Modeling the Impact of the Great Unwinding on State Medicaid Programs

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National Projection Using SOA Model

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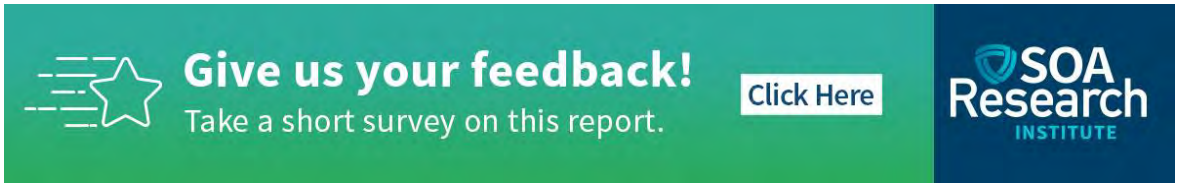

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Actuarial Research Report

Executive Summary

The intention of this report and underlying model is to project expected changes in enrollment and acuity, the latter of which can inform an acuity adjustment in Medicaid budgets and capitation rate development. This report provides actuaries and other finance professionals working in Medicaid with an example of running the Medicaid Unwinding model (the Model) with results at the national level on projected changes in both acuity and enrollment for Medicaid and Children's Health Insurance Program (CHIP). Information is critically important at the time of this writing as states recently began to terminate Medicaid and CHIP beneficiaries due to ineligibility for the first time in over three years.

During the COVID-19 public health emergency (PHE), Maintenance of Effort (MOE) requirements were put forth on Medicaid programs to allow states to receive additional federal funding. This meant that Medicaid members could not be terminated unless they passed away, moved out of state or voluntarily withdrew from coverage. The result of this was a 30% increase in Medicaid enrollment from the start of the pandemic to December 2022, with that number expected to restate slightly higher as of March 2023, the final month before the unwinding.[1] This resulted in a significant volume of beneficiaries that could be expected to disenroll and a potentially changing risk profile for those who stay in the program.

Passed by Congress in December 2022, the Consolidated Appropriations Act (CAA) decoupled the continuous coverage provision of Medicaid and CHIP beneficiaries from the PHE. The legislation established an end date for continuous coverage of March 31, 2023. States would have to resume eligibility redeterminations between February 2023 and April 2023. Termination of beneficiaries who were ruled ineligible by these redeterminations could start as early as April 2023.

The objective of this research project is to provide reasonable estimates of both changes in enrollment and acuity over the duration of what is dubbed the unwinding of the PHE, which is the portion of time that it takes to go through the aforementioned eligibility redeterminations and expected terminations where beneficiaries are disenrolled. When running the Model with baseline assumptions (documented in Section 3), the overall enrollment from March 2023 to July 2024 is projected to decrease by approximately 10.7% to 20.3%, a range of about 10 million to 19 million individuals. This time period represents the transition between the end of continuous coverage requirements and the end of the unwinding period for all states. This percentage range is significantly less than the 30% increase in Medicaid enrollment observed over the course of the PHE, and that is due to a number of factors, including regular expected enrollment growth and changes in eligibility policy such as several states expanding Medicaid under the ACA.

Nationwide, expectations on enrollment have varied, with official reports released by Urban Institute[2] estimating 18 million and the Assistant Secretary for Planning and Evaluation Office of Health Policy[3] estimating 15 million Medicaid and CHIP beneficiaries will lose coverage. In comparison, a source that the research team leveraged for assumptions, Kaiser Family Foundation, estimates anywhere from 5 million to 14 million individuals will lose coverage. Figure E-1 shows the changes to enrollment and acuity from March 2023 to July 2024.

Figure E-1

UNWINDING IMPACT TO ENROLLMENT AND ACUITY

	Period 1: Mar 23 to Mar 23		Period 2: Jul 24 to Jul 24		% Enrollment Change			% Acuity Change		
Population	Avg. Enrollment	Acuity	Avg. Enrollment	Acuity	A	B	C	A	B	C
CHIP	7,059,078	1.00	6,918,644	1.00	-0.9%	-2.0%	-4.1%	0.0%	0.1%	0.1%
Children	33,684,246	1.00	28,545,855	1.00	-23.1%	-15.3%	-10.9%	0.2%	0.4%	0.4%
Expansion	19,796,753	0.97	15,869,365	0.99	-26.3%	-19.8%	-16.6%	1.4%	1.7%	1.6%
Adult	14,843,385	0.97	11,882,207	1.01	-26.9%	-19.9%	-15.9%	3.4%	4.1%	4.3%
Aged	8,133,321	1.00	7,775,321	1.00	-9.5%	-4.4%	-0.9%	0.0%	0.0%	0.0%
Disabled	9,893,633	1.00	9,423,881	1.00	-10.2%	-4.7%	-1.1%	0.0%	0.0%	0.0%
Non-ABD	75,583,548	0.98	63,216,072	1.00	-22.8%	-16.4%	-13.0%	1.4%	1.8%	1.8%
All Populations	**93,610,502**	**0.99**	**80,415,274**	**1.00**	**-20.3%**	**-14.1%**	**-10.7%**	**0.7%**	**0.8%**	**0.8%**

In the context of this paper, acuity is the average cost of a cohort of individuals due to their underlying risk, which drives utilization of health care services. Acuity changes are seen more sharply with populations that undergo large enrollment changes, as is evident in Figure E-1. Section 4 walks through several examples of how this would impact Medicaid pricing, namely capitation rate development. For example, when examining the calendar year 2024, which corresponds with an upcoming capitation rate development period for many states, if calendar year 2022 is used as the base data, the Model shows that average acuity could increase by approximately 0.8%. We find this in the Model Outputs spreadsheet after running the Model under baseline assumptions by entering “1/1/2022” and “12” for MonthBeg and Months for Period 1, and “1/1/2024” and “12” for MonthBeg and Months for Period 2.

Significant variation in the impact of the unwinding can be expected despite relatively small deviations in how termination and churn patterns will evolve as well as uncertainty with beneficiaries’ behavior and their utilization of services when they come back into coverage.

Section 1 lists important disclosures and limitations of the underlying data. Sections 2 and 3 provide a comprehensive overview of the data used and how assumptions were developed for the Model. Section 4 summarizes the results of the Model, examining different time periods for enrollment and acuity changes.

Section 1: Disclosures

Application of the Model has its limitations, given that it is highly dependent on what the user enters as inputs for both base data and assumptions. While this provides ultimate flexibility for the end user, any baseline projections using the base enrollment data from the Centers for Medicare and Medicaid Services (CMS) come with their own limitations, which are described in this section.

While this study shows a noticeable decrease in enrollment post-unwinding, as well as an average acuity pattern that first increases and then returns to pre-pandemic levels, actual impact on enrollment and acuity could vary across different states based on affected populations and policy considerations. When examining the results of this study, it is important to consider these and other factors together with limitations of the data.

1.1 LIMITATIONS OF THE DATA

The data from CMS were taken as is and not adjusted. Data are collected by CMS from states, which may submit data with varying classifications of populations over time across states.

Examples of this include:

- Most states did not use the COVID Newly Eligible category. Given that some states did use this, it creates an issue of parity on how membership is allocated across states during the PHE period.
- Arkansas Adult counts are under 10,000 in the historical data, which suggests that adults enrolled via Temporary Assistance for Needy Families (TANF) are categorized under another population such as Expansion.
- There are no Expansion members for Idaho adults, but the adult counts jump as of January 2020, which is the month the state expanded Medicaid.
- Missouri's Expansion population has no data, despite expanding Medicaid in October 2021.
- Nebraska Expansion comes online October 2020.
- New Mexico has a gap in data in September 2019. This forces all October 2019 membership into duration 1, thus resetting the acuity curve five months prior to the PHE.
- Oklahoma's Expansion population has no data despite expanding Medicaid in July 2021.
- As of January 2020, Oregon's Expansion population goes to zero, and it appears that the enrollment is then reflected in the adult population.
- Utah Adult population decreases sharply at the same time the Expansion population first became eligible in January 2020.
- Virginia's Expansion population has no data despite expanding Medicaid in January 2019.

1.2 ACTUARIAL STANDARDS OF PRACTICE

Applicable Actuarial Standards of Practice (ASOP) were followed by the research team where possible, including the following:

- ASOP No. 1—Introductory Actuarial Standard of Practice
- ASOP No. 12—Risk Classification (for All Practice Areas)
- ASOP No. 23—Data Quality
- ASOP No. 41—Actuarial Communications
- ASOP No. 56—Modeling

In particular, reasonableness of assumptions for the development of the national projection were taken into significant consideration. The research team relied on external studies, cited throughout this report, to inform assumptions for developing the national projection. The research team reviewed these assumptions for reasonableness.

1.3 INTERPRETING THE RESULTS

Any use or reference of the actuarial work product in this research report should recognize not only the data limitations discussed in Section 1.1 but also the limitations of the assumptions. The research team did not have detailed, state-specific data such as eligibility files, fee-for-service claims data or encounter data. Such data sources would be highly informative to the development of expected rates of termination during the unwinding as well as to acuity curves. Furthermore, a number of factors may cause change in average duration of enrollment or acuity during the PHE, including changing demographic mix and temporary changes in utilization or unit cost.

Section 2: Base Data for Enrollment

This section provides an overview of the data used to run the Model and produce the results presented in this report.

Because the Model isn't designed to forecast total health care expenditures, there is little need for underlying claims data. Instead, available data sources for changes in average costs were used to determine reasonable acuity factors that vary by duration of enrollment. Acuity factors are further explained in Section 3.9.

A more critical element of the base data is monthly enrollment numbers, which have been sourced primarily from CMS and are referenced in Section 1.1 of the User Guide. These data were not modified for use in this research paper.

The only adjustments to the data were for periods after the CMS enrollment data ended. To best represent the expansion of Medicaid in South Dakota (July 2023) and North Carolina (expected January 2024), beneficiaries were added to Population 9 to represent New Expansion States. For South Dakota, 52,000 beneficiaries were added to July 2023 based on an actuarial report from the state.[4] For North Carolina, 600,000 beneficiaries were added[5] by including 100,000 positive adjustments to the Expansion population in January through June 2024. These additions were made in the "Adjustments" tab of the Model.

Section 3: Assumption Selection

Assumptions used in running the Model to create a national projection are presented in this section. These are documented in the following 10 subsections and mirror the order of the input selections in the "Inputs" tab of the Model.

3.1 SCENARIO SELECTIONS

A national projection was run using the Model, which aggregates enrollment data from all 50 states and the District of Columbia.

The Month of First Terminations during the unwinding was set to April 2023 to match the earliest month that states could terminate beneficiaries during the unwinding. Since only five states started terminations in April 2023, the expected number of terminations for this month is lower than for other months. More detail is provided on the distribution of expected terminations during the unwinding in Section 3.4. The number of months assumed to process terminations during the unwinding was set to 15 months, a time span designed to cover the unwinding for all states. The Unwinding Priority, which determines when populations are terminated, was selected to follow a Time-Based approach in the Model, which unwinds all populations simultaneously rather than one at a time.

Another assumption in the first input section of the Model deals with churn, which occurs when beneficiaries' coverage ends and they re-enroll within a short period of time, often quantified in a 12-month period. The gap in coverage that results is referenced in the Model as Months Lag. The number of months lag for members that churn back after being terminated is set to 6 months with the Scenario Testing using input values of 2 and 10 months. This assumption was selected by the research team to give a wide enough range of months that is contained within a one-year period.

3.2 ENROLLMENT GROWTH

Even though the Model is heavily focused on the unwinding, there is value in looking beyond that period to model how other enrollment factors may affect total enrollment and average acuity. For the national projection, enrollment growth was not assumed to occur during the unwinding. However, for periods after the unwinding, enrollment growth is assumed to be 1.0% per annum. It is applied on a monthly basis equal to 0.124% of the previous month's enrollment. The basis for the 1.0% selection is a combination of expected population growth (0.5% annual growth per CBO[6]), eligibility policy changes since the start of the pandemic (unknown impact), and uncertain economic conditions (unknown impact).

3.3 MEASURING ACUITY

Acuity is the severity of illness and is a parameter considered in patient classification. Broadly in actuarial applications, it's a term used to describe the average morbidity of a population. Acuity can be rebalanced in the Model between two periods such as pre-PHE and after the unwinding. The research team wanted to reflect this rebalancing assumption in the national model. Pre-PHE is defined as the months prior to February 2020, and post-unwinding is defined as beginning in July 2024.

3.4 CUSTOM DISTRIBUTION FOR TERMINATIONS DURING THE UNWINDING

As indicated in Section 3.1, the distribution of terminations during the unwinding has been customized for this national projection. As far as terminations are concerned, the assumption in the Model is that the unwinding starts in April 2023 and lasts until June 2024, a 15-month period to cover the expected unwinding periods for all states. Figure 3-1 shows the distribution of terminations used for that period in the national projection.

Figure 3-1
CUSTOM UNWINDING DISTRIBUTION USED FOR MODEL

Unwinding Month	Month	Percentage of Terminations
1	4/1/23	1.9%
2	5/1/23	3.6%
3	6/1/23	6.1%
4	7/1/23	7.4%
5	8/1/23	8.4%
6	9/1/23	9.7%
7	10/1/23	9.6%
8	11/1/23	9.1%
9	12/1/23	7.6%
10	1/1/24	7.6%
11	2/1/24	7.5%
12	3/1/24	7.9%
13	4/1/24	6.2%
14	5/1/24	4.7%
15	6/1/24	2.8%

To develop this distribution, the research team used data from the unwinding plans that states had submitted to CMS. Appendix A contains information about states' unwinding plans, including links to the renewal reports for 30 states. These state reports contain the distribution of expected volume of eligibility redeterminations. The research team is using the redeterminations as a proxy for the expected distribution of terminations. Even though terminations do not occur until at least two months after the redeterminations, the research team expects the distributions to be very similar.

The 30 state distributions sourced from the CMS renewal plans were reported in the form of either households or individuals. The percentage of distributions each month was multiplied by the number of Medicaid beneficiaries as of December 2022 for each state, resulting in expected beneficiary terminations by month.

3.5 POPULATION SELECTION

No changes were made to populations, and the OVERRIDE functionality in the Model was not used. For purposes of summary results, the aggregate grouping consists of all the populations except Aged and Disabled, which are still modeled on their own and shown in summary results. Aged and Disabled were excluded from the aggregate grouping summary because these populations are assumed to have little to no change due to the unwinding.

3.6 UNWINDING SPECIFICATIONS

Two critical assumptions for the unwinding are: (1) the percentage of beneficiaries expected to lose coverage during the unwinding and (2) the percentage of that subset that reenroll with the program within the next 12 months (churn). These are covered in the next two subsections. Churn following the unwinding is covered in Section 3.6.3.

3.6.1 LOSS OF COVERAGE ASSUMPTIONS

To derive the percentage of beneficiaries who lose coverage during the unwinding, the research team assumed that enrollment should not decrease to a level that is less than what it was before the PHE. Prior to the PHE, Medicaid enrollment was relatively "flat" and actually decreased from 2017 to 2020. Assuming there would be no continued growth during the PHE, aside from programmatic expansions by select states, such as those that expanded under the ACA, then enrollment would return closer to pre-PHE levels.

In an article published in April 2023, KFF took a similar approach with its estimates of the volume of terminations during the unwinding.[7] Its upper end scenario projection forecasted that 7.21 million children would lose coverage between March 2023 and May 2024, which is very close to the 7.25 million children who were estimated to have gained Medicaid coverage from February 2020 to March 2023. For purposes of this model, the exact counts could not be used due to different methodologies in allocating the base data for enrollment. Instead, the research team chose to use assumptions to those of similar KFF in terms of percentage of enrollment increases that were assumed to be terminated over the course of the unwinding. Figure 3-2 shows the percentages from KFF's midpoint scenario projection and the percentage assumption used by the research team in the Model.

Figure 3-2
DEVELOPMENT OF LOSS OF COVERAGE ASSUMPTIONS

Population	KFF Growth	KFF Upper	KFF Mid	Mid-of-Growth	Model Growth	% Lost Cov.	Adj % Lost	Updated % Lost
CHIP	213,400	n/a	n/a	n/a	2.9%	n/a	5.1%	6.4%
Children	7,253,100	7,210,600	4,800,100	66.2%	34.4%	16.9%	18.8%	23.5%
Expansion	8,854,100	17,202,000	11,799,700	74.3%	42.3%	22.1%	24.0%	30.0%
Adult	5,760,000			74.3%	40.0%	21.2%	23.1%	28.9%
Aged	1,258,200			74.3%	26.2%	15.4%	5.1%	6.4%
Disabled				74.3%	21.8%	13.3%	5.1%	6.4%
COVID New	n/a	n/a	n/a	n/a	0.0%	n/a	100.0%	100.0%
Unknown	n/a	n/a	n/a	n/a	-61.7%	n/a	100.0%	100.0%

The percentages in Figure 3-2 were developed through the following steps:

1. The fifth column takes KFF's midpoint scenario of terminations during the unwinding and compares it to its estimates of growth for that population over the course of the PHE. Because of the differing base enrollment methodologies, the growth observed in the Model has a different allocation across the populations, despite similar numbers in total growth. The research team took the fifth column, Mid-of-Growth, and multiplied that against growth observed in the Model (sixth column) to arrive at base percentages of each population that would lose coverage during the unwinding (seventh column). Three additional adjustments were then made.
2. The first adjustment is that COVID New and Unknown were both assumed to lose all beneficiaries.
3. The second adjustment is based on the expectation that the Children, Expansion and Adult populations would see the most terminations. With observations of relatively high loss of coverage for the Aged and Disabled, a smoothing technique was applied to split those terminations across two groups of populations.
    a. One half of those expected terminations would apply to the Children, Expansion and Adult populations, therefore increasing each population's loss of coverage rate by 1.9%.
    b. The other group was CHIP, Aged and Disabled. CHIP was included in this second group because the research team expects there to be some level of terminations of CHIP beneficiaries, given the nature of the unwinding.
4. Finally, for the last column, these percentages were increased by a factor of 1.25 (but not to exceed 100%) to reflect the expected loss in coverage based on the research team's observation of the initial results from the first two months of unwinding.

For scenario testing, the research team assumed there would be more variation in the populations with higher percentages of coverage loss. No supporting data were used to develop the assumptions in the variation. The research team assumed the Children, Expansion and Adult populations would each have a percentage that varies by 10.0%. For example, the loss of coverage assumption for Children is 23.5%, as shown in Figure 3-2. The lower enrollment scenario would result in this percentage being 33.5%, whereas the higher enrollment scenario is 13.5%. The research team then assumed the variation would be 5.0% for the Aged and Disabled populations and 0% for the CHIP, COVID New and Unknown populations.

3.6.2 CHURN

Churn is a critical element of modeling Medicaid enrollment changes when there are large changes with a population. Churn can happen for a number of reasons, such as income fluctuations, moving between Medicaid and other coverages, aging out of an eligibility group (children), or losing temporary coverage (pregnant women), all of which are eligibility changes. It can also happen due to procedural reasons where a beneficiary does not return paperwork (or respond to similar online inquiry) to renew their enrollment, despite the beneficiary still being eligible.

When beneficiaries are terminated in any way within the Model, churn will then apply, with two separate churn assumptions for the unwinding and post-unwinding periods. The rationale for this is that churn could be higher than "normal" during the unwinding due to the unprecedented volume in terminations that are taking place. Furthermore, a significant portion of individuals subject to eligibility renewals may have limited prior experience in navigating Medicaid enrollment given that they were not subject to termination during the PHE. The research team used a MACPAC study, summarized in Figure 3-3, as the basis for the post-unwinding churn assumption and then assumed that churn during the unwinding would occur at a higher rate than "normal," which is reflected in the unwinding assumption.[8]

Figure 3-3
MACPAC CHURN STUDY

Eligibility group	Number of beneficiaries ever enrolled in 2018 included in analysis	Beneficiaries disenrolled in 2018		Beneficiaries disenrolled in 2018 who re-enrolled within 12 months	
		Number	Share of all beneficiaries	Number	Share of all beneficiaries
Total	**72,151,065**	**15,072,817**	**21%**	**5,565,440**	**8%**
Children	**34,988,539**	**6,538,623**	**19%**	**2,882,277**	**8%**
Medicaid, MAGI	30,728,826	5,434,257	18%	2,375,676	8%
Medicaid, children with disabilities	1,276,388	92,255	7%	39,835	3%
Separate CHIP	2,983,325	1,012,111	34%	466,766	16%
Adults	**37,162,526**	**8,534,194**	**23%**	**2,683,163**	**7%**
MAGI	26,115,314	7,212,546	28%	2,340,104	9%
Adults with disabilities	5,845,017	542,739	9%	179,699	3%
Age 65 and older	5,202,195	778,909	15%	163,360	3%

Churn is the ratio of the beneficiaries who reenrolled (fifth and sixth columns) to those who initially disenrolled (third and fourth columns). For the unwinding period, the research team assumed churn would be an additional 5% higher for the CHIP, Aged and Disabled populations and 20% higher for the Children, Expansion and Adult populations. These percentages were selected on the basis of the stated rationale of higher-than-expected churn during the unwinding. The populations with substantially higher churn adjustments are the three from the default populations in the Model that are assumed to experience the highest losses of coverage. Figure 3-4 shows the resulting percentages used for both churn assumptions.

Figure 3-4
CHURN ASSUMPTIONS

	Churn		
Population	Baseline	Additional	Unwinding
CHIP	46.1%	5.0%	51.1%
Children	43.7%	20.0%	63.7%
Expansion	32.4%	20.0%	52.4%
Adult	32.4%	20.0%	52.4%
Aged	20.9%	5.0%	25.9%
Disabled	34.6%	5.0%	39.6%
COVID New	0.0%	0.0%	0.0%
Unknown	0.0%	0.0%	0.0%

The next section covers churn in greater detail for the assumptions on how populations return to coverage and if eligibility changes upon return.

3.7 CHURN DISTRIBUTION

When a beneficiary leaves and returns to a state Medicaid/CHIP program shortly thereafter, they may not return with the same eligibility. This is exacerbated even further due to the PHE, as there has not been churn for at least three years. For example, children have maintained coverage in Medicaid during the PHE, but with redeterminations restarting during the unwinding, many children will be moved to CHIP. The Model supports the change in population when members churn back by allowing the user to control how former members return to the program.

Selected churn back distribution assumptions for the national projection are shown in Figures 3-5 and 3-6 for expansion and non-expansion states, respectively. Newly disabled beneficiaries, joining as a small subset from CHIP, TANF and Expansion groups, were based on recent trends with the COVID-19 pandemic where there has been an increase in rates of disability across the country, leading to a 0.36% assumption (based on the figure of 1.2 million referenced in an article[9] and divided by a US population of 334.2 million people as of January 2023[10]) for those who churn back from those populations to Disabled. Due to aging, 1 out of 18 CHIP and Children beneficiaries and 2 out of 46 Disabled beneficiaries are assumed to churn back to Adult and Aged, respectively. It is assumed that 5% of children who lose coverage will rejoin as CHIP beneficiaries. In the other direction of member movement, 13.9% of CHIP beneficiaries are assumed to return with Medicaid eligibility and be in the Children population. Other than the assumptions already mentioned, beneficiaries are assumed to churn back to the same population, which are presented in whole in the following figures. Note that Figures 3-5 and 3-6 include an unlabeled population in the both the last row and column, which is a supported functionality in the Model that was not used in this national projection.

Figure 3-5
CHURN BACK DISTRIBUTION FOR EXPANSION STATES

	INPUT #7: Churn Back Distribution								
Population	CHIP	Children	Expansion	Adult	Aged	Disabled	COVID New	Unknown	
CHIP	83.5%	13.9%	2.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Children	5.0%	89.4%	5.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Expansion	0.0%	0.0%	97.5%	0.0%	2.2%	0.4%	0.0%	0.0%	0.0%
Adult	0.0%	0.0%	0.0%	97.5%	2.2%	0.4%	0.0%	0.0%	0.0%
Aged	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%
Disabled	0.0%	0.0%	0.0%	0.0%	4.3%	95.7%	0.0%	0.0%	0.0%
COVID New	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
Unknown	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%
	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%

Figure 3-6
CHURN BACK DISTRIBUTION FOR NON-EXPANSION STATES

	INPUT #7: Churn Back Distribution								
Population	CHIP	Children	Expansion	Adult	Aged	Disabled	COVID New	Unknown	
CHIP	85.7%	14.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Children	5.3%	94.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Expansion	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Adult	0.0%	0.0%	0.0%	97.5%	2.2%	0.4%	0.0%	0.0%	0.0%
Aged	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%
Disabled	0.0%	0.0%	0.0%	0.0%	4.3%	95.7%	0.0%	0.0%	0.0%
COVID New	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
Unknown	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%
	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%

3.8 TERMINATION RATES

In lieu of having eligibility data for all states, the research team leveraged an assumption to account for both historical changes in enrollment and future lapse in coverage. This is called the Rate of Leavers and can be viewed as a turnover assumption; it is the percentage of enrollment that disenrolls each month. The Model varies this rate for the pre-PHE, continuous coverage period and the period of unwinding and months later. This rate can also vary by population.

The Rate of Leavers causes beneficiaries, skewed to higher durations, to drop their coverage. To reconcile historical monthly enrollment data, an adjustment to joiners is included so the net total with the joiners less the leavers is equal to the change in enrollment from one month to the next. The Rate of Leavers doesn't apply only to historical data, so the adjustment to joiners also applies to future periods.

Because there is ongoing churn in Medicaid, the adjustment to joiners to balance the Rate of Leavers reflects this. If enrollment growth is set to 0%, then the joiners will fully offset the leavers to keep total enrollment constant. Note that, depending on the churn back distribution assumptions, some populations may increase or decrease, despite a total enrollment growth of 0%, but the aggregate sum of all populations should reflect the enrollment growth of 0%.

The assumptions used in the national projection for the Rate of Leavers are based on a study that showed leavers, excluding deaths, still occurred in Medicaid but were 85% lower in the 2020 study period as compared to the previous year.[11] The study showed that for the 2020 study period, which spanned eight months, 194,000 beneficiaries were disenrolled. That period started with 7,285,000 enrollees and ended with 8,279,000 enrollees. Therefore, the percentage used for monthly termination rates during the PHE was set to 0.31%, which is equal to the 194,000 divided by eight months of an average enrollment of 7,782,000—the arithmetic average of 7,285,000 and 8,279,000—rounded to two decimal places. Using the same set of measures from the 2019 study period, the assumption for pre-PHE was set to 1.65%. As an

additional point of validation, the research team compared this 2019 study result to the MACPAC study referenced in Section 3.6, which showed that 21% of all beneficiaries in 2018 were disenrolled within the subsequent 12-month period. This is equivalent to a monthly termination rate of 1.75%, reasonably close to the study being used for termination rates.

For the monthly termination rates in future periods, the Model allows for different assumptions by population. The research team expects terminations to return to rates similar to pre-PHE and used the MACPAC study to support these assumptions, taking the percentage of all beneficiaries in 2018 that were disenrolled within the subsequent 12-month period, dividing that percentage by 12 and rounding the final result to two decimal places. For individuals with disabilities, the MACPAC study had 7% for children and 9% for adults, so an average of 8% per year, or 0.67% per month, was used as the assumption. MACPAC has 1.25% for the Aged population, but the research team chose a lower assumption to prevent the population from decreasing in a 0% enrollment growth scenario. This led to the selection of 0.4% as the monthly termination rate for Aged individuals. The assumption for all other populations directly tied to a line in the MACPAC study. The resulting assumptions for monthly termination rates were 2.83% for CHIP, 1.50% for Children, 2.33% for both Adults and Expansion, 0.67% for Disabled, and 1.25% for Aged.

3.9 ACUITY PRE-UNWINDING

Default assumptions for the acuity curves shown in Figure 3-7 were developed using data from several sources:

- Datasets from Synthetic Healthcare Database for Research (SyH-DR), which has a sample of a full enrollment and claims dataset from CMS in 2016, were summarized by duration of enrollment for all beneficiaries who had new coverage beginning that year. Data are split by inpatient, outpatient, and pharmacy. Average PMPM claim cost by duration was compared to average per member per month (PMPM) for each population, which included CHIP, Medicaid Children, Adult, Expansion Adult, Disabled and Aged. Methodology from the Agency for Healthcare Research and Quality can be found at https://www.ahrq.gov/sites/default/files/wysiwyg/data/SyH-DR-Sampling-Weighting-Synthetization-Methodologies-rev.pdf.
- Publicly available data sources from select states, including actuarial rate certifications from Arizona Medicaid for the rating period of October 1, 2022, through September 30, 2023, which detail acuity factors for a significant portion of the originally scheduled end of PHE and unwinding.
- Requested data sets from Medicaid agencies in Mississippi and West Virginia.

Starting with the SyH-DR dataset, acuity was measured by examining PMPM by population by state by duration of enrollment for Medicaid beneficiaries. Comparing the PMPM at a duration for a state population to the overall PMPM for all durations results in a cost relativity that can be used to develop the acuity factors. Duration was counted by measuring continuous months of coverage within the dataset. Since the dataset spanned only one year, the first month in which a beneficiary was eligible could indicate that they either were newly eligible or had long duration. For this reason, only beneficiaries who first became eligible in the year would be included in the analysis. Any beneficiary with full coverage for the year would go into a 12+ month duration slot for purposes of developing the acuity factors.

When comparing these results to publicly available data sources and the requested datasets from select states, the acuity curves appeared too steep. Furthermore, the Model takes monthly acuity factors for the first year and then a single acuity factor for Year 2 onward, so the acuity curves need an expectation for acuity in the time period after the first year. To adjust for this, the research team examined duration by population as sourced from the National Institutes of Health (NIH)[12] and assumed a consistent lapse rate for each month of duration up to 36 months to match expected average durations from NIH. Acuity curves were used for Children (both CHIP and Medicaid), Expansion and Adult. The research team assumed no acuity changes due to shifts in enrollment for Aged and Disabled; therefore, the acuity remains a constant 1.00 at all durations. Furthermore, with COVID New and Unknown being completely decremented in the

projection, no acuity curves were assumed for those populations. Resulting acuity factors by duration used in the national projection are shown in Figure 3-7.

Figure 3-7
ACUITY CURVE

INPUT #9: Acuity Pre-Unwinding									
Duration	CHIP	Children	Expansion	Adult	Aged	Disabled	COVID New	Unknown	
1	1.039	1.089	1.559	1.753	1.000	1.000	1.000	1.000	1.000
2	1.077	1.076	1.112	1.266	1.000	1.000	1.000	1.000	1.000
3	1.069	1.068	1.098	1.182	1.000	1.000	1.000	1.000	1.000
4	0.969	0.968	1.127	1.051	1.000	1.000	1.000	1.000	1.000
5	1.147	1.145	0.977	1.037	1.000	1.000	1.000	1.000	1.000
6	1.024	1.023	1.057	1.061	1.000	1.000	1.000	1.000	1.000
7	0.936	0.935	1.005	1.039	1.000	1.000	1.000	1.000	1.000
8	0.956	0.955	1.019	1.017	1.000	1.000	1.000	1.000	1.000
9	0.986	0.984	0.974	0.996	1.000	1.000	1.000	1.000	1.000
10	0.994	0.992	0.969	0.981	1.000	1.000	1.000	1.000	1.000
11	0.996	0.994	0.971	0.960	1.000	1.000	1.000	1.000	1.000
12	0.996	0.994	0.971	0.960	1.000	1.000	1.000	1.000	1.000
+1 Year	0.996	0.994	0.971	0.960	1.000	1.000	1.000	1.000	1.000

Furthermore, the research team acknowledges through data observations as well as industry shared knowledge that it is widely accepted that the average cost profile of Medicaid (and CHIP) beneficiaries has decreased during the PHE. With the volume of terminations significantly decreasing, a couple of situations occur: (1) beneficiaries stay covered for much longer, increasing their duration of enrollment, and shifting the cost profile from higher costs expected in the first year to lower costs in future durations, and (2) some beneficiaries will have other insurance, such as employer-sponsored coverage, resulting in greatly reduced claims. The decreasing acuity with longer durations is usually due to the immediate need at enrollment, whether it is through presumptive eligibility or direct applications. MACPAC observed this in its analysis of inpatient admissions.

A subset of the pre-unwinding period is the pre-PHE period of January 2019 to February 2020. The Model does not apply the pre-unwinding factors for this period but assumes a 1.0 acuity factor due to the unknown distribution of enrollment by duration.

3.10 ACUITY AFTER THE UNWINDING

The post-unwinding acuity curve was set to be equivalent to the pre-PHE acuity curve with the underlying assumption that acuity would return to the same level it was before the pandemic. However, there is a major shift in enrollment that requires the acuity curve to be "rebalanced." With more than three years of continuous coverage, remaining eligible beneficiaries will have a much higher duration of enrollment after the unwinding than they did before the PHE. The research team assumes that beneficiaries with lower acuity, such as under- and non-utilizers or individuals with primary health insurance coverage that isn't Medicaid, comprise the majority of beneficiaries that lose coverage. Given this major shift in enrollment from low durations to high durations (meaning the months of continuous coverage) and the reduction in lower acuity beneficiaries with high durations, the research team adjusted the acuity upward in the 13+ month entry of the post-unwinding acuity curve table.

For the post-unwinding acuity curve, the Model has an option to run a macro that will allow for neutrality of acuity so that the average acuity for each population at the time period immediately before the PHE and immediately following the unwinding is equivalent. The macro takes the values for the "solved acuity curve" for each population at the month denoted for post-unwinding in INPUT #3, which is calculated by multiplying acuity by membership for each duration and then algebraically solving for the acuity at Month

13+. If a solution is not attainable by adjusting that duration, the entire acuity curve is adjusted upward or downward by a factor that ensures the average acuity is equal between the pre-PHE and post-unwinding periods (referenced in Section 3.3).

The research team decided not to simulate any change in acuity for the scenario testing. This decision was made to keep the focus on the impacts of the unwinding and enrollment shifts on average acuity.

Section 4: Interpreting Model Results

This section provides an overview of the Model's results running the national projection. There are several ways to examine and interpret the results. Figure 4-1 shows the enrollment and acuity changes from March 2023 to July 2024, which represents the last month of the PHE to the first month after the unwinding. On average, enrollment decreased by approximately 12.6 million nationwide (a 13.4% decrease), and within the range of low to high enrollment assumptions, this enrollment change resulted in about 9 million to 18 million Medicaid and CHIP beneficiaries losing coverage.

Figure 4-1
CHANGE FROM PRE-UNWINDING TO POST-UNWINDING

	Period 1: Mar 23 to Mar 23		Period 2: Jul 24 to Jul 24		Low Enrollment Scenario		Mid Enrollment Scenario		High Enrollment Scen.	
Population	Avg. Enrollment	Acuity	Avg. Enrollment	Acuity	Enrollment	Acuity	Enrollment	Acuity	Enrollment	Acuity
CHIP	7,059,078	1.00	6,921,250	1.00	-0.9%	0.1%	-2.0%	0.2%	-4.1%	0.2%
Children	33,684,246	1.00	28,578,480	1.00	-23.0%	0.3%	-15.2%	0.5%	-10.9%	0.5%
Expansion	19,796,753	0.97	16,495,680	1.00	-23.2%	2.2%	-16.7%	2.6%	-13.3%	2.6%
Adult	14,843,385	0.97	11,882,207	1.00	-26.9%	2.9%	-19.9%	3.5%	-15.9%	3.7%
Aged	8,133,321	1.00	7,767,131	1.00	-9.6%	0.0%	-4.5%	0.0%	-1.0%	0.0%
Disabled	9,893,633	1.00	9,422,525	1.00	-10.2%	0.0%	-4.8%	0.0%	-1.1%	0.0%
Non-ABD	75,583,548	0.98	63,877,617	1.00	-22.0%	1.5%	-15.5%	1.9%	-12.1%	1.9%
All Populations	**93,610,502**	**0.99**	**81,067,274**	**1.00**	**-19.6%**	**0.7%**	**-13.4%**	**0.9%**	**-10.0%**	**0.9%**

As shown in this projection, Children, Expansion and Adult are the most impacted groups during the unwinding. The Adult population is most impacted in terms of acuity changes, with a 3.5% average increase. This is largely driven by the greater variance in the acuity curve used for the Expansion population.

In the next set of exhibits, both Period 1 and Period 2 are changed to 12-month periods to best reflect what would be the base data period and rating period for Medicaid capitation rate development. This is done for projections both to Calendar Year periods that start January 1 and to Common State Fiscal Year periods that start July 1:

- Figure 4-2 compares time periods beginning January 1, 2022, and January 1, 2024, respectively.
- Figure 4-3 compares time periods beginning January 1, 2023, and January 1, 2025, respectively.
- Figure 4-4 compares time periods beginning January 1, 2024, and January 1, 2026, respectively.
- Figure 4-5 compares time periods beginning July 1, 2021, and July 1, 2023, respectively.
- Figure 4-6 compares time periods beginning July 1, 2022, and July 1, 2024, respectively.
- Figure 4-7 compares time periods beginning July 1, 2023, and July 1, 2025, respectively.
- Figure 4-8 compares time periods beginning July 1, 2024, and July 1, 2026, respectively.

Figure 4-2

EXAMPLE IMPACT TO CALENDAR YEAR 2024

	Period 1: Jan 22 to Dec 22		Period 2: Jan 24 to Dec 24		Low Enrollment Scenario		Mid Enrollment Scenario		High Enrollment Scen.	
Population	Avg. Enrollment	Acuity	Avg. Enrollment	Acuity	Enrollment	Acuity	Enrollment	Acuity	Enrollment	Acuity
CHIP	7,049,396	1.00	6,847,706	1.00	-1.3%	0.4%	-2.9%	0.4%	-4.6%	0.4%
Children	32,111,334	1.00	28,784,434	1.00	-17.4%	0.3%	-10.4%	0.3%	-6.1%	0.3%
Expansion	19,067,288	0.98	16,535,114	1.00	-18.8%	2.4%	-13.3%	2.6%	-9.9%	2.4%
Adult	14,188,345	0.97	11,984,830	1.00	-21.6%	2.8%	-15.5%	3.1%	-11.5%	2.9%
Aged	7,775,627	1.00	7,790,077	1.00	-4.5%	0.0%	0.2%	0.0%	3.6%	0.0%
Disabled	9,454,813	1.00	9,443,933	1.00	-5.1%	0.0%	-0.1%	0.0%	3.4%	0.0%
Non-ABD	72,608,084	0.98	64,170,581	1.00	-17.2%	1.5%	-11.6%	1.7%	-8.2%	1.6%
All Populations	**89,838,524**	**0.99**	**81,404,591**	**1.00**	**-14.8%**	**0.7%**	**-9.4%**	**0.8%**	**-6.0%**	**0.8%**

Figure 4-3

EXAMPLE IMPACT TO CALENDAR YEAR 2025

	Period 1: Jan 23 to Dec 23		Period 2: Jan 25 to Dec 25		Low Enrollment Scenario		Mid Enrollment Scenario		High Enrollment Scen.	
Population	Avg. Enrollment	Acuity	Avg. Enrollment	Acuity	Enrollment	Acuity	Enrollment	Acuity	Enrollment	Acuity
CHIP	7,009,497	1.00	6,766,997	1.00	0.6%	0.1%	-3.5%	0.2%	-8.3%	0.2%
Children	32,342,455	1.00	29,190,940	1.00	-17.5%	0.2%	-9.7%	0.2%	-8.5%	0.3%
Expansion	18,825,171	0.98	16,507,350	1.00	-18.7%	1.9%	-12.3%	2.1%	-11.8%	2.3%
Adult	14,115,897	0.97	11,806,558	1.00	-23.0%	2.4%	-16.4%	2.7%	-15.0%	2.9%
Aged	8,041,375	1.00	7,840,233	1.00	-7.0%	0.0%	-2.5%	0.0%	-0.5%	0.0%
Disabled	9,781,404	1.00	9,445,152	1.00	-7.9%	0.0%	-3.4%	0.0%	-1.8%	0.0%
Non-ABD	72,458,757	0.98	64,271,845	1.00	-17.3%	1.2%	-11.3%	1.4%	-10.8%	1.5%
All Populations	**90,281,535**	**0.99**	**81,557,230**	**1.00**	**-15.4%**	**0.6%**	**-9.7%**	**0.7%**	**-8.9%**	**0.7%**

Figure 4-4

EXAMPLE IMPACT TO CALENDAR YEAR 2026

	Period 1: Jan 24 to Dec 24		Period 2: Jan 26 to Dec 26		Low Enrollment Scenario		Mid Enrollment Scenario		High Enrollment Scen.	
Population	Avg. Enrollment	Acuity	Avg. Enrollment	Acuity	Enrollment	Acuity	Enrollment	Acuity	Enrollment	Acuity
CHIP	6,847,706	1.00	6,988,684	1.00	4.8%	-0.4%	2.1%	-0.4%	-1.7%	-0.3%
Children	28,784,434	1.00	29,765,174	1.00	1.8%	-0.1%	3.4%	-0.2%	1.5%	-0.2%
Expansion	16,535,114	1.00	16,567,722	1.00	-1.3%	-0.2%	0.2%	-0.4%	-1.6%	-0.2%
Adult	11,984,830	1.00	11,759,602	0.99	-3.5%	-0.4%	-1.9%	-0.7%	-3.5%	-0.5%
Aged	7,790,077	1.00	7,919,477	1.00	1.0%	0.0%	1.7%	0.0%	1.1%	0.0%
Disabled	9,443,933	1.00	9,519,740	1.00	0.5%	0.0%	0.8%	0.0%	-0.2%	0.0%
Non-ABD	64,170,581	1.00	65,081,181	1.00	0.3%	-0.2%	1.4%	-0.4%	-0.6%	-0.3%
All Populations	**81,404,591**	**1.00**	**82,520,398**	**1.00**	**0.4%**	**-0.1%**	**1.4%**	**-0.2%**	**-0.4%**	**-0.1%**

Figure 4-5

EXAMPLE IMPACT TO COMMON STATE FISCAL YEAR 2024

	Period 1: Jul 21 to Jun 22		Period 2: Jul 23 to Jun 24		Low Enrollment Scenario		Mid Enrollment Scenario		High Enrollment Scen.	
Population	Avg. Enrollment	Acuity	Avg. Enrollment	Acuity	Enrollment	Acuity	Enrollment	Acuity	Enrollment	Acuity
CHIP	7,067,426	1.00	6,912,540	1.00	-1.2%	0.2%	-2.2%	0.2%	-2.9%	0.2%
Children	30,848,780	1.00	29,946,052	1.00	-6.6%	0.2%	-2.9%	0.1%	1.2%	0.1%
Expansion	18,461,247	0.98	17,236,843	0.99	-9.2%	1.7%	-6.6%	1.5%	-3.0%	1.1%
Adult	13,656,736	0.97	12,765,267	0.99	-9.6%	1.7%	-6.5%	1.4%	-2.6%	1.0%
Aged	7,487,440	1.00	7,879,065	1.00	2.4%	0.0%	5.2%	0.0%	7.8%	0.0%
Disabled	9,096,926	1.00	9,576,517	1.00	2.2%	0.0%	5.3%	0.0%	7.9%	0.0%
Non-ABD	70,218,927	0.98	66,946,296	0.99	-7.4%	1.0%	-4.7%	0.9%	-1.2%	0.6%
All Populations	**86,803,293**	**0.99**	**84,401,878**	**1.00**	**-5.6%**	**0.5%**	**-2.8%**	**0.4%**	**0.5%**	**0.3%**

Figure 4-6

EXAMPLE IMPACT TO COMMON STATE FISCAL YEAR 2025

	Period 1: Jul 22 to Jun 23		Period 2: Jul 24 to Jun 25		Low Enrollment Scenario		Mid Enrollment Scenario		High Enrollment Scen.	
Population	Avg. Enrollment	Acuity	Avg. Enrollment	Acuity	Enrollment	Acuity	Enrollment	Acuity	Enrollment	Acuity
CHIP	7,056,143	1.00	6,764,414	1.00	-1.1%	0.4%	-4.1%	0.4%	-7.2%	0.4%
Children	33,144,665	1.00	28,932,414	1.00	-20.9%	0.2%	-12.7%	0.3%	-9.4%	0.4%
Expansion	19,534,415	0.98	16,519,610	1.00	-22.1%	2.4%	-15.4%	2.5%	-12.9%	2.7%
Adult	14,612,551	0.97	11,857,982	1.00	-26.0%	3.1%	-18.9%	3.2%	-15.5%	3.6%
Aged	8,018,636	1.00	7,804,046	1.00	-7.8%	0.0%	-2.7%	0.0%	0.5%	0.0%
Disabled	9,752,879	1.00	9,425,200	1.00	-8.6%	0.0%	-3.4%	0.0%	-0.4%	0.0%
Non-ABD	74,544,031	0.98	64,074,420	1.00	-20.6%	1.6%	-14.0%	1.7%	-11.5%	1.9%
All Populations	**92,315,546**	**0.99**	**81,303,666**	**1.00**	**-18.2%**	**0.8%**	**-11.9%**	**0.8%**	**-9.3%**	**0.9%**

Figure 4-7

EXAMPLE IMPACT TO COMMON STATE FISCAL YEAR 2026

	Period 1: Jul 23 to Jun 24		Period 2: Jul 25 to Jun 26		Low Enrollment Scenario		Mid Enrollment Scenario		High Enrollment Scen.	
Population	Avg. Enrollment	Acuity	Avg. Enrollment	Acuity	Enrollment	Acuity	Enrollment	Acuity	Enrollment	Acuity
CHIP	6,912,540	1.00	6,879,362	1.00	2.8%	-0.2%	-0.5%	-0.1%	-5.4%	-0.1%
Children	29,946,052	1.00	29,477,203	1.00	-7.2%	0.0%	-1.6%	0.0%	-2.9%	0.1%
Expansion	17,236,843	0.99	16,538,002	1.00	-9.0%	0.4%	-4.1%	0.7%	-5.8%	1.1%
Adult	12,765,267	0.99	11,783,514	0.99	-12.9%	0.6%	-7.7%	0.9%	-8.7%	1.4%
Aged	7,879,065	1.00	7,879,853	1.00	-2.7%	0.0%	0.0%	0.0%	0.4%	0.0%
Disabled	9,576,517	1.00	9,482,461	1.00	-3.4%	0.0%	-1.0%	0.0%	-1.1%	0.0%
Non-ABD	66,946,296	0.99	64,678,082	1.00	-7.8%	0.2%	-3.4%	0.4%	-5.1%	0.7%
All Populations	**84,401,878**	**1.00**	**82,040,396**	**1.00**	**-6.8%**	**0.1%**	**-2.8%**	**0.2%**	**-4.1%**	**0.3%**

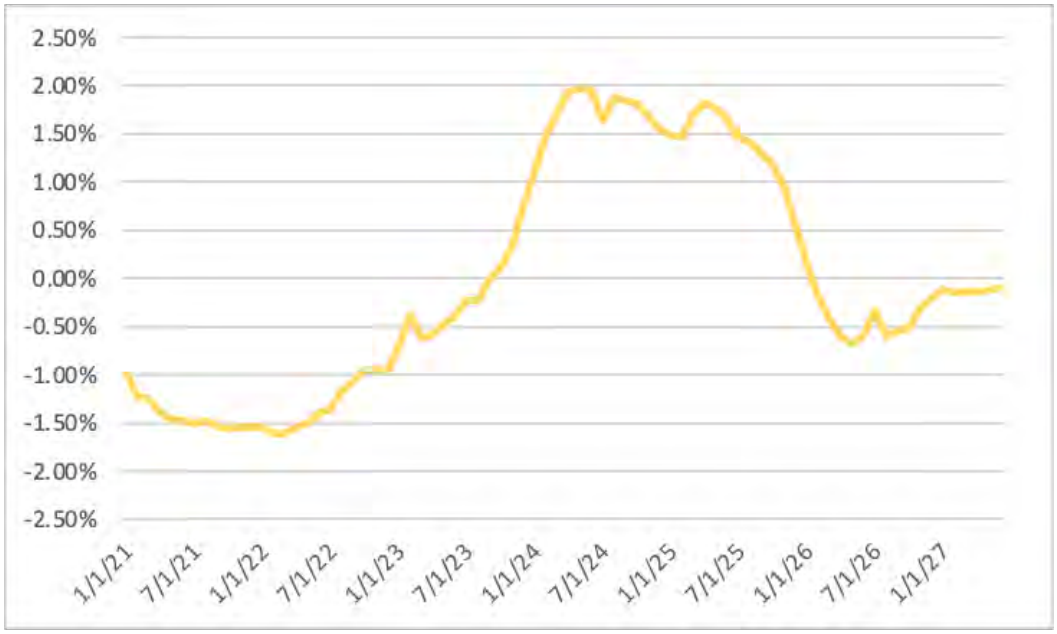
Figure 4-8

EXAMPLE IMPACT TO COMMON STATE FISCAL YEAR 2027

	Period 1: Jul 24 to Jun 25		Period 2: Jul 26 to Jun 27		Low Enrollment Scenario		Mid Enrollment Scenario		High Enrollment Scen.	
Population	Avg. Enrollment	Acuity	Avg. Enrollment	Acuity	Enrollment	Acuity	Enrollment	Acuity	Enrollment	Acuity
CHIP	6,764,414	1.00	7,099,518	1.00	6.1%	-0.4%	5.0%	-0.4%	2.5%	-0.4%
Children	28,932,414	1.00	30,056,412	1.00	4.2%	-0.1%	3.9%	-0.1%	2.7%	-0.2%
Expansion	16,519,610	1.00	16,598,036	1.00	0.7%	-0.1%	0.5%	-0.2%	-0.6%	-0.4%
Adult	11,857,982	1.00	11,735,735	0.99	-0.9%	-0.5%	-1.0%	-0.6%	-2.0%	-0.9%
Aged	7,804,046	1.00	7,959,169	1.00	2.0%	0.0%	2.0%	0.0%	1.6%	0.0%
Disabled	9,425,200	1.00	9,557,149	1.00	1.6%	0.0%	1.4%	0.0%	0.7%	0.0%
Non-ABD	64,074,420	1.00	65,489,700	1.00	2.6%	-0.2%	2.2%	-0.3%	1.0%	-0.5%
All Populations	**81,303,666**	**1.00**	**83,006,018**	**1.00**	**2.4%**	**-0.1%**	**2.1%**	**-0.1%**	**1.0%**	**-0.2%**

These time periods were selected as most capitation rates having rating periods that begin either January 1 (calendar year) or July 1 (aligning with many states' fiscal years). Of these six sample outputs, the largest projected change in acuity occurs for Common State Fiscal Year 2025 when using Common State Fiscal Year 2023 base data, as seen in Figure 4-6. This demonstrates that the unwinding is projected to impact Medicaid capitation rate development for multiple years. The research team examined how acuity changes looked like when examining the acuity in 1 month compared to the acuity 24 months prior to that month. While this does not represent base data or rating periods in 12-month spans, it does demonstrate when the impacts of acuity changes peak on a monthly basis. This is illustrated in Figure 4-9, which shows this 24-month percentage change in acuity for the Non-ABD population.

Figure 4-9
PERCENTAGE CHANGE IN ACUITY (24 MONTHS)



The research team selected Non-ABD (excludes Aged and Disabled) to limit the analysis to the populations in which acuity is modeled to change over the course of the unwinding. As Figure 4-9 shows, the impact of acuity changes peaks in May 2024 and then appears to decrease a year later at a similar rate to that at which it was increasing prior to that point. Alternatively, this graph shows how there were negative acuity impacts during the PHE.

From the "Results" tab in the Model, there is a graph that shows enrollment and acuity over time for a selected position. The next set of exhibits presents this information for the following populations in the national projection:

- CHIP in Figure 4-10
- Children in Figure 4-11
- Expansion in Figure 4-12
- Adult in Figure 4-13
- Aged in Figure 4-14
- Disabled in Figure 4-15
- All Populations in Figure 4-16

Figure 4-10
CHIP'S ENROLLMENT AND ACUITY OVER TIME

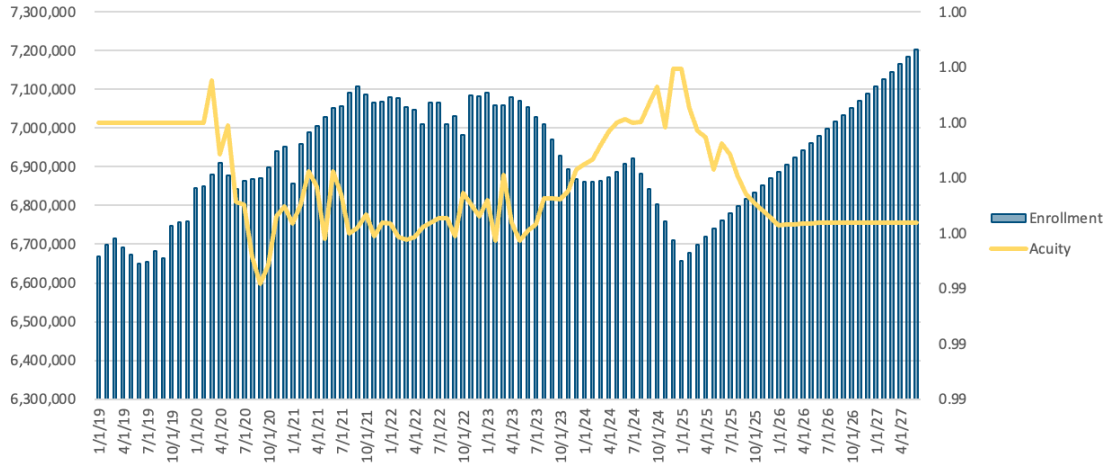


Figure 4-11
CHILDREN'S ENROLLMENT AND ACUITY OVER TIME

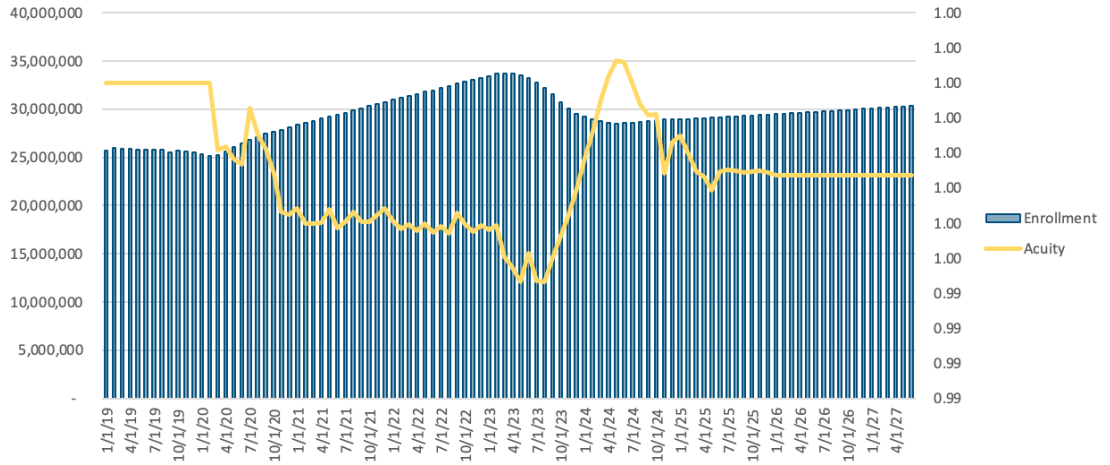


Figure 4-12
EXPANSION'S ENROLLMENT AND ACUITY OVER TIME

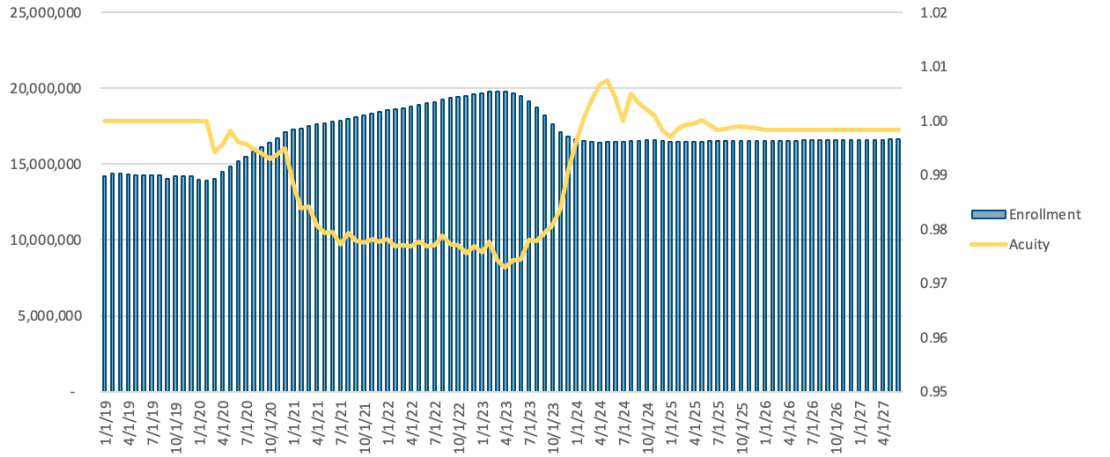


Figure 4-13
ADULT'S ENROLLMENT AND ACUITY OVER TIME

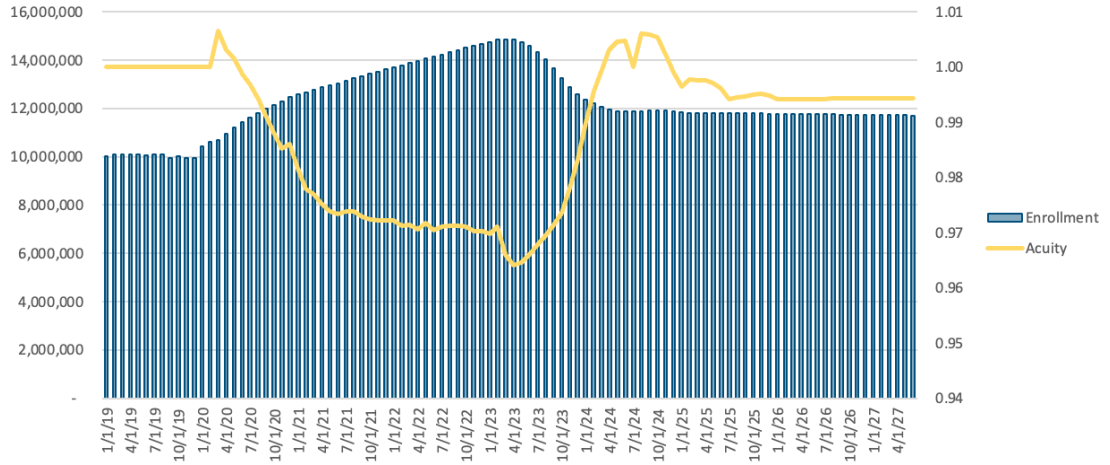


Figure 4-14
AGED'S ENROLLMENT AND ACUITY OVER TIME

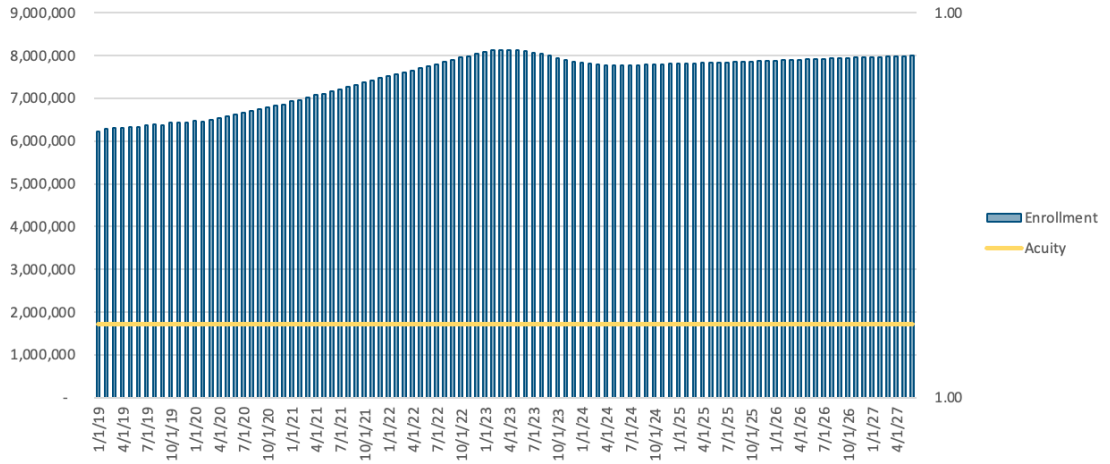


Figure 4-15
DISABLED'S ENROLLMENT AND ACUITY OVER TIME

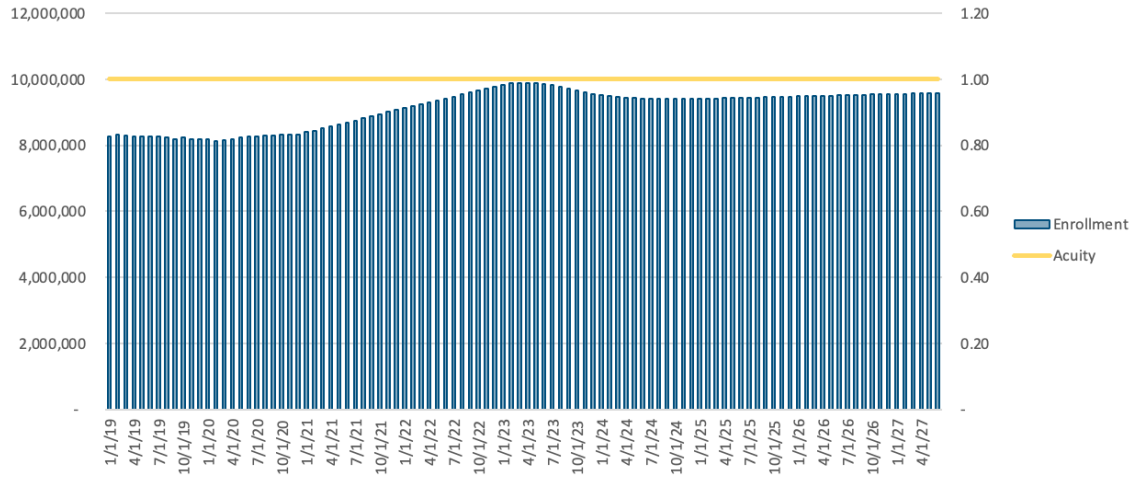
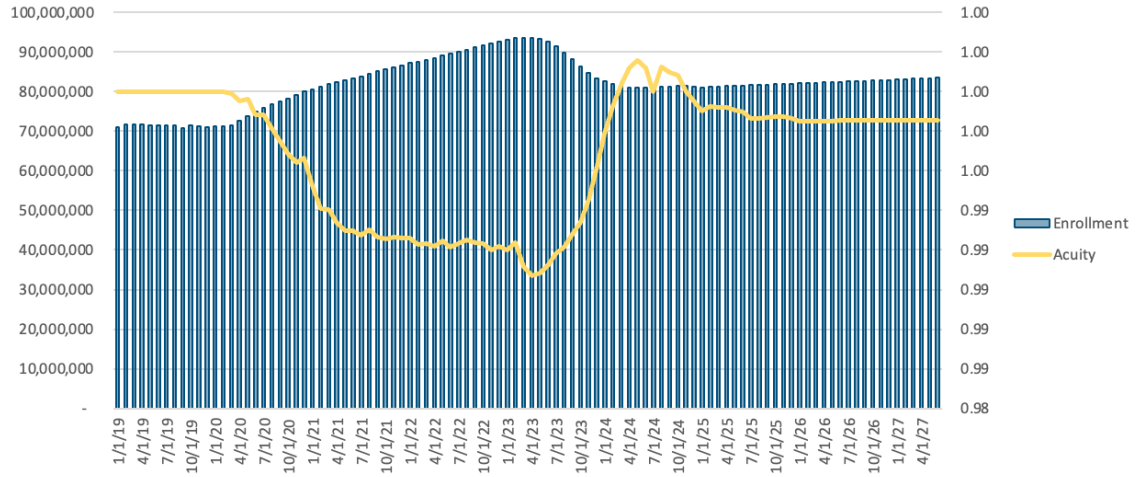


Figure 4-16
ALL POPULATIONS' ENROLLMENT AND ACUITY OVER TIME



It is important to be aware of the limitations described in Section 1 when interpreting these results. Actual enrollment and acuity patterns will vary. With that said, the research team feels that the tables and graphs in this section give an appropriate visual on the impact of the unwinding.

Section 5: Acknowledgments

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Appendix A: State Unwinding Expectations

For states that have "N" listed for renewal reports, the information was not made publicly available when this SOA report was being published. Enrollment is total Medicaid and CHIP enrollment data from CMS in the Model in December 2022.

State	State Renewal Report	Renewals Start	Terminations Start	Enrollment
Alabama	N	Apr. 2023	Jun. 2023	1,171,540
Alaska	N	Apr. 2023	Jun. 2023	263,656
Arizona	AZ Renewal Report	Feb. 2023	Apr. 2023	2,291,196
Arkansas	AR Renewal Report	Feb. 2023	Apr. 2023	1,041,085
California	CA Renewal Report	Apr. 2023	Jul. 2023	14,078,007
Colorado	N	Mar. 2023	Jun. 2023	1,699,630
Connecticut	N	Mar. 2023	May 2023	1,008,718
Delaware	N	Apr. 2023	Jul. 2023	300,480
District of Columbia	DC Renewal Report	Apr. 2023	May 2023	292,727
Florida	FL Renewal Report	Mar. 2023	May 2023	4,883,951
Georgia	GA Renewal Report	Apr. 2023	Jun. 2023	2,485,394
Hawaii	HI Renewal Report	Apr. 2023	Jun. 2023	459,261
Idaho	N	Feb. 2023	Apr. 2023	452,903
Illinois	N	Apr. 2023	Jul. 2023	3,788,584
Indiana	IN Renewal Report	Mar. 2023	Apr. 2023	2,011,078
Iowa	IA Renewal Report	Feb. 2023	Apr. 2023	850,906
Kansas	KS Renewal Report	Mar. 2023	Jun. 2023	503,665
Kentucky	KY Renewal Report	Apr. 2023	May 2023	1,618,816
Louisiana	LA Renewal Report	Apr. 2023	Jul. 2023	1,896,206
Maine	N	Apr. 2023	Jun. 2023	367,372
Maryland	MD Renewal Report	Apr. 2023	May 2023	1,685,151
Massachusetts	N	Apr. 2023	Jun. 2023	1,977,039
Michigan	N	Apr. 2023	Jul. 2023	3,048,240
Minnesota	N	Apr. 2023	Jul. 2023	1,380,680
Mississippi	MS Renewal Report	Mar. 2023	Jun. 2023	770,553
Missouri	MO Renewal Report	Apr. 2023	Jul. 2023	1,453,302
Montana	MT Renewal Report	Mar. 2023	Apr. 2023	324,866
Nebraska	N	Mar. 2023	May 2023	390,562

Nevada	NV Renewal Report	Apr. 2023	May 2023	870,550
New Hampshire	N	Feb. 2023	Apr. 2023	249,906
New Jersey	NJ Renewal Report	Apr. 2023	Jun. 2023	2,202,958
New Mexico	N	Mar. 2023	May 2023	884,416
New York	N	Mar. 2023	Jul. 2023	7,408,878
North Carolina	NC Renewal Report	Apr. 2023	Jul. 2023	2,283,425
North Dakota	N	Apr. 2023	Jun. 2023	130,665
Ohio	OH Renewal Report	Feb. 2023	Apr. 2023	3,365,244
Oklahoma	N	Mar. 2023	May 2023	1,294,297
Oregon	OR Renewal Report	Apr. 2023	Oct. 2023	1,380,287
Pennsylvania	PA Renewal Report	Mar. 2023	Apr. 2023	3,674,072
Rhode Island	RI Renewal Report	Apr. 2023	May 2023	362,512
South Carolina	SC Renewal Report	Apr. 2023	May 2023	1,296,844
South Dakota	N	Feb. 2023	Apr. 2023	144,718
Tennessee	TN Renewal Report	Mar. 2023	Jun. 2023	1,816,267
Texas	TX Renewal Report	Apr. 2023	Jun. 2023	5,746,388
Utah	UT Renewal Report	Mar. 2023	May 2023	482,074
Vermont	VT Renewal Report	Apr. 2023	May 2023	192,634
Virginia	N	Mar. 2023	May 2023	2,003,672
Washington	WA Renewal Report	Apr. 2023	Jun. 2023	2,168,482
West Virginia	WV Renewal Report	Feb. 2023	Apr. 2023	645,172
Wisconsin	WI Renewal Report	May 2023	Jun. 2023	1,421,699
Wyoming	N	Mar. 2023	May 2023	83,301

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