,619	$40,241
	Female 65-74	$309,210,011	156,015	9,731	16.03	$1,982	$31,776
	Female 75-84	$490,152,724	208,292	11,934	17.45	$2,353	$41,072
	Female 85+	$604,272,360	172,076	11,748	14.65	$3,512	$51,436
	Female Total	$1,403,635,094	536,383	33,413	16.05	$2,617	$42,009
	All 65-74	$535,590,855	250,239	16,271	15.38	$2,140	$32,917

LTSS Service	Age Category	Total Payments per Year	Total Months of LTSS Use per Year	People using the Service during the Year	Months per User	Payment per Month	Payment per User per Year
	All 75-84	$735,373,829	303,166	17,753	17.08	$2,426	$41,423
	All 85+	$770,009,920	226,336	15,227	14.86	$3,402	$50,569
	All Users	$2,040,974,604	779,741	49,251	15.83	$2,618	$41,440

Table A.8 Projected Number of LTSS Users by Age and Type of LTSS

Scenario	Type of LTSS	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Blended	All Users	57971	59855	61755	63430	65128	66851	68596	70357	71897	73460	75054
	Age 65-74	19447	19792	20137	20035	19930	19822	19711	19597	19222	18844	18461
	Age75-84	22645	23671	24703	25658	26617	27581	28548	29517	30192	30868	31546
	Age 85+	15846	16368	16900	17743	18609	19496	20410	21341	22613	23914	25248
	Nursing Facility	17738	18703	19691	20697	21734	22801	23899	25025	26166	27339	28547
	Assisted Living	15073	15448	15820	16200	16583	16969	17357	17746	18130	18518	18912
	In Home Care	20921	21690	22469	23084	23703	24326	24954	25584	26038	26491	26945
	PCA	14204	14563	14922	15152	15381	15608	15834	16058	16161	16262	16360
Post-COVID	All Users	57971	59524	61083	62388	63692	64999	66304	67602	68614	69615	70613
	Age 65-74	19447	19833	20220	20159	20095	20028	19957	19883	19544	19199	18849
	Age75-84	22645	23623	24603	25502	26401	27302	28203	29101	29707	30311	30915
	Age 85+	15846	16047	16250	16739	17231	17724	18223	18720	19494	20266	21039
	Nursing Facility	17738	18200	18664	19112	19560	20009	20459	20907	21317	21724	22131
	Assisted Living	15073	15473	15874	16278	16683	17088	17495	17900	18280	18658	19036
	In Home Care	20921	21521	22123	22558	22991	23424	23856	24286	24542	24794	25044
	PCA	14204	14598	14993	15260	15527	15793	16058	16321	16465	16606	16745

Table A.9 Transition Pattern Between LTSS Subgroups Observed in the Data

LTSS Subgroup	Death	EWC	EWR	MA NF	MA Non-LTSS	MA PCA w/o Waiver	NON-MA AC	Non-MA NF	NON-MA NON-LTSS
EWC	26%	0%	34%	26%	12%	2%	0%	0%	0%
EWR	38%	36%	0%	20%	6%	0%	0%	0%	0%
MA NF	51%	11%	16%	0%	21%	0%	0%	0%	0%
MA Non-LTSS	11%	34%	11%	34%	0%	8%	1%	0%	0%
MA PCA w/o Waiver	14%	39%	1%	6%	39%	0%	0%	0%	0%
NON-MA AC	16%	4%	9%	6%	17%	2%	0%	20%	26%
Non-MA NF	20%	0%	0%	5%	0%	0%	1%	0%	75%
NON-MA NON-LTSS	19%	2%	4%	1%	7%	0%	3%	64%	0%

MA NF = Medicaid enrolled and residing in a Nursing Facility. EWR = Elderly Waiver Residential (primarily assisted living). EWC = Elderly Waiver living in Community setting. AC = Alternative Care. PCA = Personal Car Assistant not enrolled in a waiver program. NOT-MA NF = not Medicaid enrolled while residing in a Nursing Facility. LTSS = Long Term Services and Supports.

Figure A 1. Elderly Waiver Community to Death Time to Transition Distribution

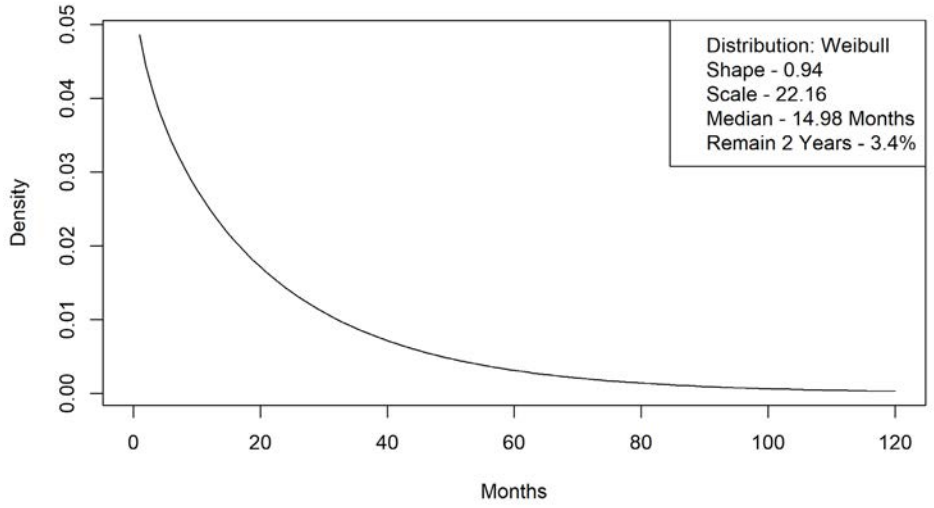


Figure A 2. Elderly Waiver Community to Elderly Waiver Residential Time to Transition Distribution

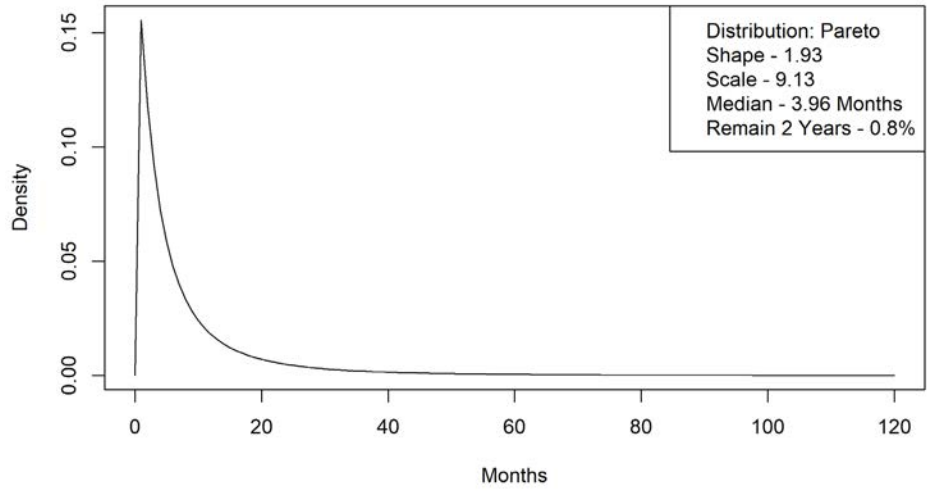


Figure A 3. Elderly Waiver Community to Medicaid Nursing Facility Time to Transition Distribution

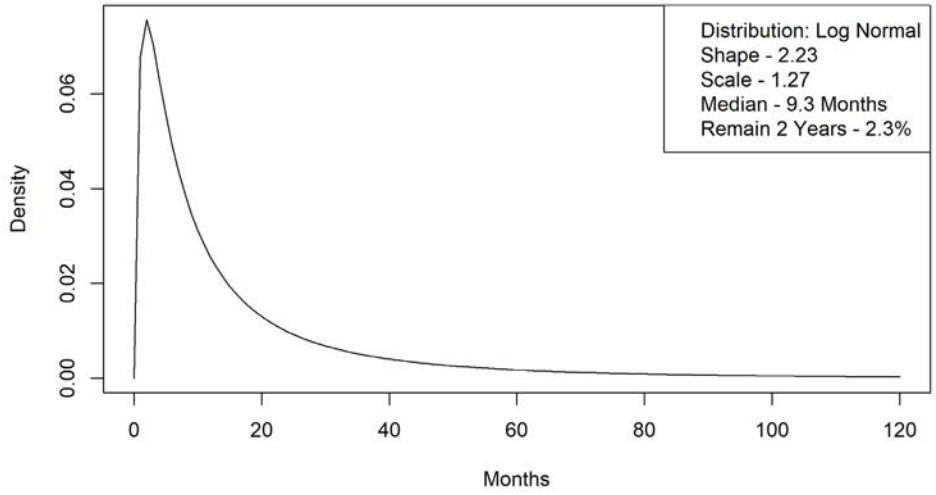


Figure A 4. Elderly Waiver Community to Medicaid without LTSS Time to Transition Distribution

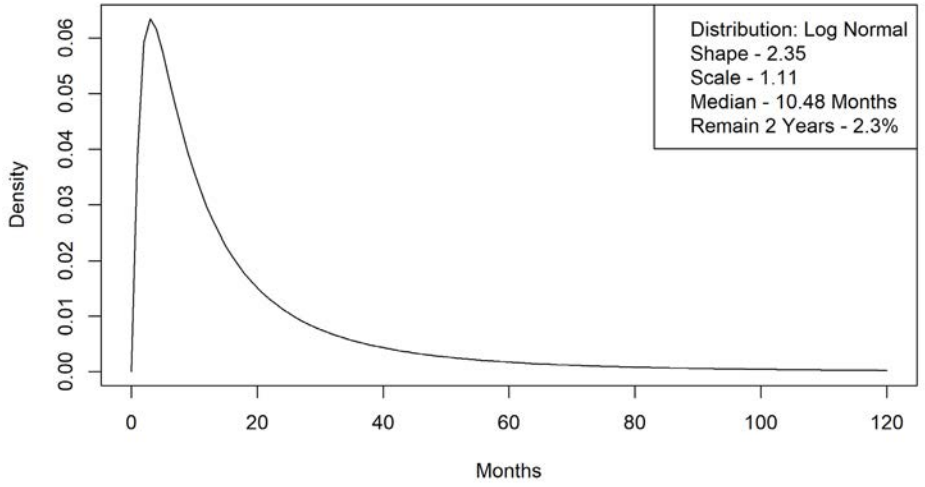


Figure A 5. Elderly Waiver Community to Personal Care Assistant without Waiver Time to Transition Distribution

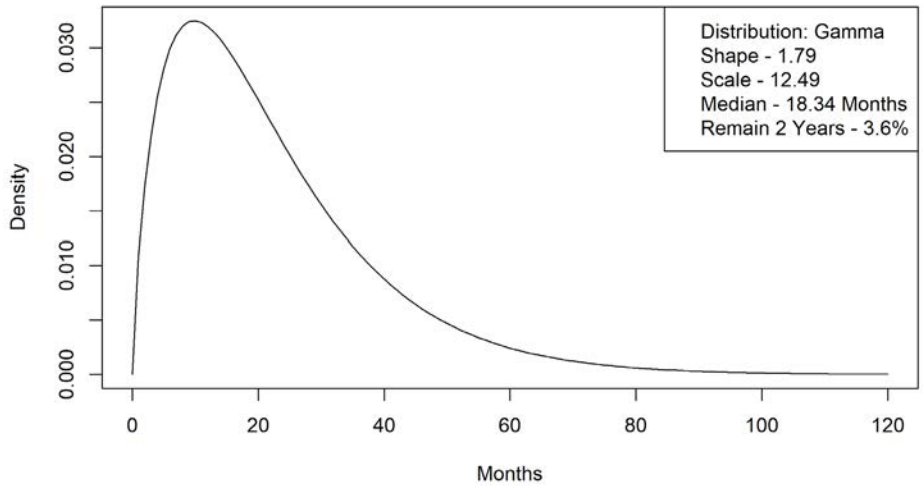


Figure A 6. Elderly Waiver Community to Alternative Care Time to Transition Distribution

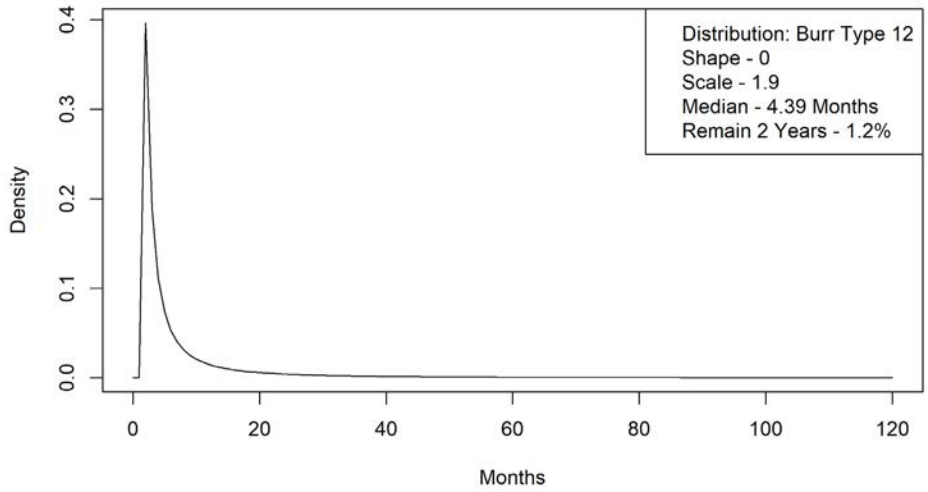


Figure A 7. Elderly Waiver Residential to Death Time to Transition Distribution

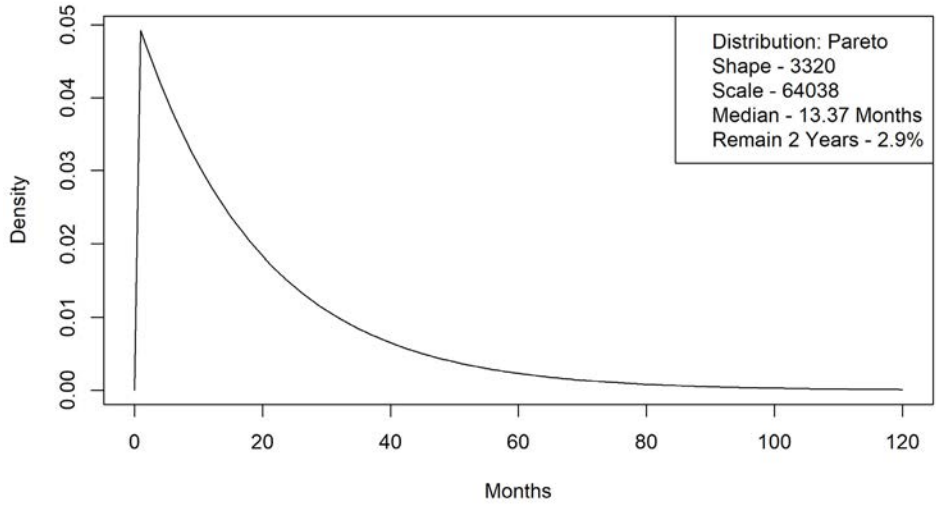


Figure A 8. Elderly Waiver Residential to Elderly Waiver Community Time to Transition Distribution

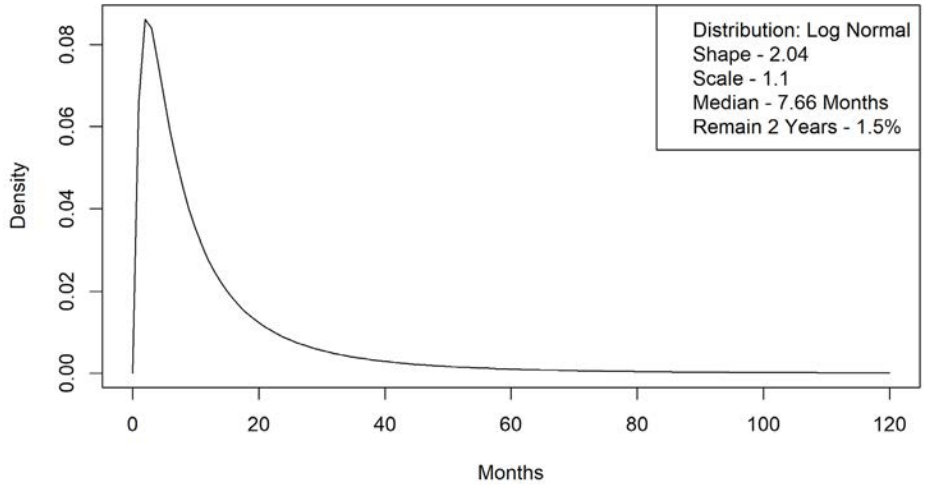


Figure A 9. Elderly Waiver Residential to Medicaid Nursing Facility Time to Transition Distribution

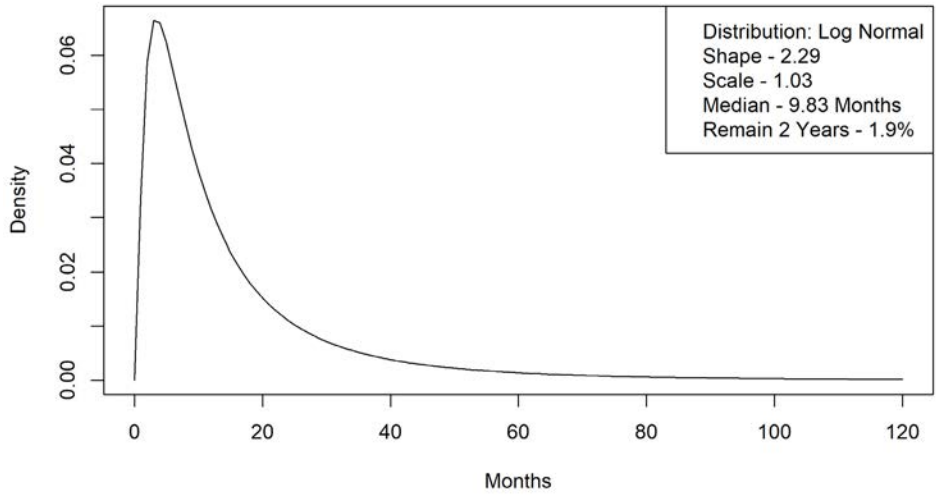


Figure A 10. Elderly Waiver Residential to Medicaid without LTSS Time to Transition Distribution

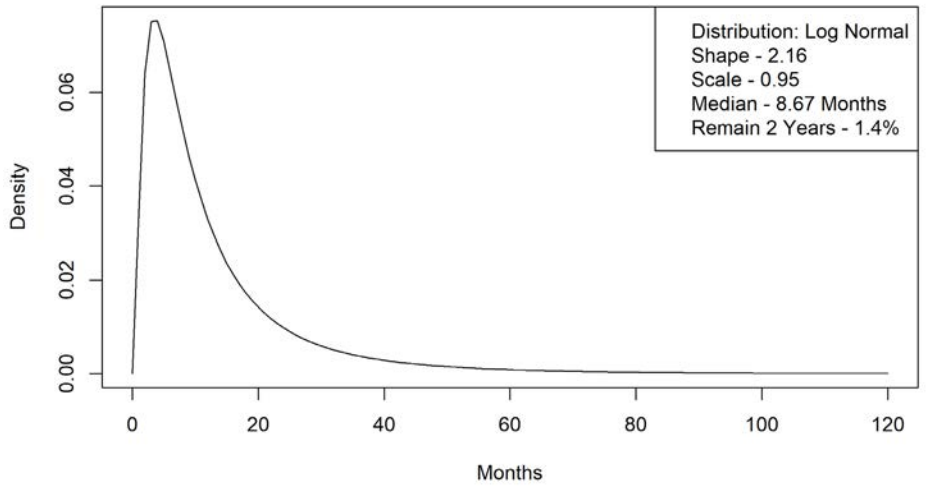


Figure A 11. Medicaid Nursing Facility (91+ Day Stay) to Death Time to Transition Distribution

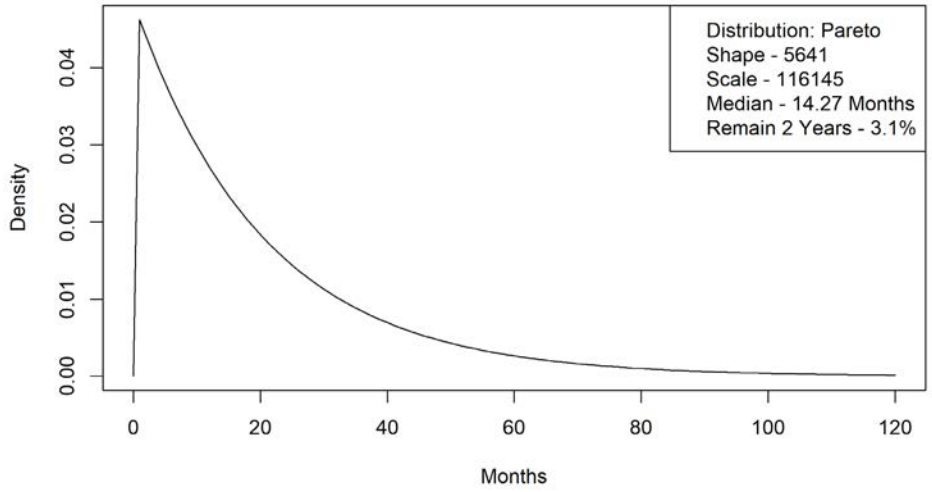


Figure A 12. Medicaid Nursing Facility (91+ Day Stay) to Elderly Waiver Community Time to Transition Distribution

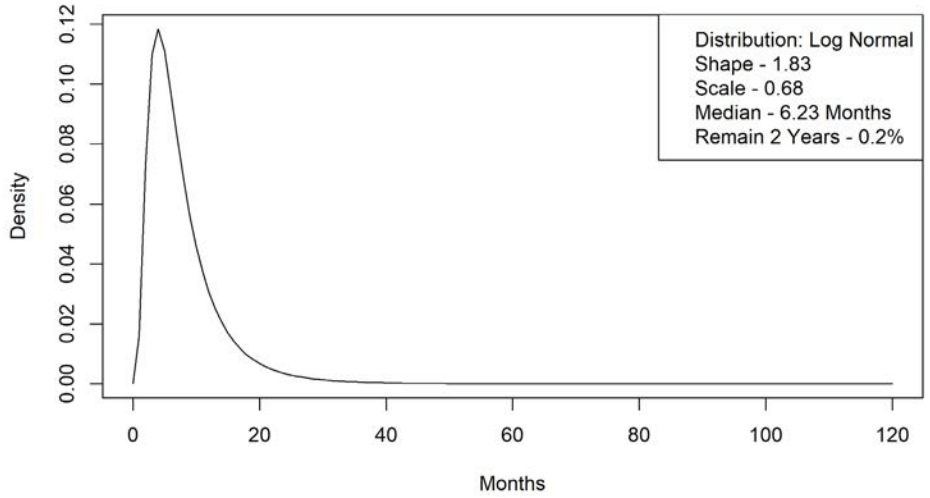


Figure A 13. Medicaid Nursing Facility (91+ Day Stay) to Elderly Waiver Residential Time to Transition Distribution

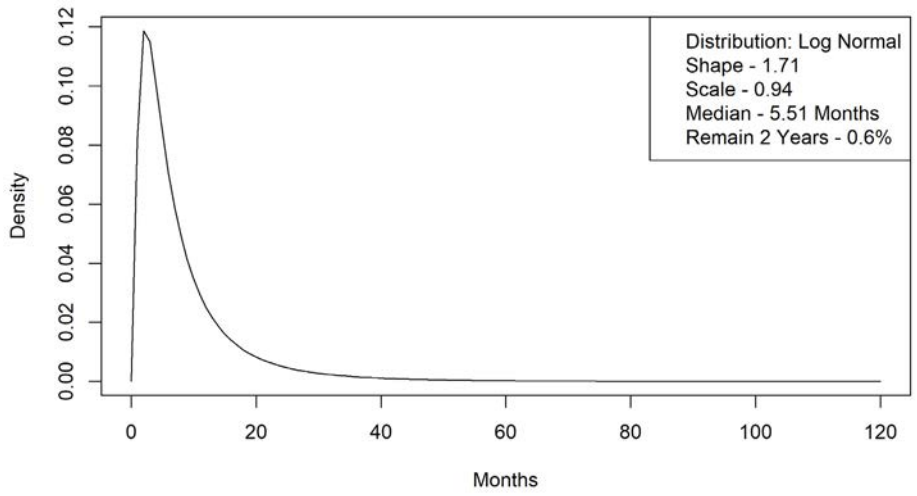


Figure A 14. Medicaid Nursing Facility (91+ Day Stay) to Medicaid without LTSS Time to Transition Distribution

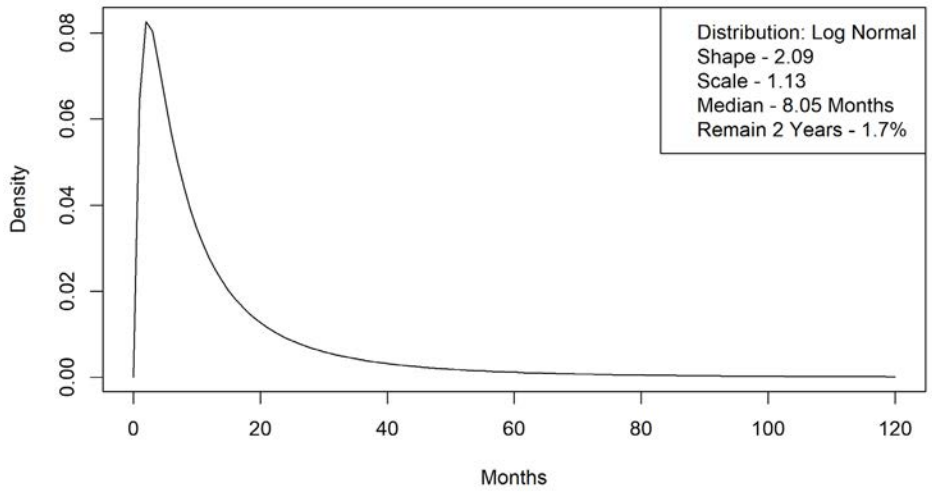


Figure A 15. Medicaid Nursing Facility (91+ Day Stay) to Personal Care Assistant without a Waiver Time to Transition Distribution

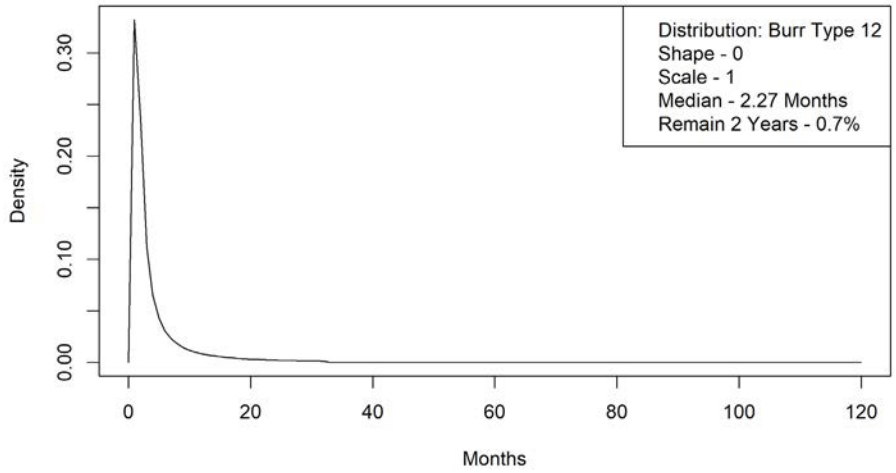


Figure A 16. Medicaid Nursing Facility (91+ Day Stay) to Alternative Care Time to Transition Distribution

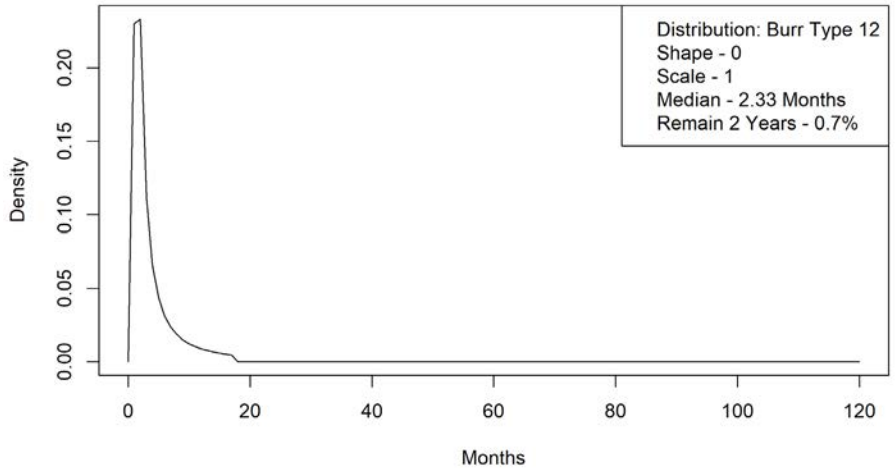


Figure A 17. Medicaid without LTSS to Death Time to Transition Distribution

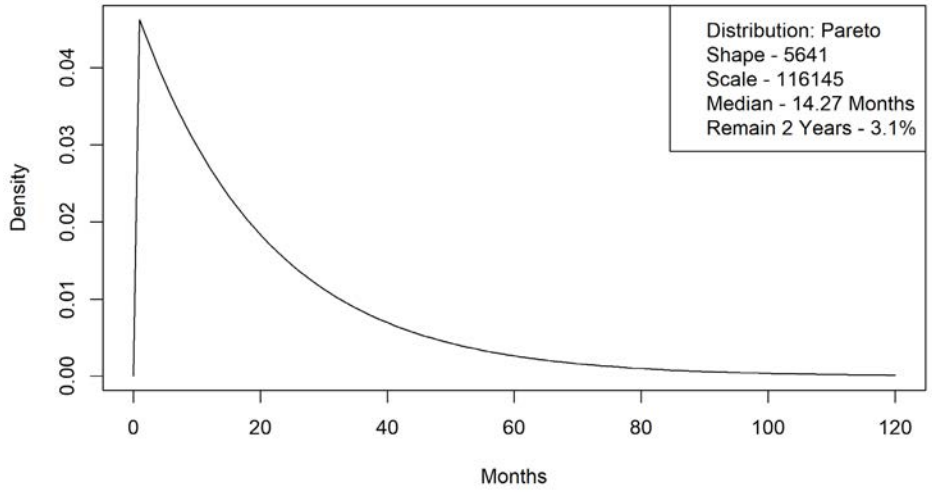


Figure A 18. Medicaid without LTSS to Elderly Waiver Community Time to Transition Distribution

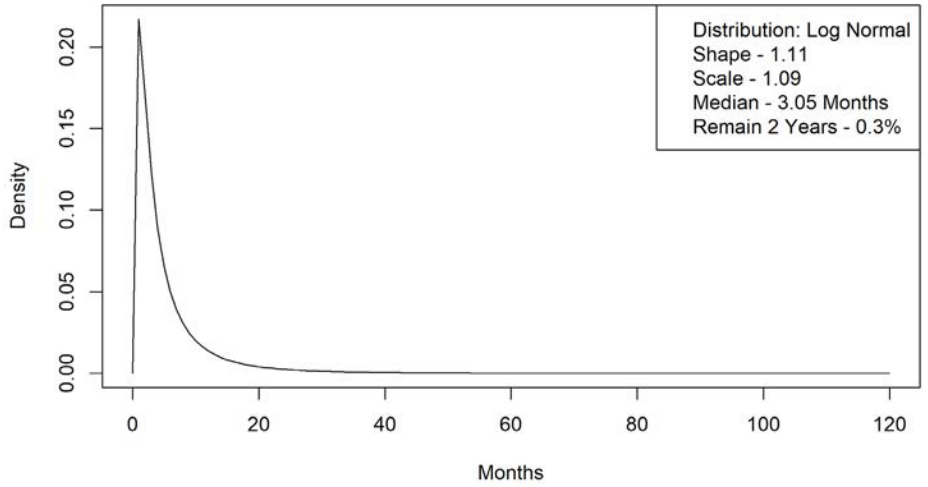


Figure A 19. Medicaid without LTSS to Elderly Waiver Residential Time to Transition Distribution

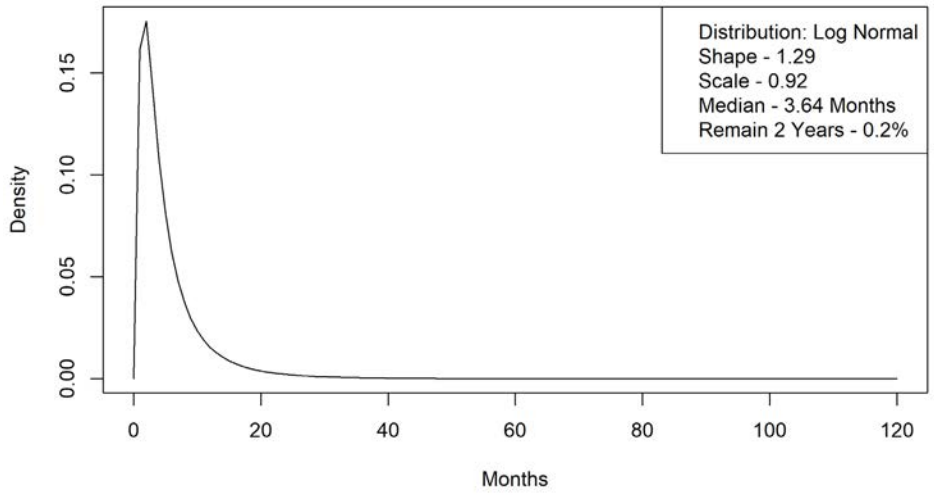


Figure A 20. Medicaid without LTSS to Medicaid Nursing Facility Time to Transition Distribution

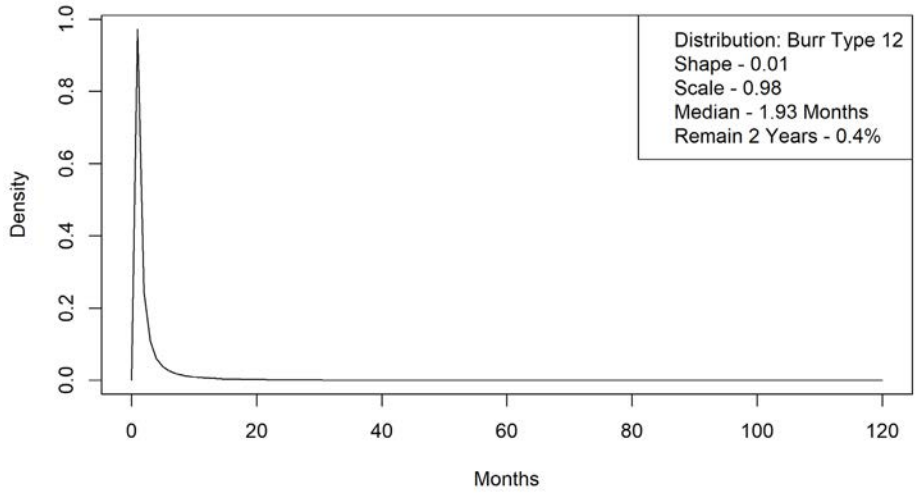


Figure A 21. Medicaid without LTSS to Personal Care Assistant without a Waiver Time to Transition Distribution

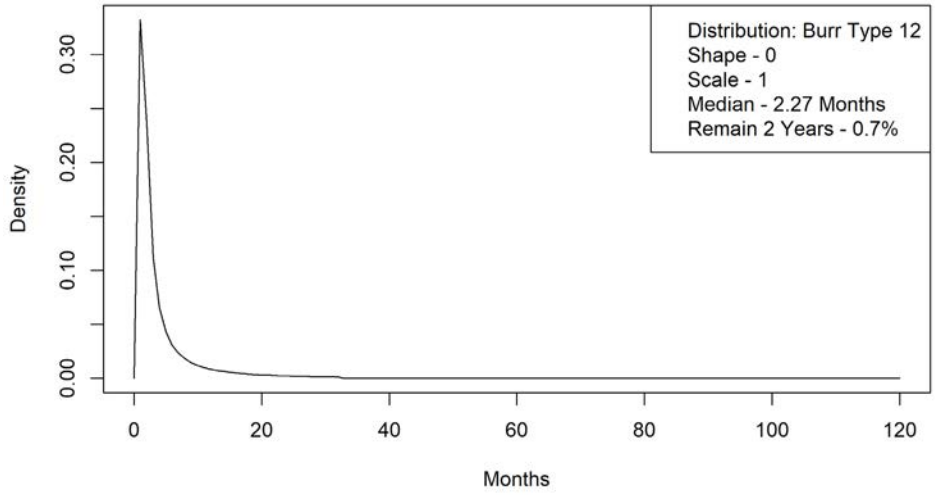


Figure A 22. Medicaid without LTSS to Alternative Care Time to Transition Distribution

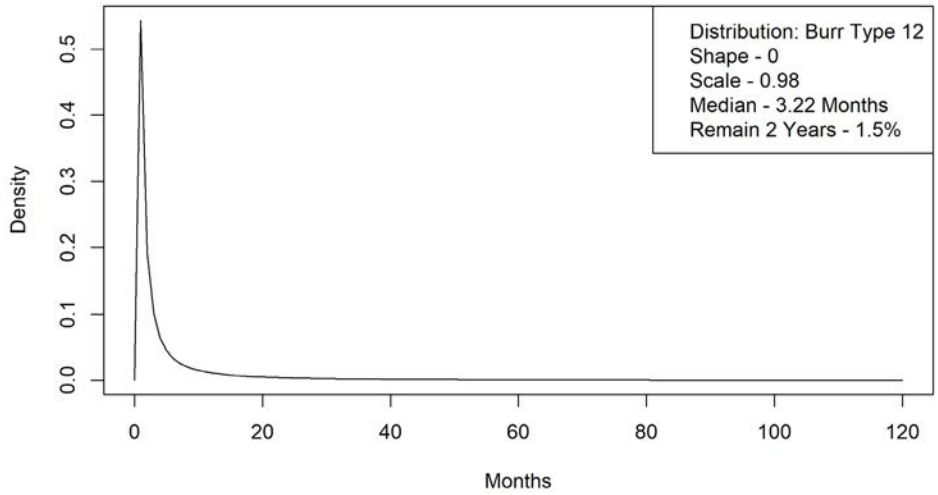


Figure A 23 Personal Care Assistant without a Waiver to Death Time to Transition Distribution

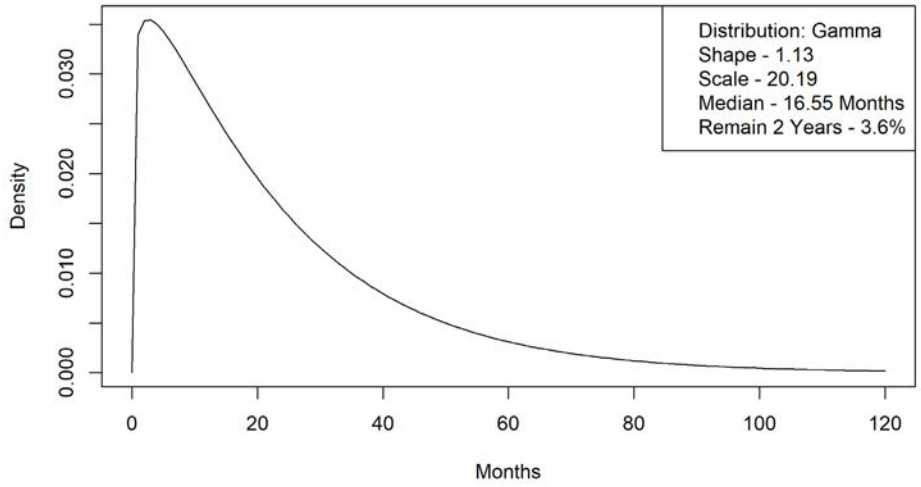


Figure A 24 Personal Care Assistant without a Waiver to Elderly Waiver Community Time to Transition Distribution

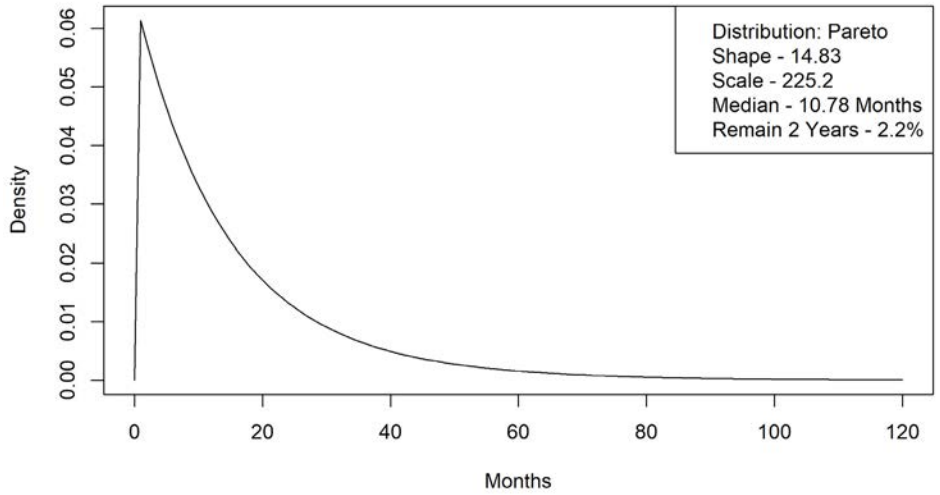


Figure A 25 Personal Care Assistant without a Waiver to Elderly Waiver Residential Time to Transition Distribution

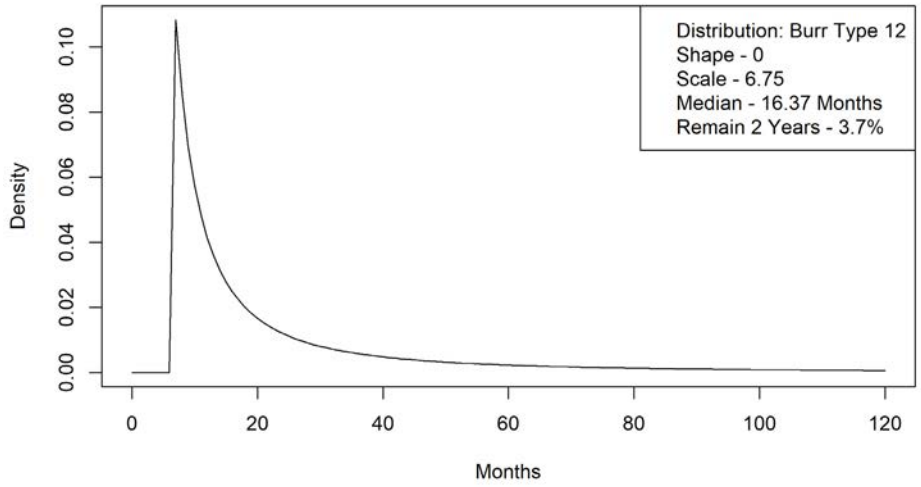


Figure A 26 Personal Care Assistant without a Waiver to Medicaid without LTSS Time to Transition Distribution

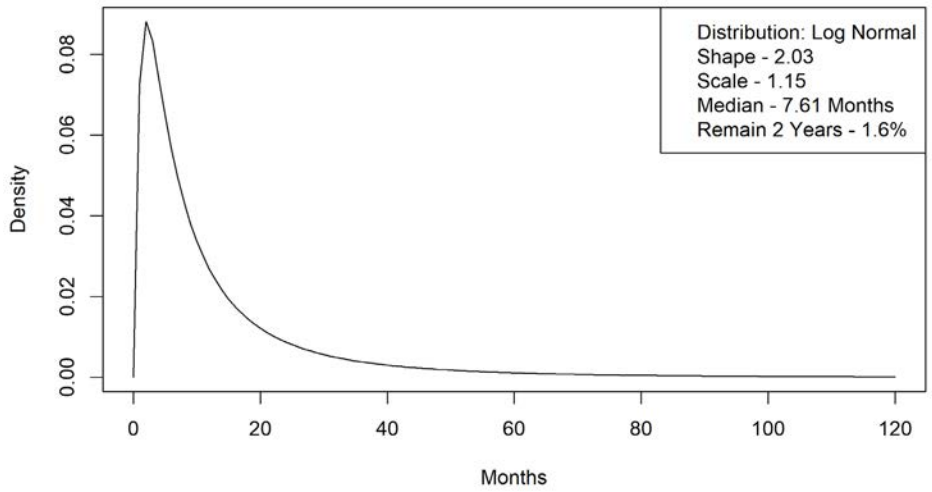


Figure A 27 Personal Care Assistant without a Waiver to Alternative Care Time to Transition Distribution

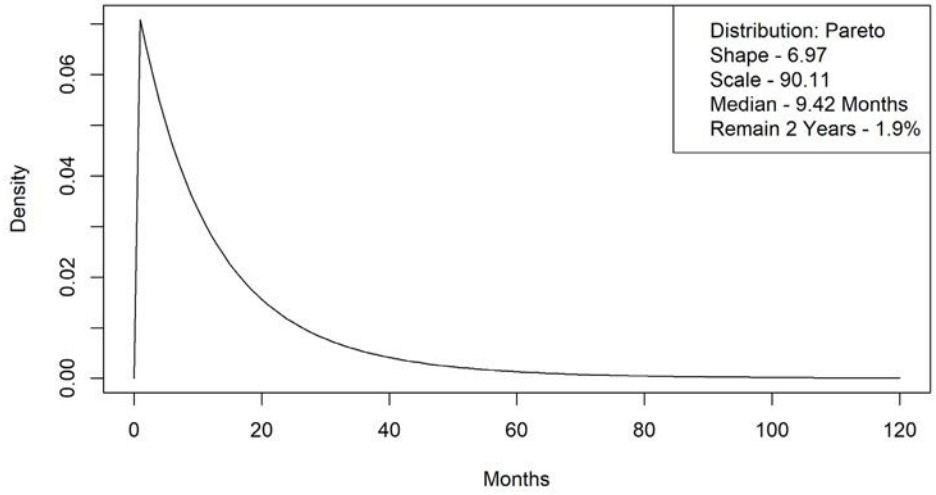


Figure A 28 Alternative Care to Death Time to Transition Distribution

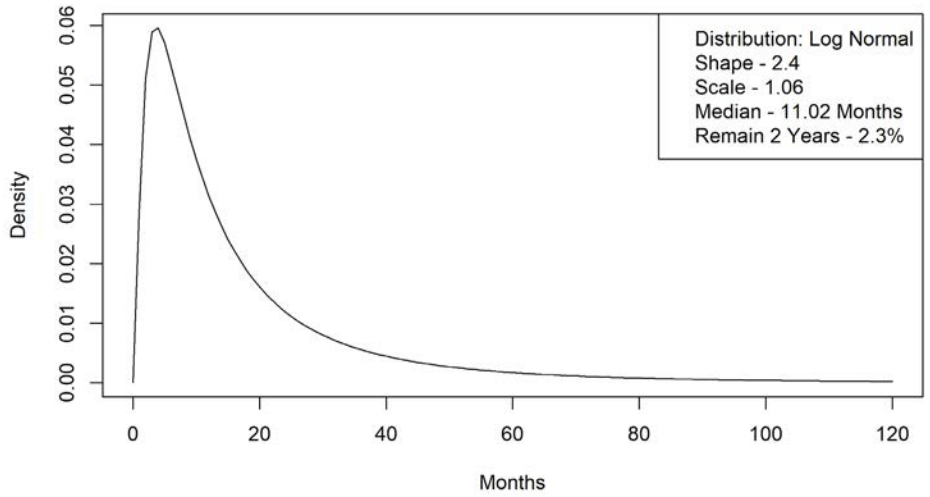


Figure A 29 Alternative Care Time to Elderly Waiver Community Time to Transition Distribution

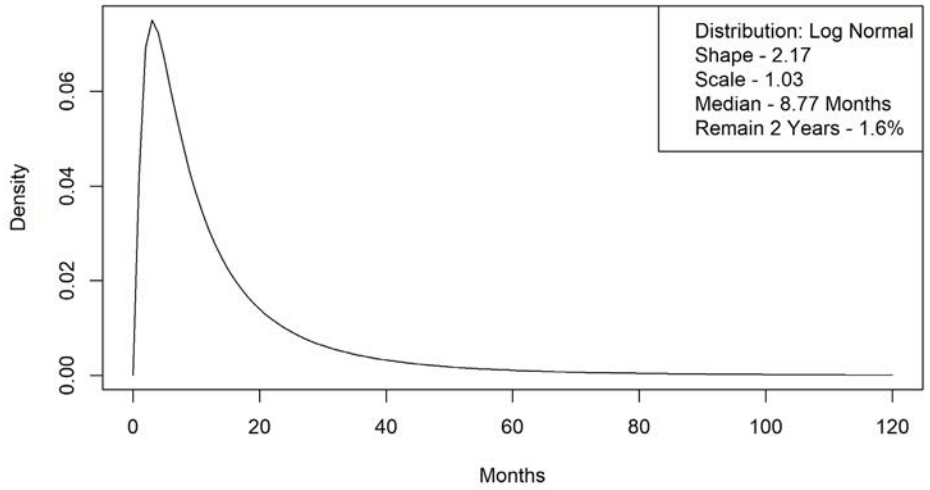


Figure A 30 Alternative Care Time to Elderly Waiver Residential Time to Transition Distribution

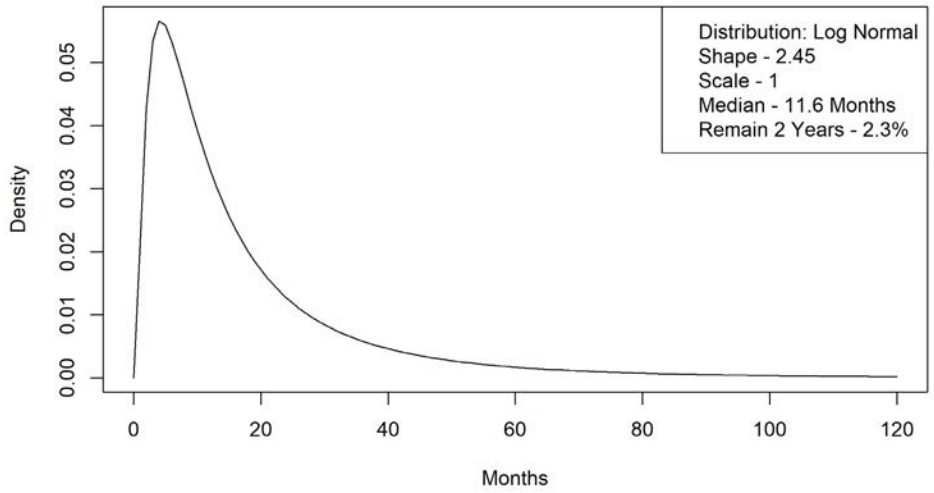


Figure A 31 Alternative Care Time to Medicaid Nursing Facility Time to Transition Distribution

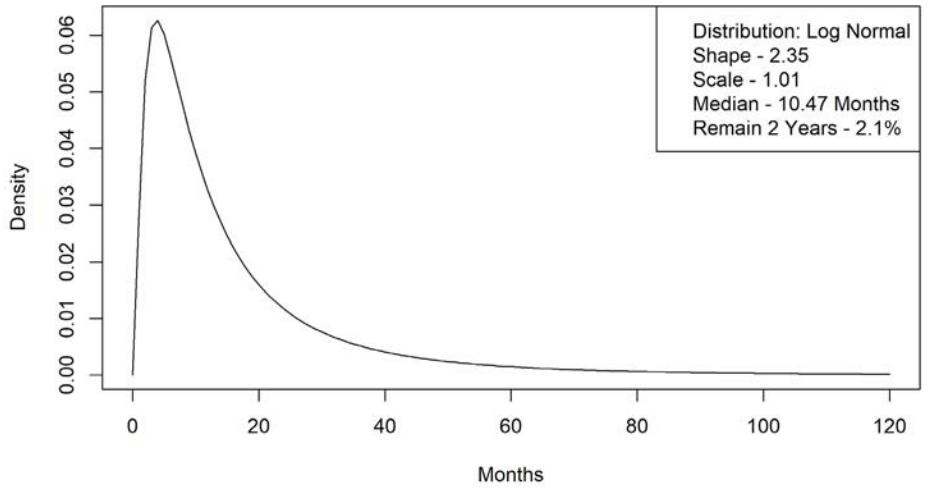


Figure A 32 Alternative Care Time to Medicaid without LTSS Time to Transition Distribution

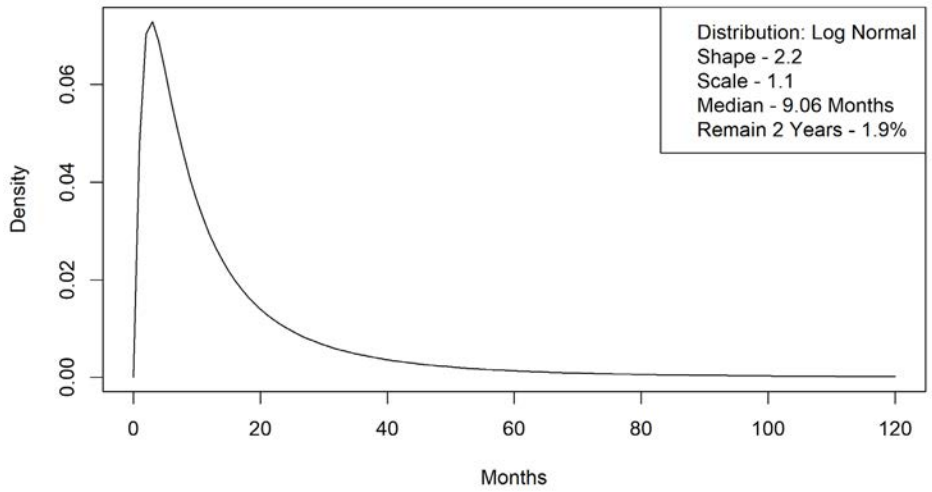


Figure A 33 Alternative Care Time to Personal Care Assistant without Waiver Time to Transition Distribution

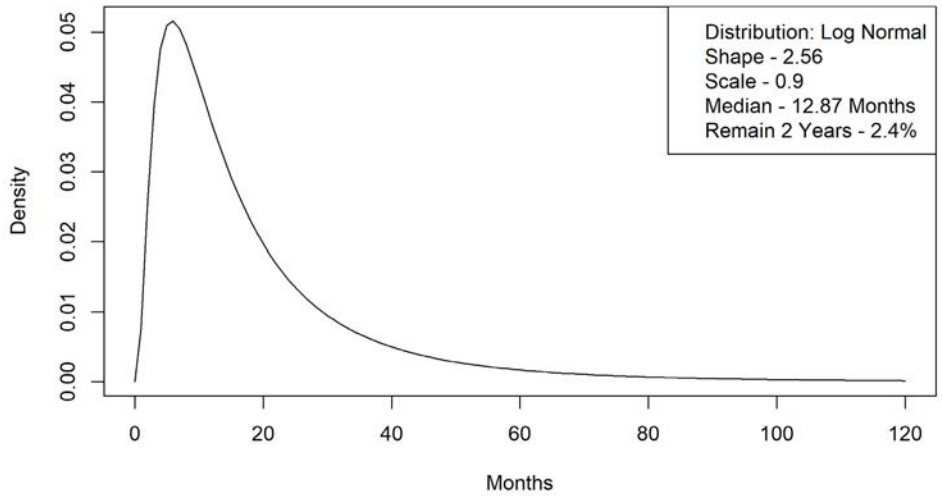


Figure A 34 Alternative Care Time to Non-Medicaid Nursing Facility Time to Transition Distribution

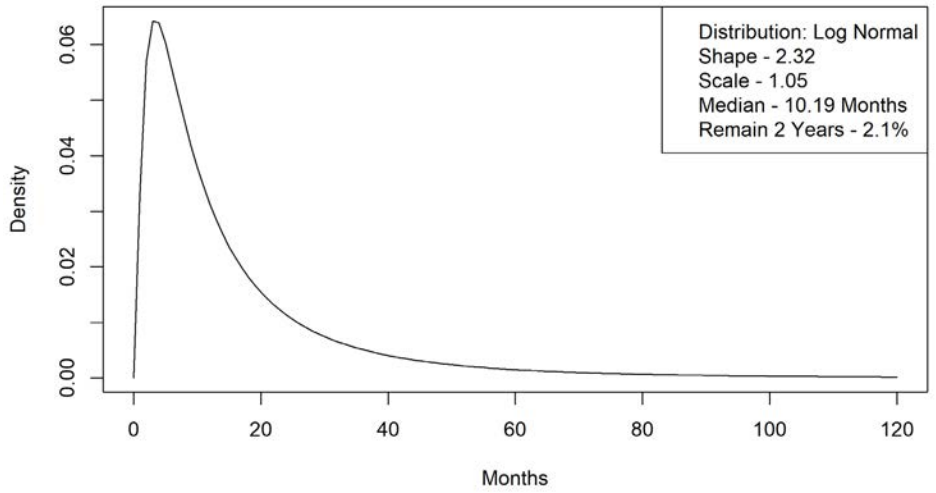


Figure A 35 Alternative Care Time to Non-Medicaid no LTSS Time to Transition Distribution

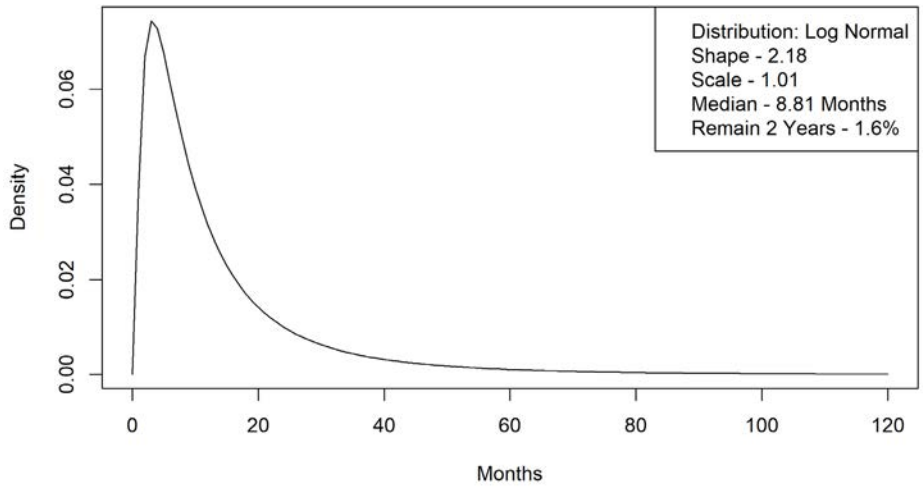


Figure A 36 Non-Medicaid Nursing Facility (91+ Day Stay) to Death Transition Distribution

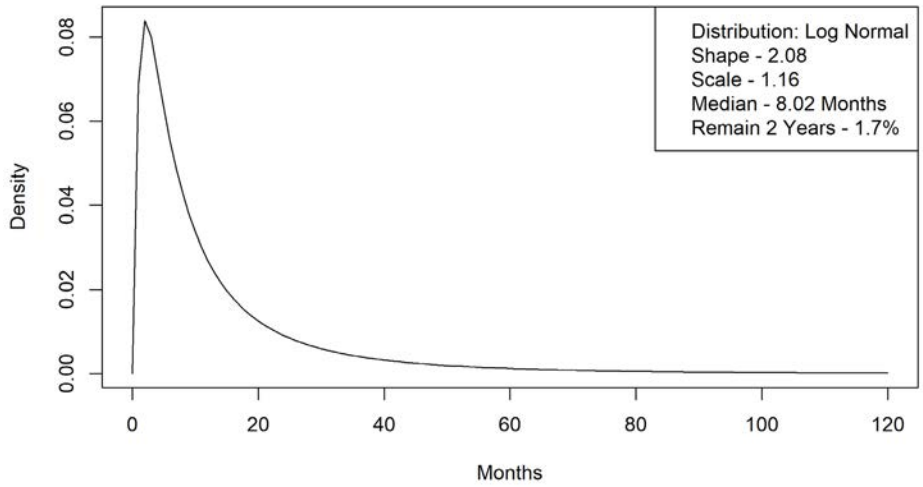


Figure A 37 Non-Medicaid Nursing Facility (91+ Day Stay) to Elderly Waiver Residential Time to Transition Distribution

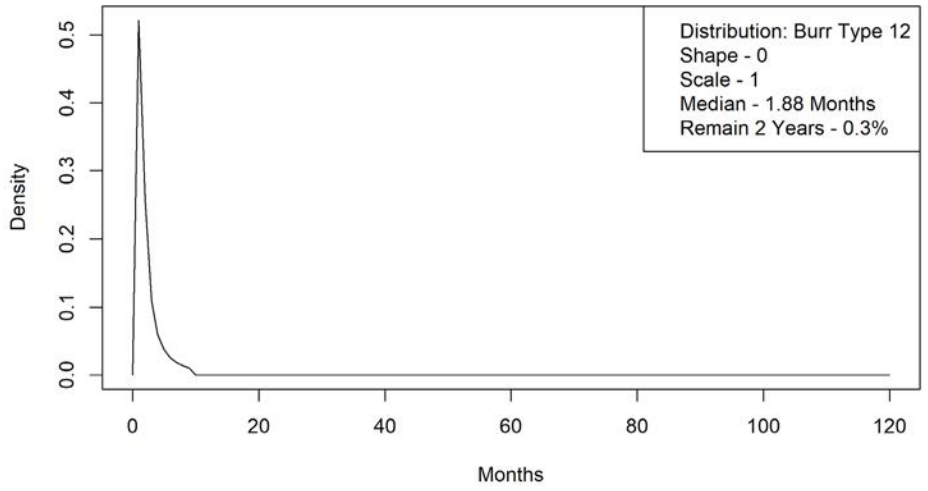


Figure A 38 Non-Medicaid Nursing Facility (91+ Day Stay) to Medicaid Nursing Facility Time to Transition Distribution

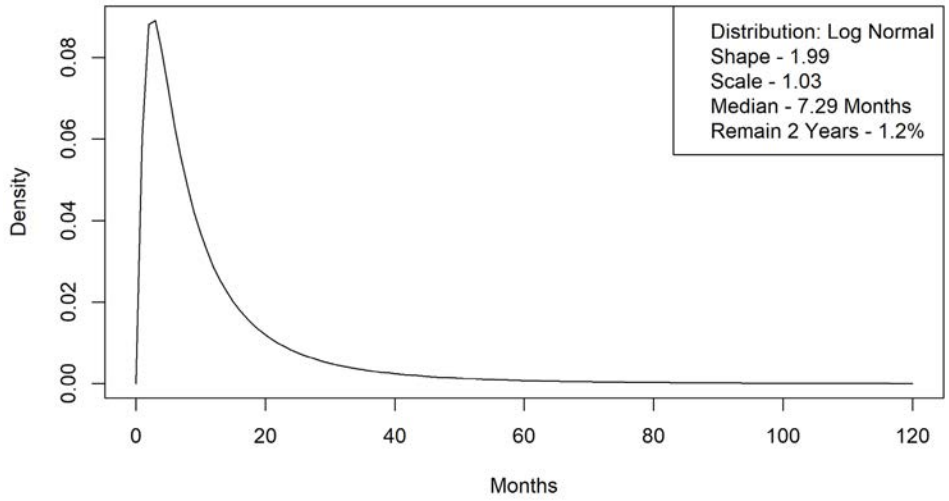


Figure A 39 Non-Medicaid Nursing Facility (91+ Day Stay) to Medicaid no LTSS Time to Transition Distribution

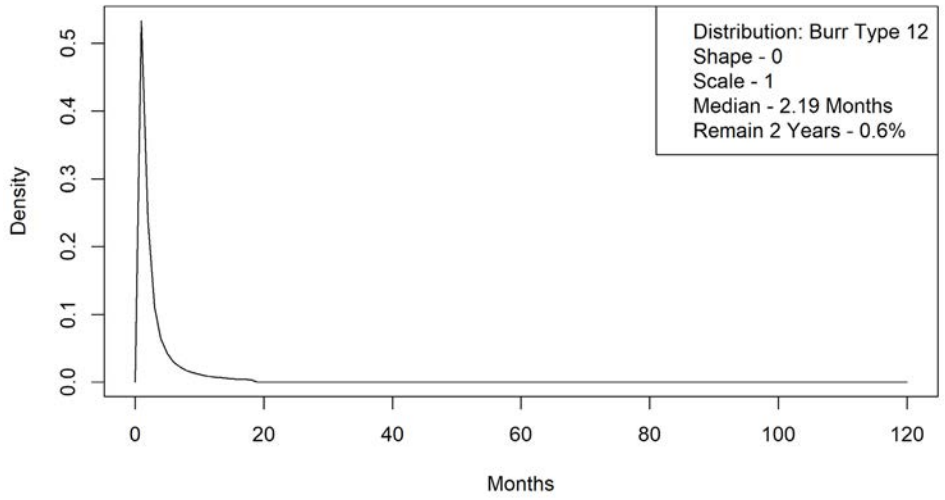


Figure A 40 Non-Medicaid Nursing Facility (91+ Day Stay) to Alternative Care Time to Transition Distribution

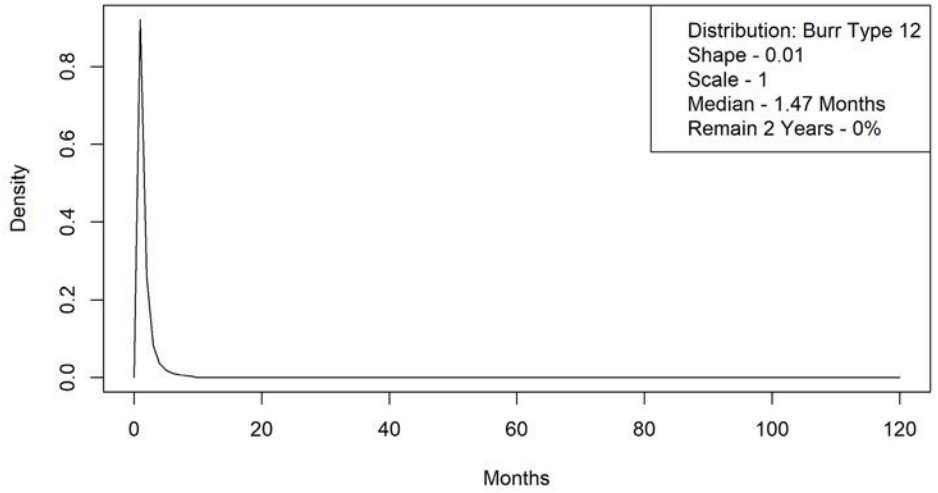


Figure A 41 Non-Medicaid Nursing Facility (91+ Day Stay) to Non-Medicaid no LTSS Time to Transition Distribution

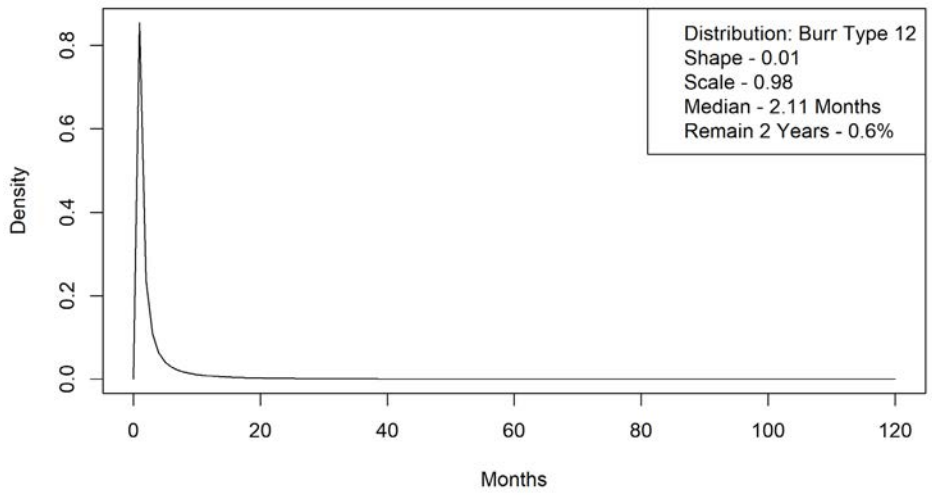


Figure A 42 Non-Medicaid no LTSS to Death Time to Transition Distribution

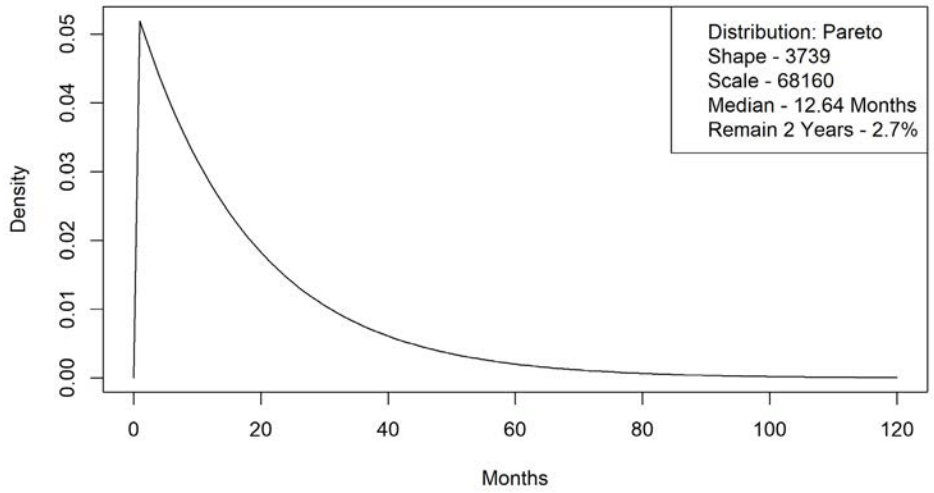


Figure A 43 Non-Medicaid no LTSS to Elderly Waiver Community Time to Transition Distribution

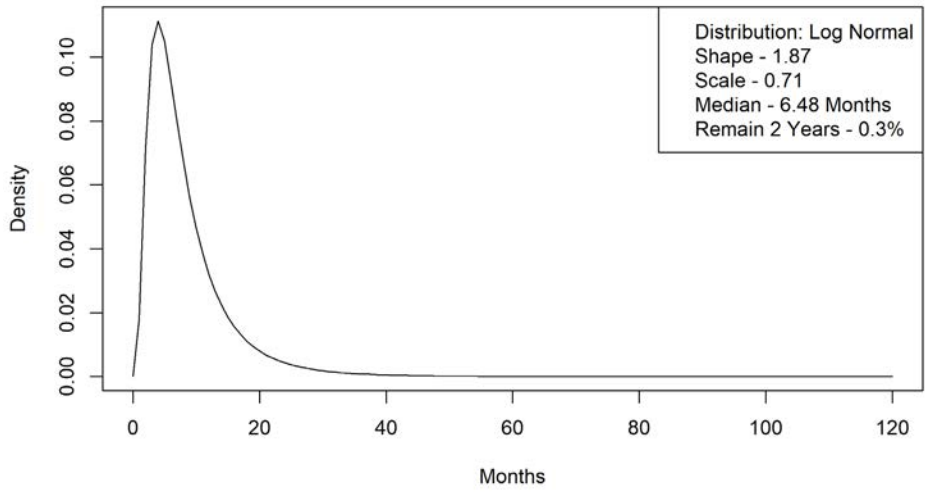


Figure A 44 Non-Medicaid no LTSS to Elderly Waiver Residential Time to Transition Distribution

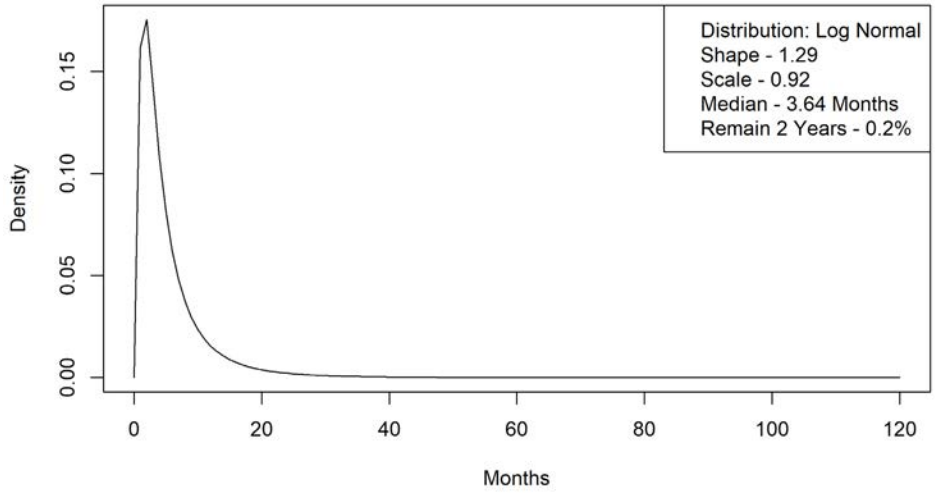


Figure A 45 Non-Medicaid no LTSS to Medicaid Nursing Facility Time to Transition Distribution

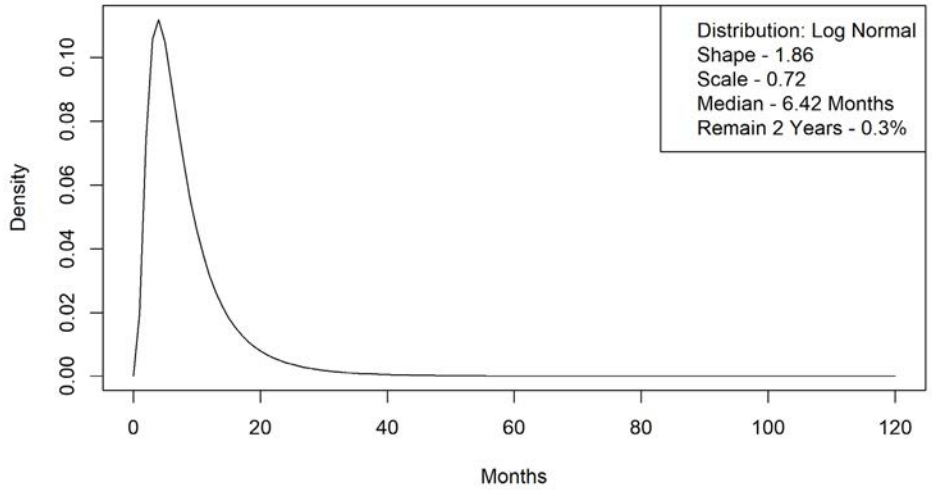


Figure A 46 Non-Medicaid no LTSS to Medicaid no LTSS Time to Transition Distribution

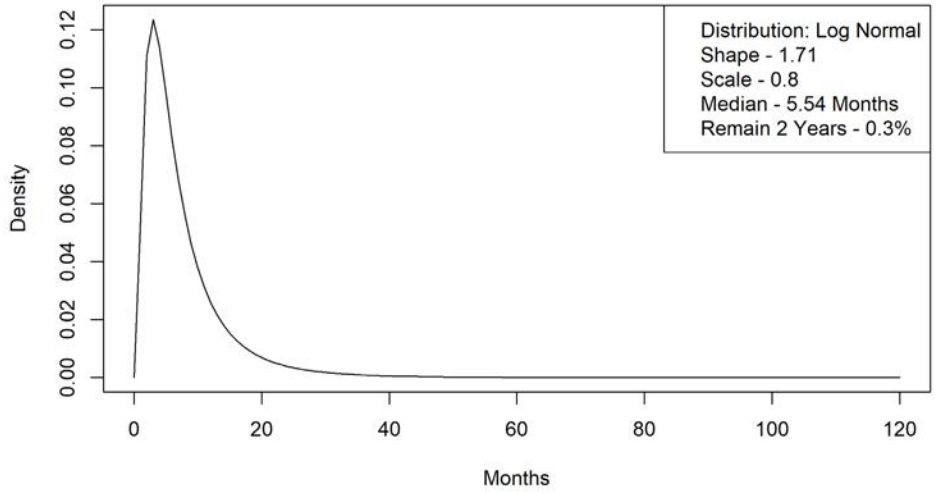


Figure A 47 Non-Medicaid no LTSS to Personal Care without a Waiver Time to Transition Distribution

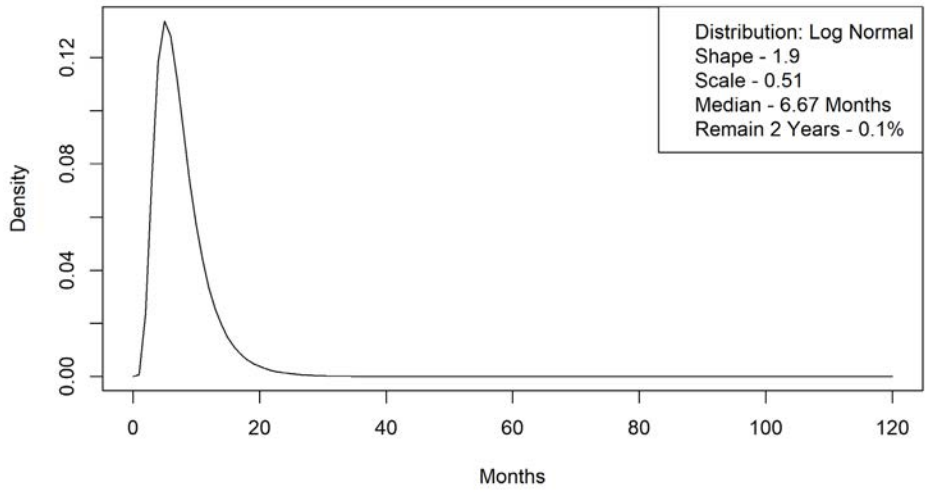


Figure A 48. Non-Medicaid no LTSS to Alternative Care Time to Transition Distribution

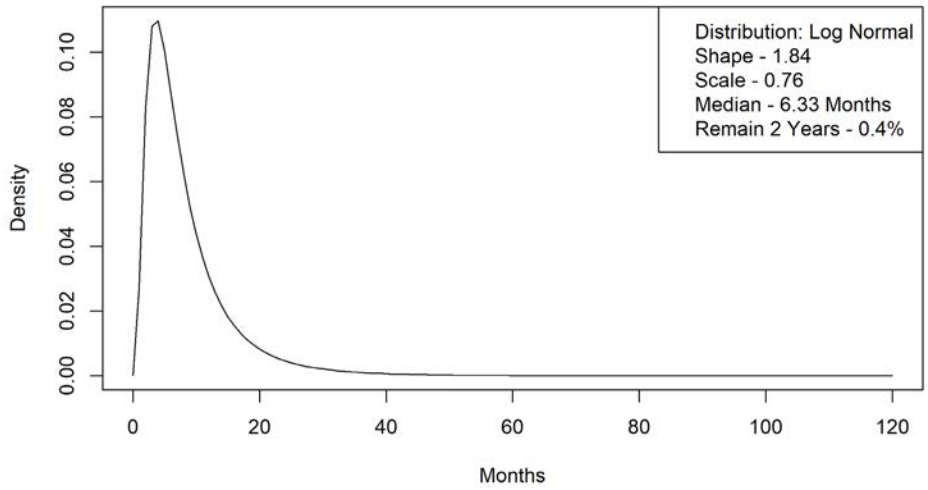


Figure A 49 Non-Medicaid no LTSS to Non-Medicaid Nursing Facility Time to Transition Distribution

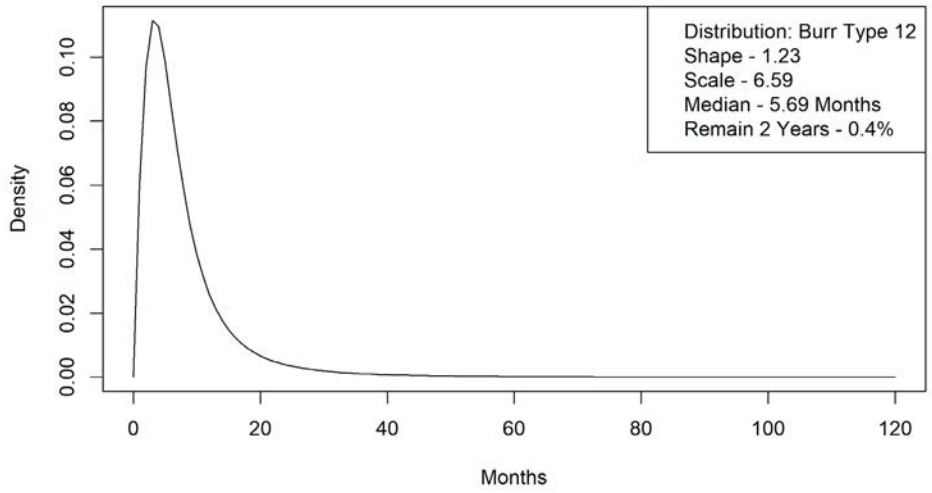
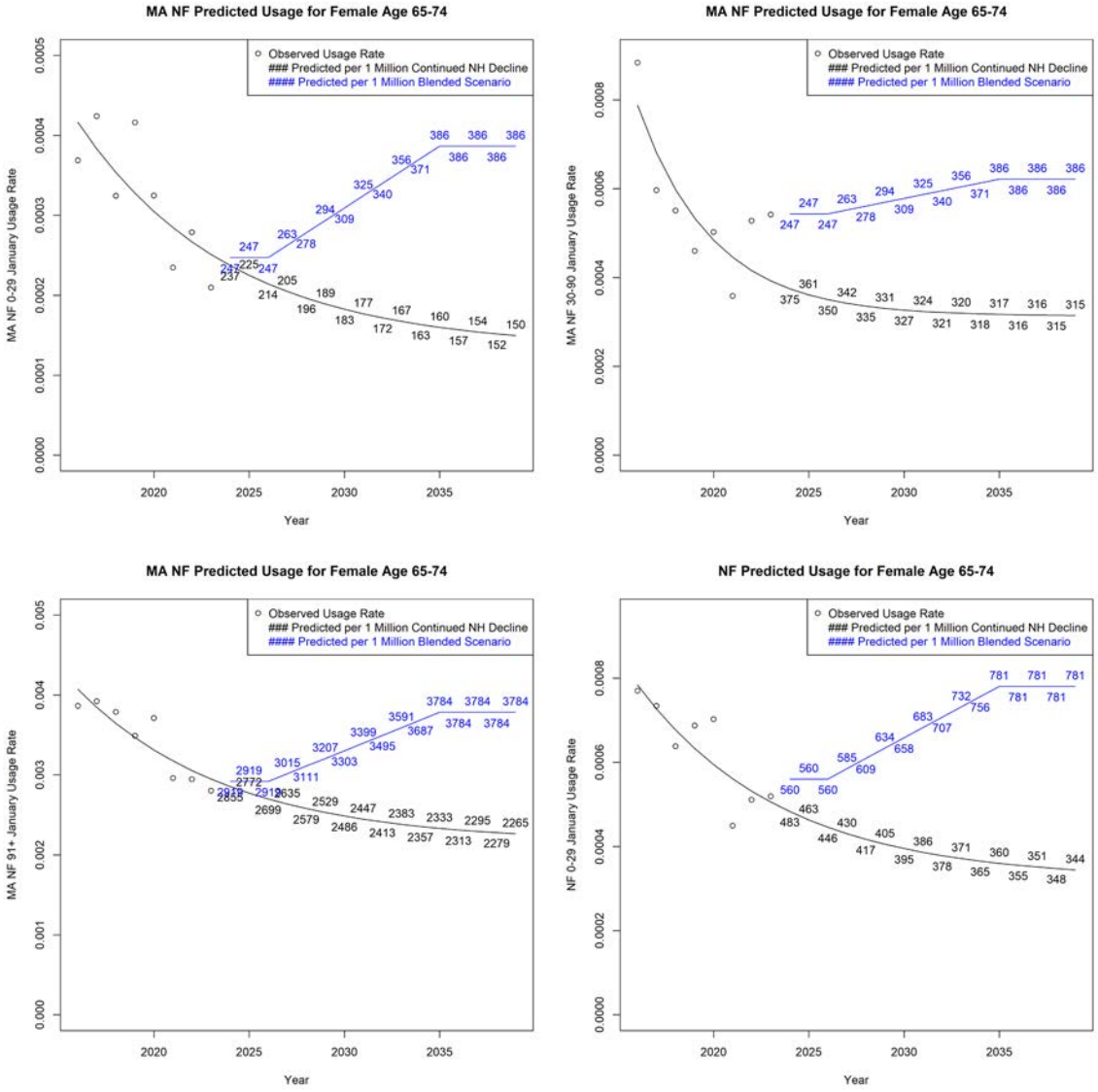


Table A.10 DHS Forecast Numbers used in Cost to Medicaid and Cost to Medicaid Growth Assumptions by Year and LTSS subgroup

LTSS Subgroup	2023	2024	2025	2026	2027	2028	2029
EWC	7.9%	25.1%	22.8%	11.1%	5.1%	5.1%	5.0%
EWR	7.9%	25.1%	22.8%	11.1%	5.1%	5.1%	5.0%
MA NF	9.7%	11.2%	3.1%	4.3%	5.8%	4.9%	4.3%
PCA	3.5%	7.3%	20.7%	9.3%	-0.6%	2.1%	1.6%
AC	6.6%	26.2%	26.8%	5.4%	5.9%	6.2%	6.0%
NOT-MA NF	9.7%	11.2%	3.1%	4.3%	5.8%	4.9%	4.3%

MA NF = Medicaid enrolled and residing in a Nursing Facility. EWR = Elderly Waiver Residential (primarily assisted living). EWC = Elderly Waiver living in Community setting. AC = Alternative Care. PCA = Personal Car Assistant not enrolled in a waiver program. NOT-MA NF = not Medicaid enrolled while residing in a Nursing Facility. DHS = Minnesota Department of Human Services. LTSS = Long Term Services and Supports.

Figure A 50. Assumed Monthly Nursing Facility Users per 1 Million Population for Females Age 65-74 across Scenarios



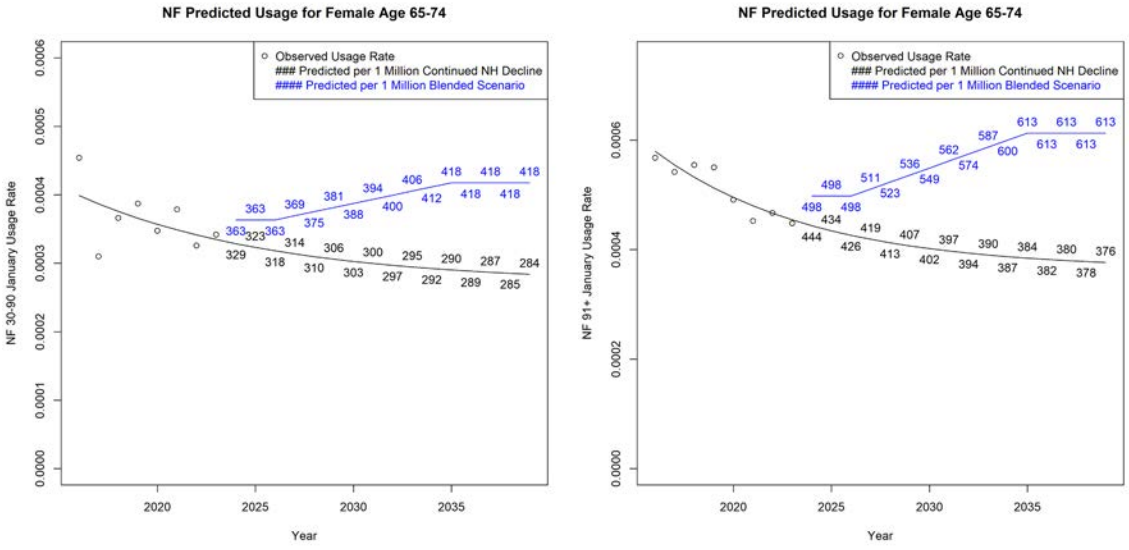
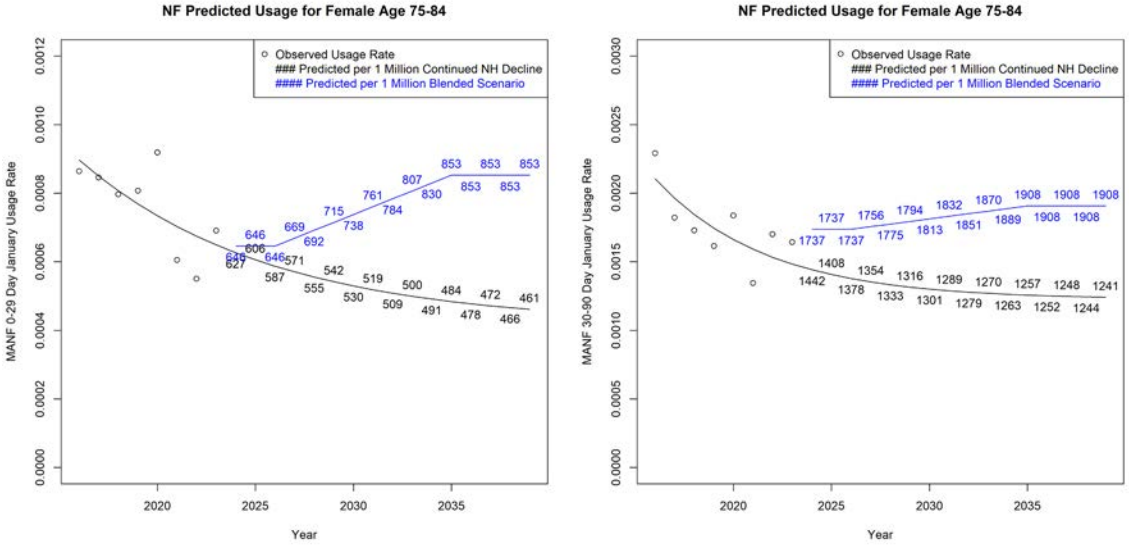
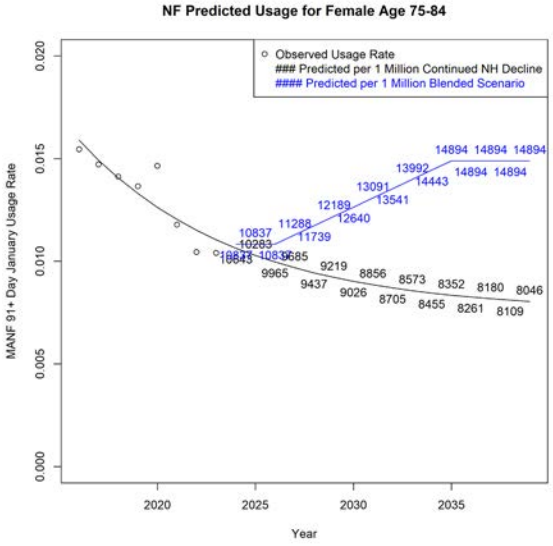
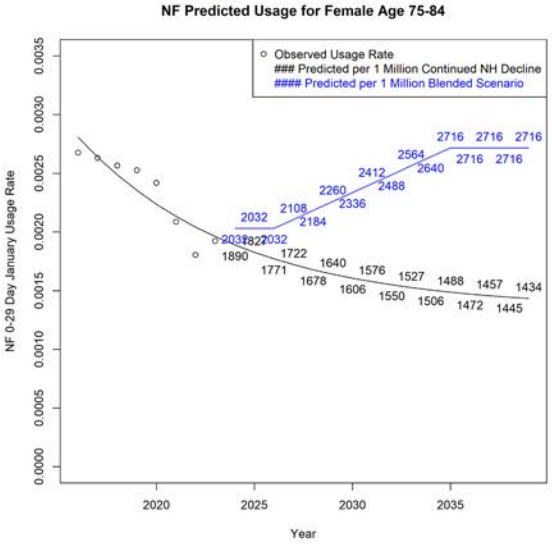
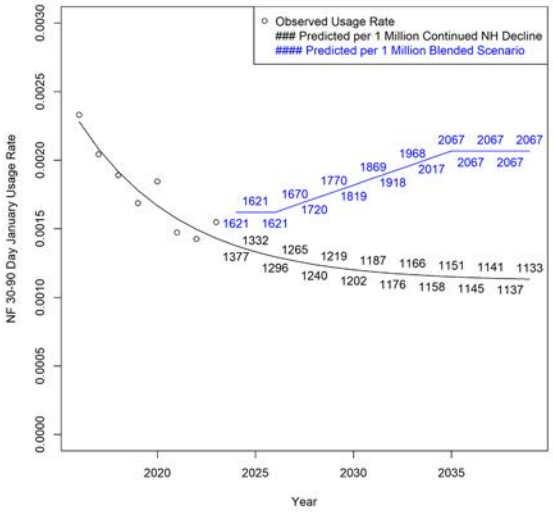


Figure A 51. Assumed Monthly Nursing Facility Users per 1 Million Population for Females Age 75-84 across Scenarios




NF Predicted Usage for Female Age 75-84
Observed Usage Rate
Predicted per 1 Million Continued NH Decline
Predicted per 1 Million Blended Scenario
MANF 91+ Day January Usage Rate
Year


NF Predicted Usage for Female Age 75-84
Observed Usage Rate
Predicted per 1 Million Continued NH Decline
Predicted per 1 Million Blended Scenario
NF 0-29 Day January Usage Rate
Year


NF Predicted Usage for Female Age 75-84
Observed Usage Rate
Predicted per 1 Million Continued NH Decline
Predicted per 1 Million Blended Scenario
NF 30-90 Day January Usage Rate
Year

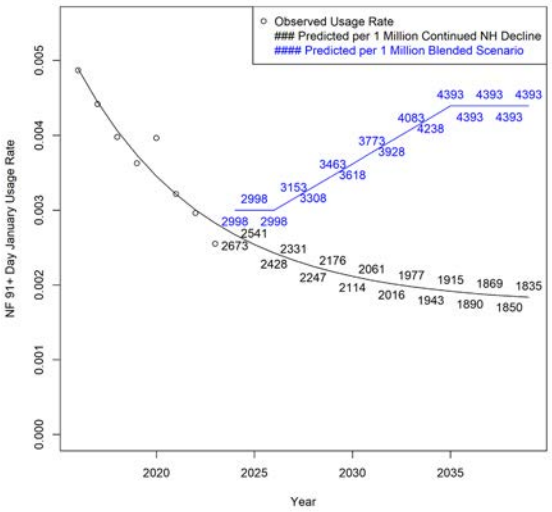
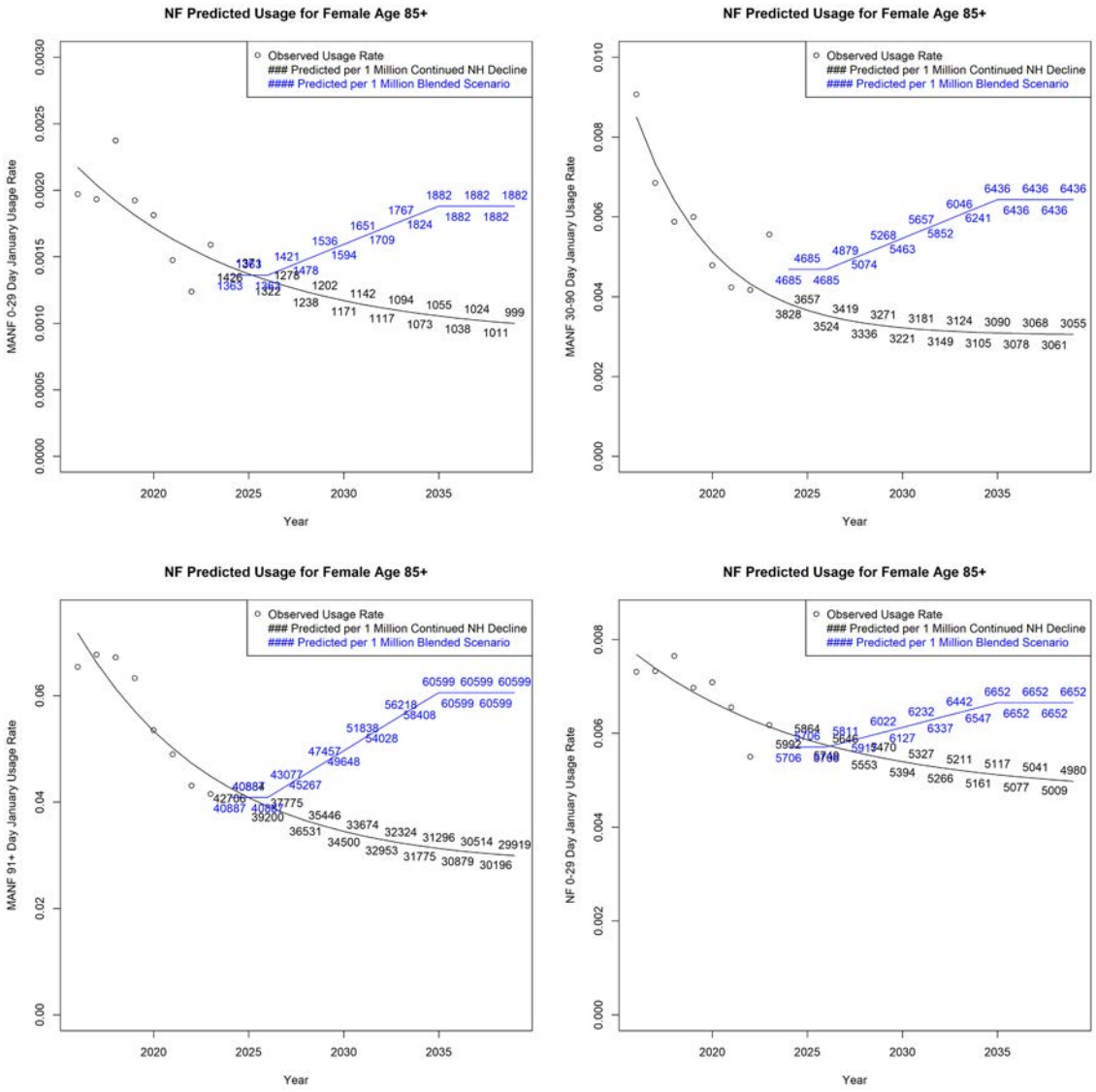

NF Predicted Usage for Female Age 75-84
Observed Usage Rate
Predicted per 1 Million Continued NH Decline
Predicted per 1 Million Blended Scenario
NF 91+ Day January Usage Rate
Year

Figure A 52. Assumed Monthly Nursing Facility Users per 1 Million Population for Females Age 85 and above across Scenarios



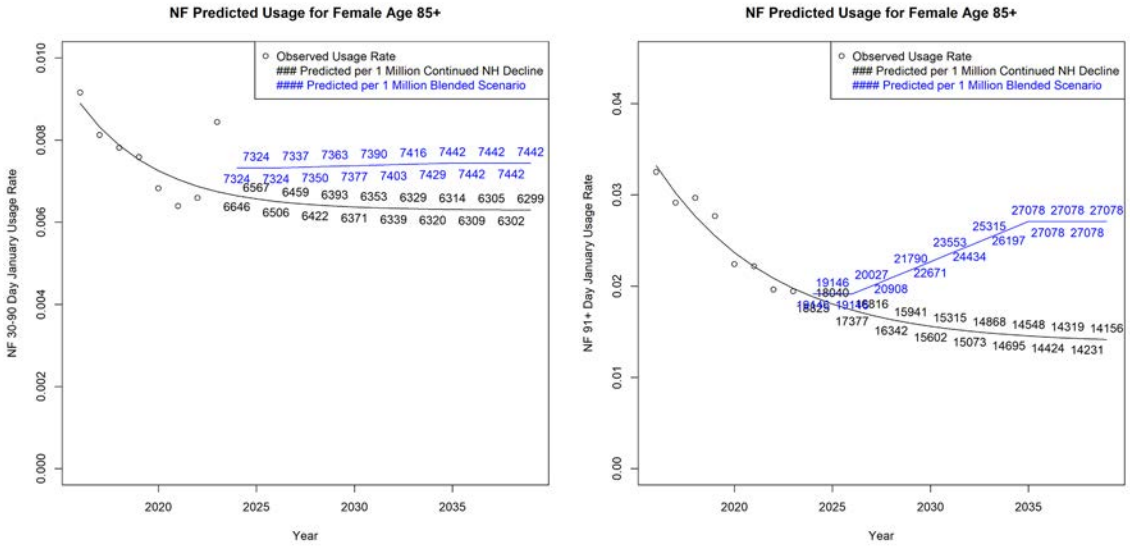
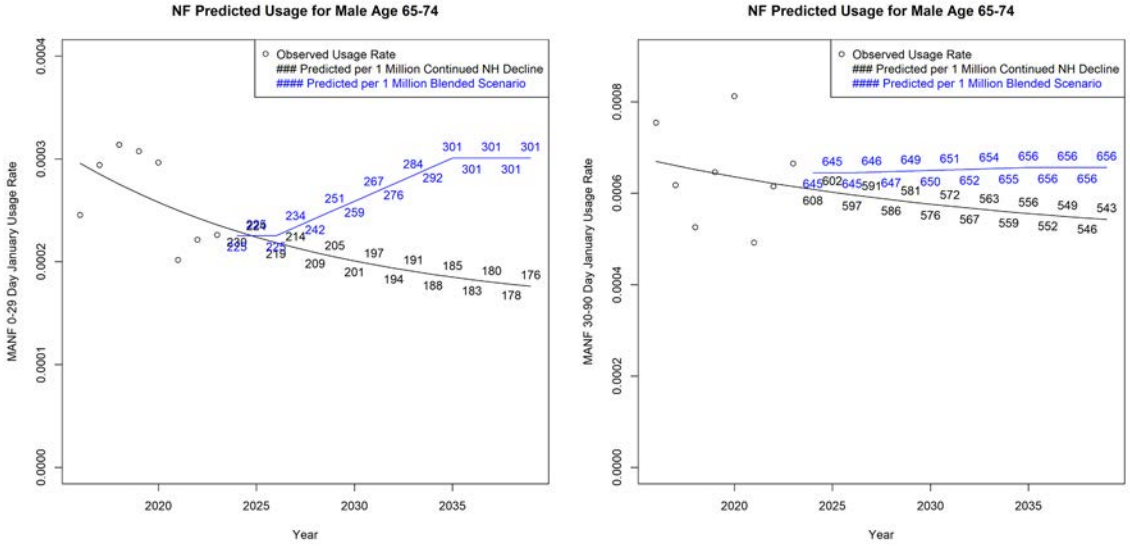
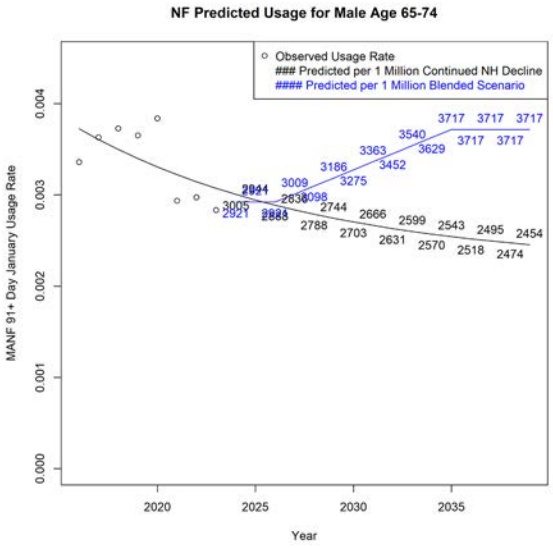
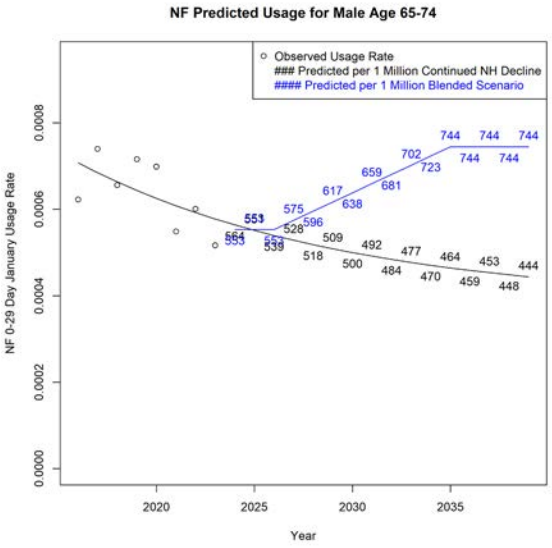
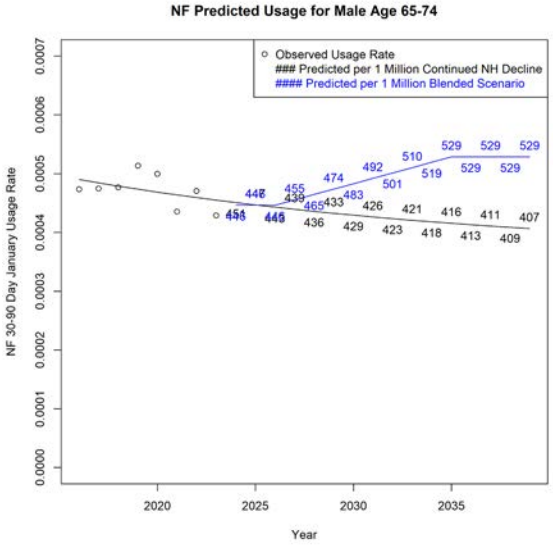


Figure A 53. Assumed Monthly Nursing Facility Users per 1 Million Population for Males Age 65-74 across Scenarios




NF Predicted Usage for Male Age 65-74
Observed Usage Rate
Predicted per 1 Million Continued NH Decline
Predicted per 1 Million Blended Scenario
MANF 91+ Day January Usage Rate
Year


NF Predicted Usage for Male Age 65-74
Observed Usage Rate
Predicted per 1 Million Continued NH Decline
Predicted per 1 Million Blended Scenario
NF 0-29 Day January Usage Rate
Year


NF Predicted Usage for Male Age 65-74
Observed Usage Rate
Predicted per 1 Million Continued NH Decline
Predicted per 1 Million Blended Scenario
NF 30-90 Day January Usage Rate
Year

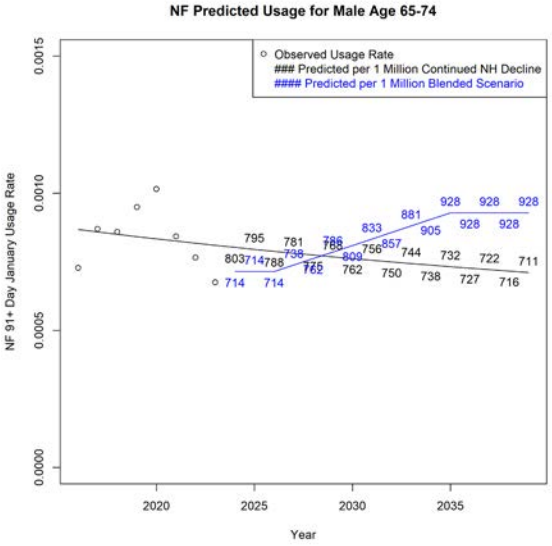
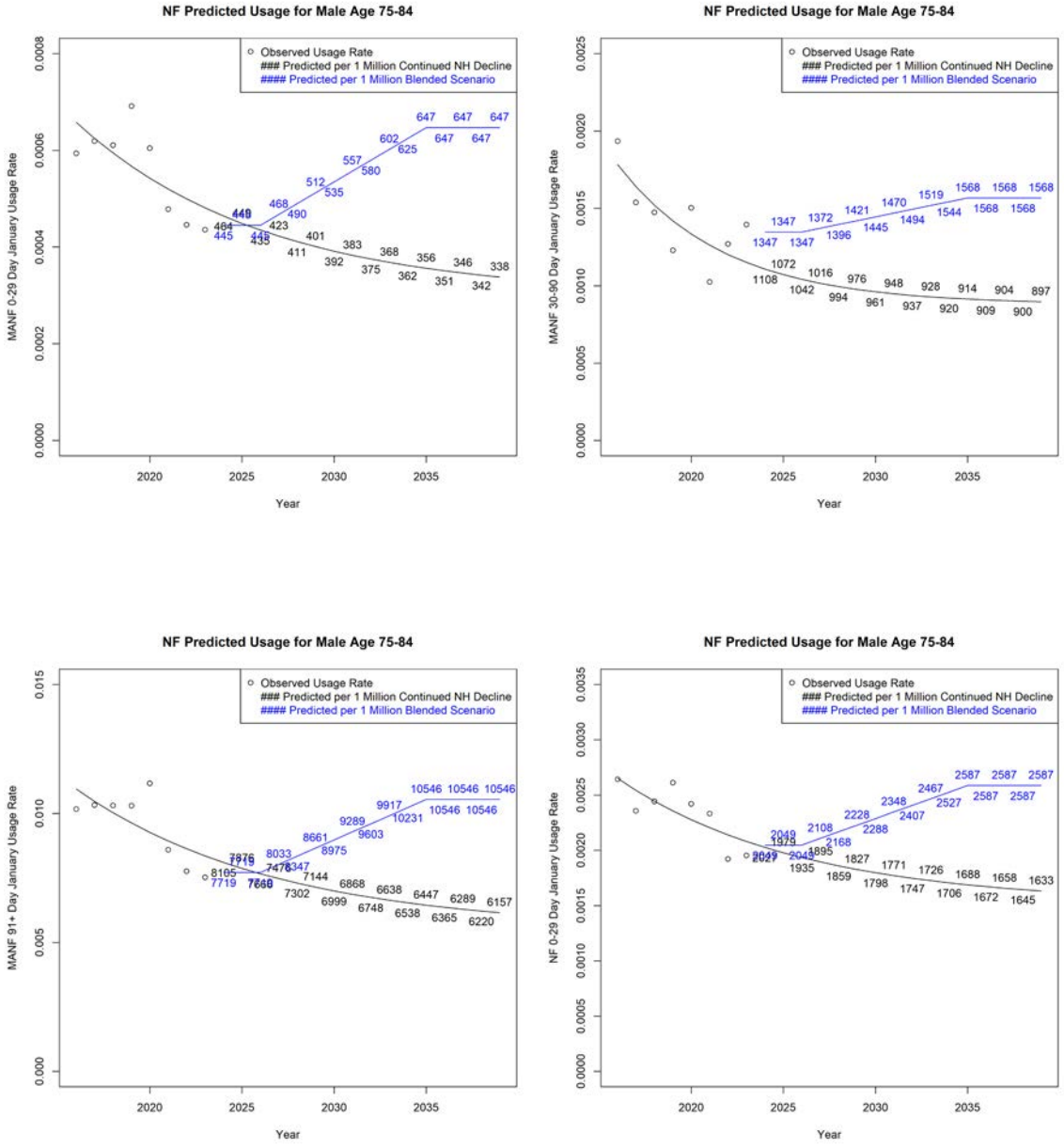

NF Predicted Usage for Male Age 65-74
Observed Usage Rate
Predicted per 1 Million Continued NH Decline
Predicted per 1 Million Blended Scenario
NF 91+ Day January Usage Rate
Year

Figure A 54. Assumed Monthly Nursing Facility Users per 1 Million Population for Males Age 75-84 across Scenarios



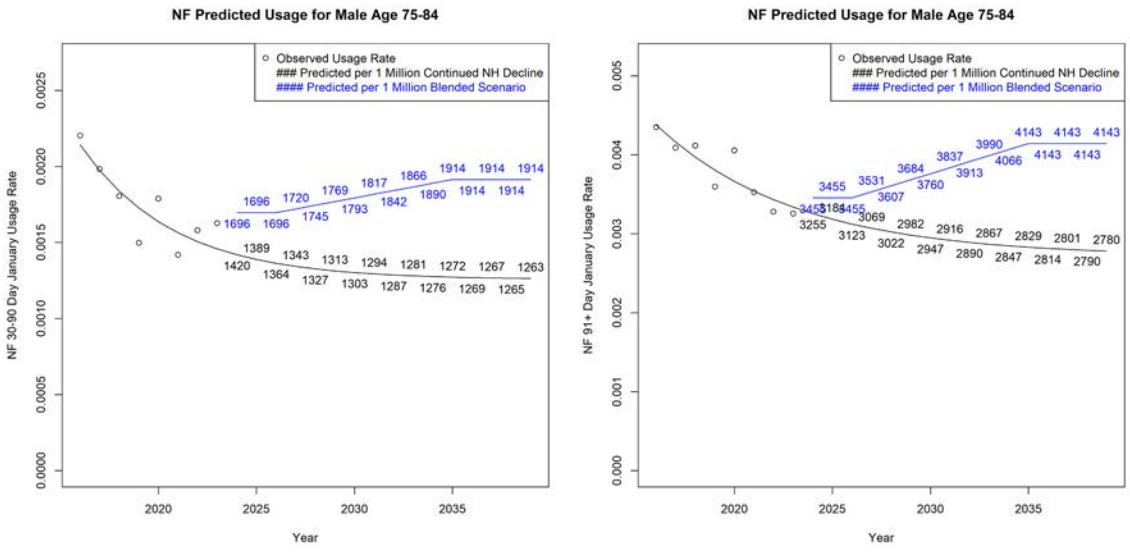
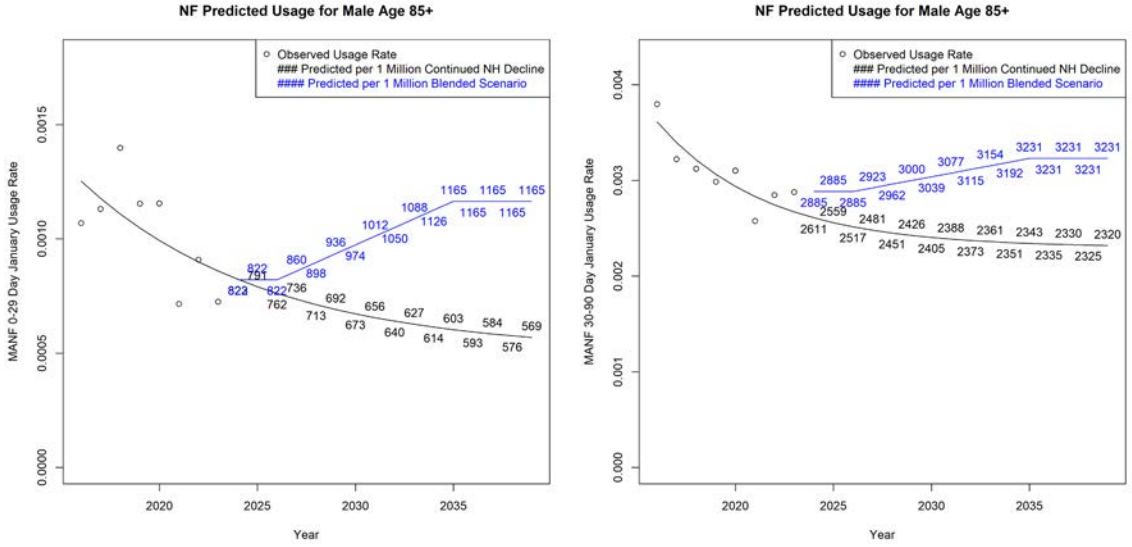
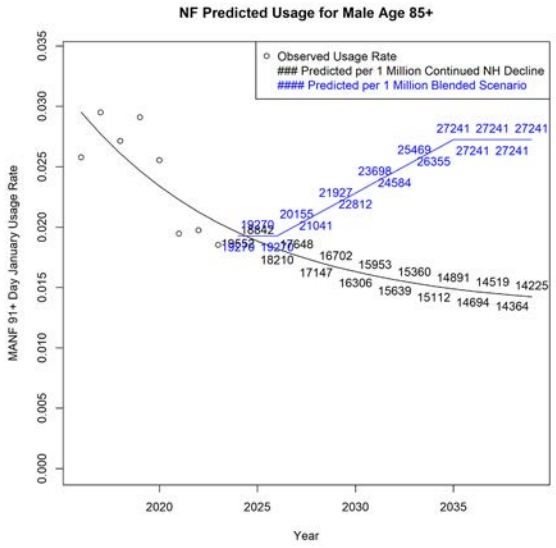
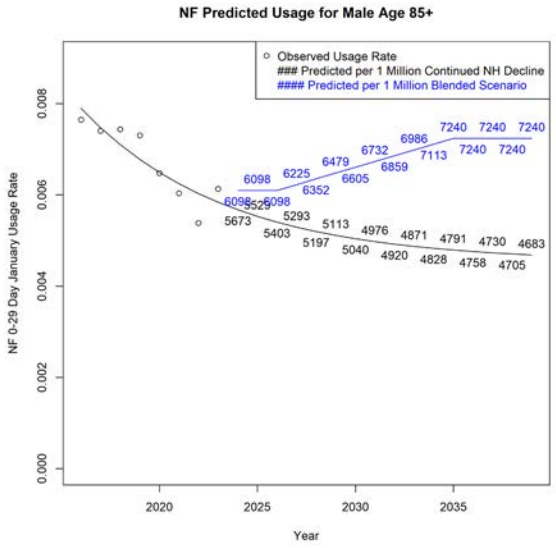
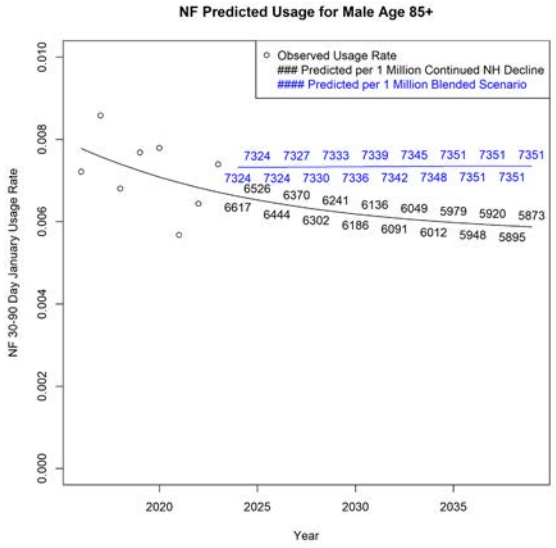


Figure A 55. Assumed Monthly Nursing Facility Users per 1 Million Population for Males Age 85 and above across Scenarios




NF Predicted Usage for Male Age 85+
Observed Usage Rate
Predicted per 1 Million Continued NH Decline
Predicted per 1 Million Blended Scenario
MANF 91+ Day January Usage Rate
Year


NF Predicted Usage for Male Age 85+
Observed Usage Rate
Predicted per 1 Million Continued NH Decline
Predicted per 1 Million Blended Scenario
NF 0-29 Day January Usage Rate
Year


NF Predicted Usage for Male Age 85+
Observed Usage Rate
Predicted per 1 Million Continued NH Decline
Predicted per 1 Million Blended Scenario
NF 30-90 Day January Usage Rate
Year

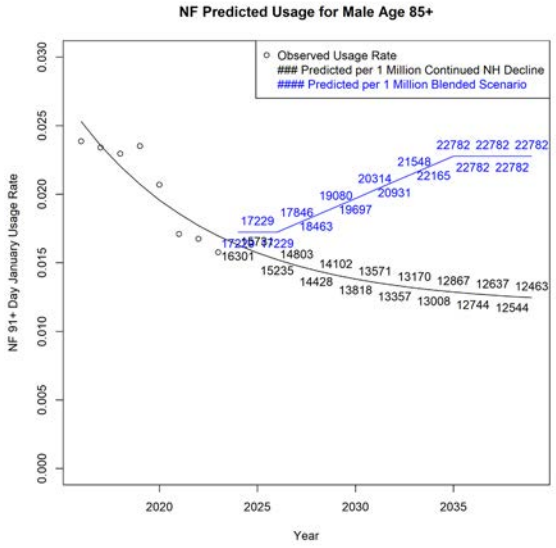

NF Predicted Usage for Male Age 85+
Observed Usage Rate
Predicted per 1 Million Continued NH Decline
Predicted per 1 Million Blended Scenario
NF 91+ Day January Usage Rate
Year

Figure A 56. Projected Monthly User Count by Scenario (Usage Rate*Population): Elderly Waiver Community

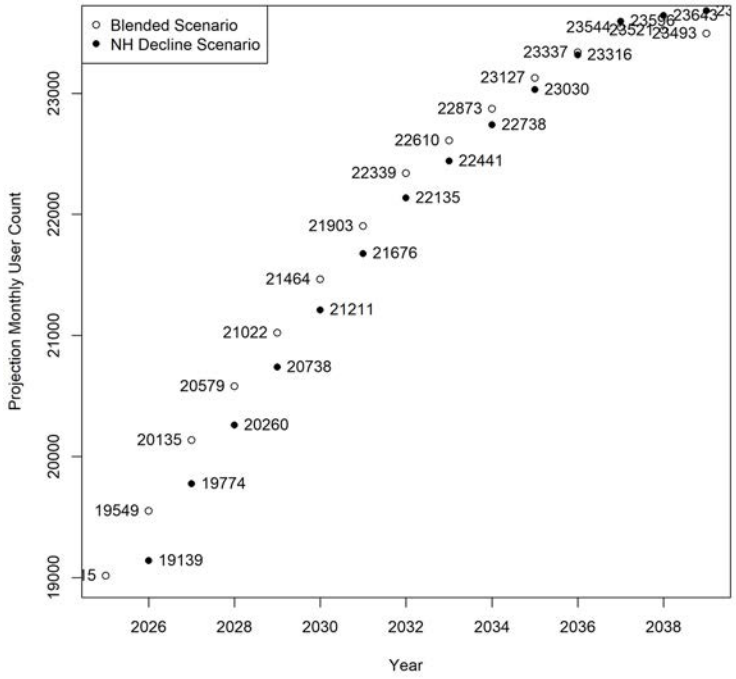


Figure A 57. Projected Monthly User Count by Scenario (Usage Rate*Population): Elderly Waiver Residential

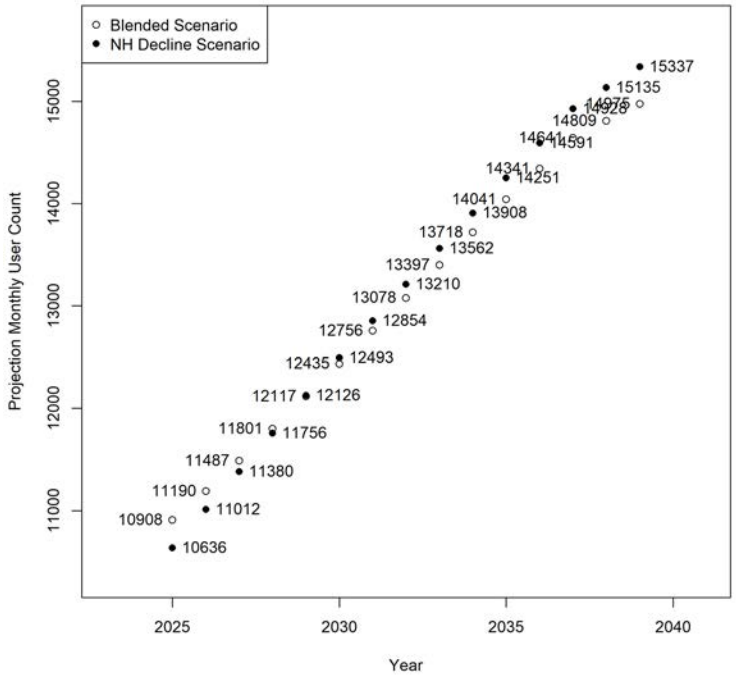


Figure A 58. Projected Monthly User Count by Scenario (Usage Rate*Population): Medicaid Nursing Facility 0-29 Day Stay

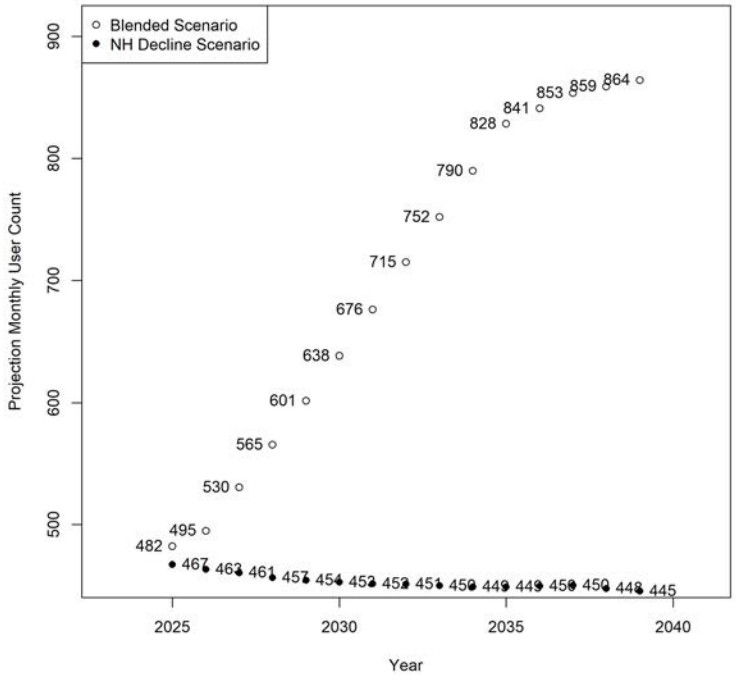


Figure A 59. Projected Monthly User Count by Scenario (Usage Rate*Population):Medicaid Nursing Facility 30-90 Day Stay

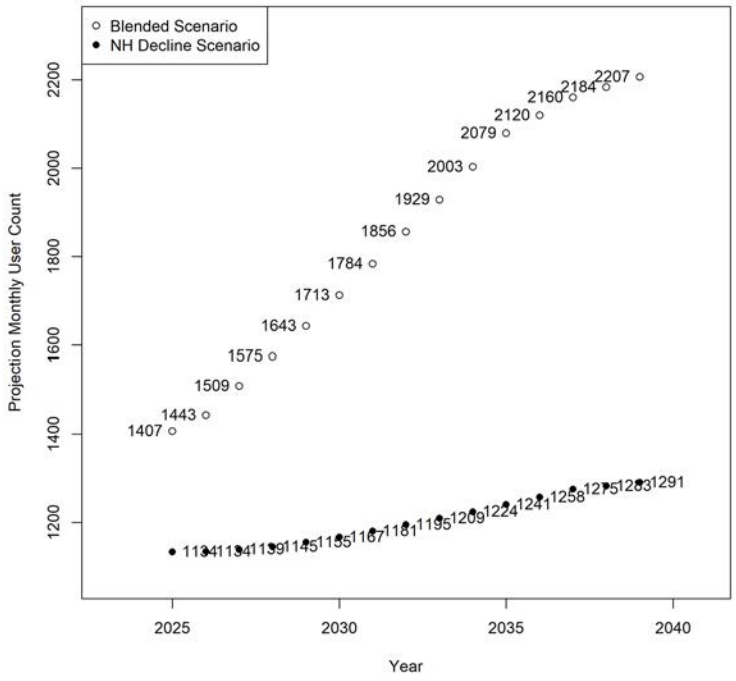


Figure A 60. Projected Monthly User Count by Scenario (Usage Rate*Population): Medicaid Nursing Facility Stay of 91 or more days

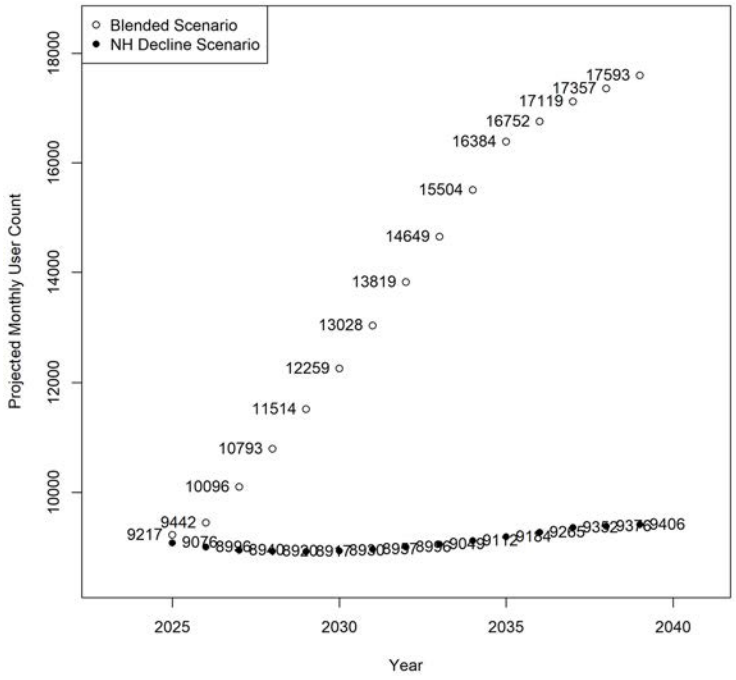


Figure A 61. Projected Monthly User Count by Scenario (Usage Rate*Population): Personal Care Assistant without Waiver

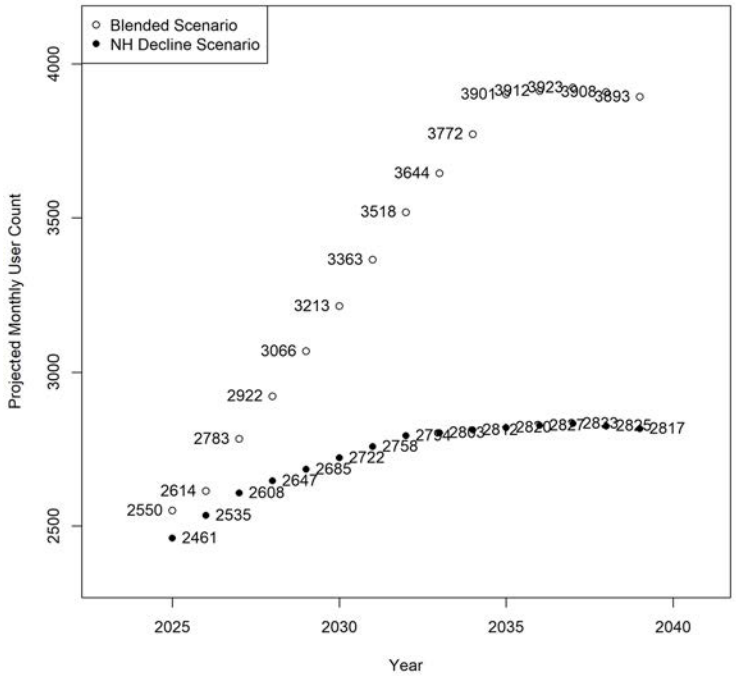


Figure A 62. Projected Monthly User Count by Scenario (Usage Rate*Population): Alternative Care

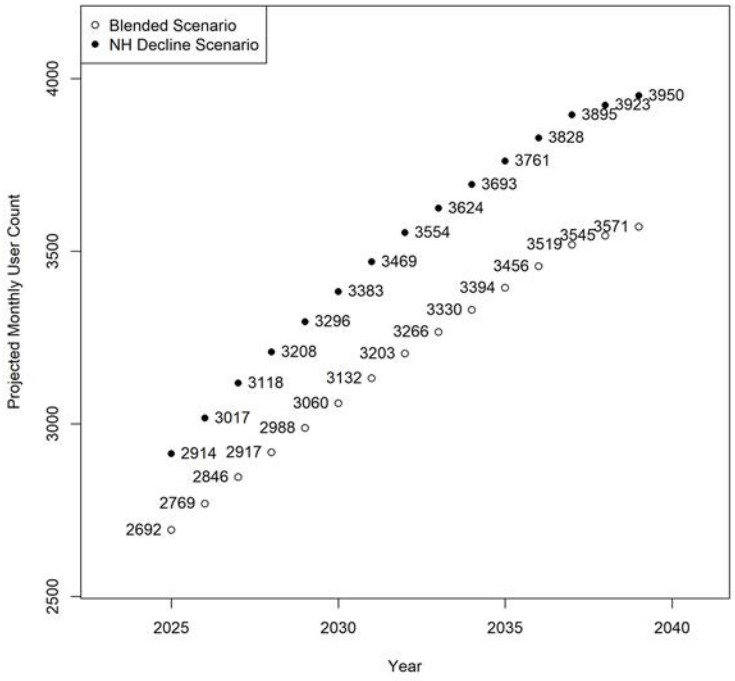


Figure A 63. Projected Monthly User Count by Scenario (Usage Rate*Population): Nursing Facility Stay of 0-29 Days

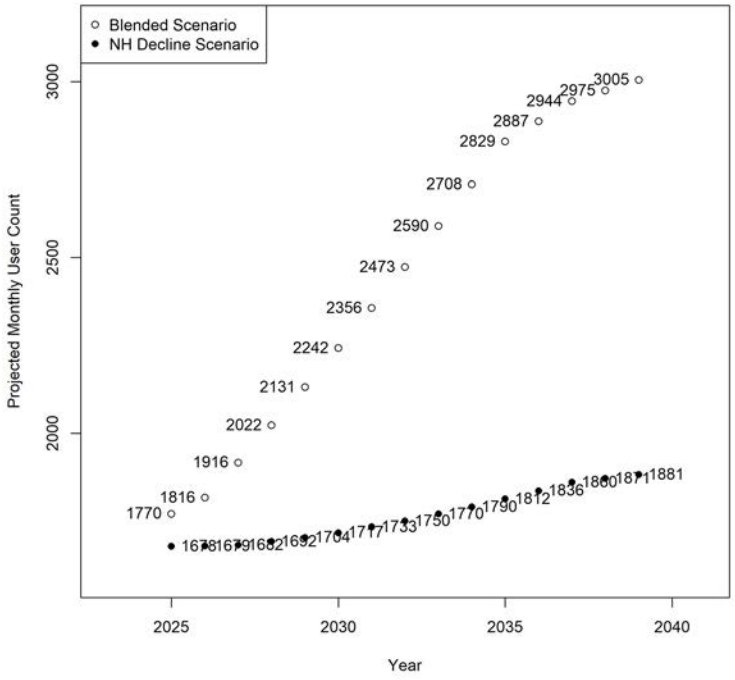


Figure A 64. Projected Monthly User Count by Scenario (Usage Rate*Population): Nursing Facility Stay of 30-90 Days

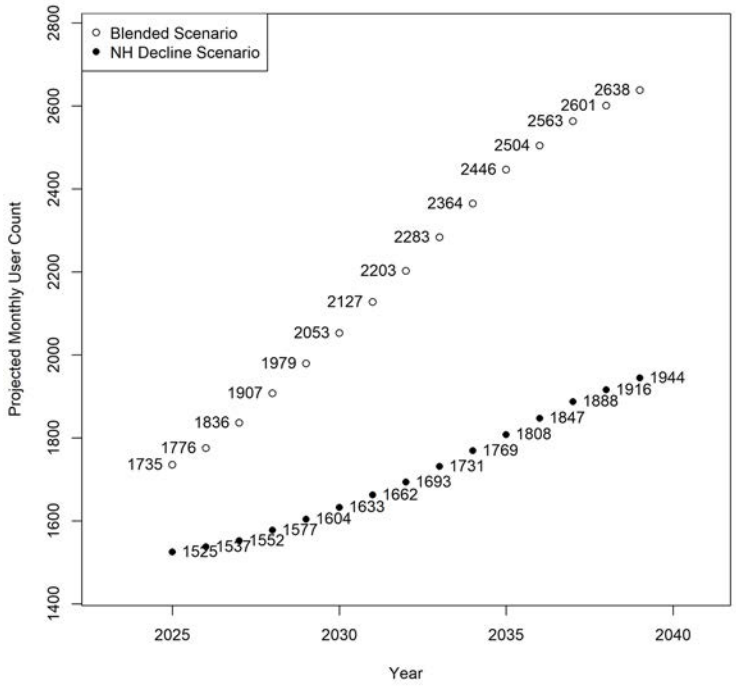


Figure A 65. Projected Monthly User Count by Scenario (Usage Rate*Population): Nursing Facility Stay of 91 or more Days