

MILLIMAN REPORT

Cost and Savings Analysis for Medicare Advancing Home and Community Care Model Concept

Prepared for California Health and Human Services Agency

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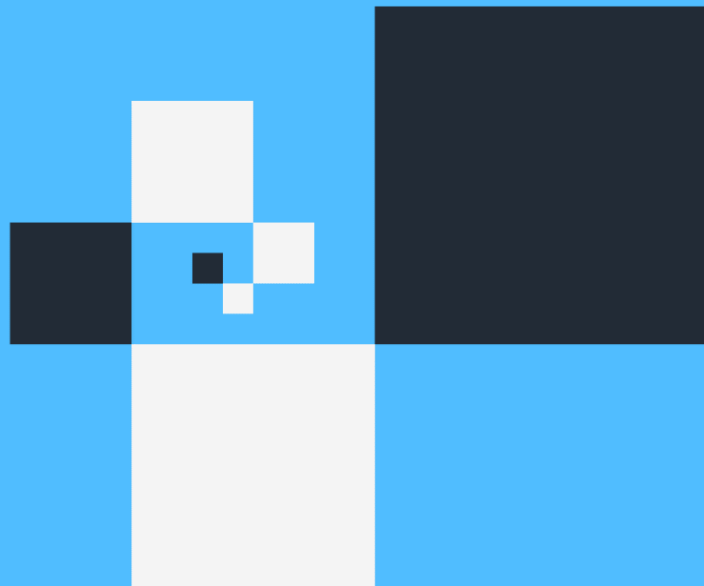


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Overview

The California Health and Human Services Agency (CalHHS)¹ has developed a draft concept called the Medicare Advancing Home and Community Care (MAHCC) model that would provide eligible Medicare enrollees who satisfy minimum frailty criteria with service navigation, access to a suite of home and community-based services (HCBS), including at-home care and supports for caregivers, and the option to participate in the Community Aging in Place Advancing Better Living for Elders (CAPABLE) program. CAPABLE is a short-term home-based program that provides occupational therapy, a handy worker, and registered nurse services in conjunction with home modifications to improve function and safety².

At the request of CalHHS and ATI Advisory, a technical and analytical advisor to CalHHS, we conducted an actuarial analysis to understand the potential cost of the MAHCC model and a range of potential medical cost savings scenarios that may be generated by the provision of the model benefits. The analysis allows stakeholders to make an informed decision about the likelihood and magnitude of costs and potential savings generated to Medicare if the MAHCC model is implemented. This analysis may not be appropriate and should not be used for any other purposes.

In alignment with the Governor's Master Plan for Aging, this report was funded by the California Department of Aging's Long-Term Services and Supports (LTSS) Financing and Affordability Initiative, as part of the Budget Act of 2022 AB 179 (Ting). This report was developed with the input and guidance from the California Departments of Aging and Health Care Services. For more information, please see the California Department of Aging's LTSS Financing and Affordability Initiative webpage³.

SCOPE OF ENGAGEMENT

The purpose of this analysis is to estimate the direct cost of the MAHCC model as well as a range of medical cost savings projections resulting from the provision of model benefits to eligible Medicare enrollees in California.

The scope of our engagement included the following components:

- Analyze eligibility models and estimate enrollment in the model over an 8-year period with 2 years of runout
- Develop direct model cost projections
- Develop model savings projections for Medicare
- Perform sensitivity testing on model parameters and actuarial assumptions
- Provide a final report summarizing the key results, methodology, and assumptions of the analysis

POPULATION SELECTION AND MODEL GOAL

Through the MAHCC model, CalHHS aims to serve the "Overlooked Middle," their term for Medicare beneficiaries above the Medicaid income limit who need home and community-based care. Without access to Medicaid HCBS, these individuals and their caregivers may be left to navigate the high out-of-pocket costs of home and community-based care that could lead to potential impoverishment, and/or they may need to rely on strained family caregiver supports.

The MAHCC model aims to test the impact of providing eligible individuals in the "Overlooked Middle" population with service navigation, access to HCBS benefits, and the option to participate in the CAPABLE program. Per CalHHS, overall goals include improvement in enrollee experience and outcomes, delays in or avoidance of institutionalization, reduction in acute and post-acute care expenditures, and the creation of Medicare cost savings⁴.

¹ CalHHS includes six offices that constitute the Office of the Health and Human Services Secretary which include the Office of Legislative Affairs, the Office of External Affairs, the Office of the Agency General Counsel, the Office of Program and Fiscal Affairs, the Administration Unit, the Office of the Agency Information Officer, and the Office of Policy and Strategic Planning. The Department of Health Care Services (DHCS) and the California Department of Aging (CDA) are departments within CalHHS.

² Johns Hopkins School of Nursing. Community Aging in Place – Advancing Better Living for Elders (CAPABLE). <https://nursing.jhu.edu/faculty-research/research/projects/capable/>

³ California Department of Aging. Long-Term Services and Supports (LTSS) Financing and Affordability Initiative. https://www.aging.ca.gov/Information_and_Resources/Long-Term_Services_and_Supports/

⁴ We calculated the projected total net savings for the model across the 10-year analysis period as the total gross savings (reduction in Medicare paid claims for MAHCC model enrollees relative to paid claims in the absence of the MAHCC model) minus the estimated total model costs (the benefit and administrative costs).

MODELING APPROACH

As defined in the scope, the cost and savings analysis included four major components: eligibility and enrollment, direct model cost, Medicare cost savings, and sensitivity testing. Each element was developed using a combination of Medicare administrative claims data, publicly available research, our experience with managed care programs for Medicare beneficiaries, proprietary Milliman data and research including Milliman's Health Cost Guidelines™ (HCGs), and feedback from stakeholders. In particular, the savings assumptions for each benefit were developed based on previously published literature for programs or services that are similar to certain aspects of the MAHCC model.

MAHCC model eligibility projections were primarily based on an analysis that applied the Kim claims-based Frailty Index (CFI) to Medicare historical claims and enrollment data for California fee-for-service (FFS) Medicare beneficiaries. We analyzed the potential eligible population size and Medicare medical cost profile separately for four levels of frailty: robust, prefrail, mildly frail, and moderately-to-severely frail. We then applied numerous actuarial and research-based assumptions including participation rates, benefit usage rates, and medical cost savings to project potential enrollment, cost, and medical savings.

The CAPABLE literature⁵ was compiled from current and previous iterations of the CAPABLE program that were operated in other locations. The CAPABLE literature suggests significant potential for medical cost savings due to avoided inpatient, emergent, and other care. Drivers of these savings include reductions in falls, pain, and depression. Studies included high level estimates of total per participant savings from the program along with service category specific assumptions. Overall utilization assumptions for the CAPABLE program were developed based on the implementation experience of the CAPABLE National Center and Johns Hopkins University.

The HCBS literature⁶ was compiled from previous programs that studied the underlying components of the HCBS benefits offered through the MAHCC model, namely non-emergency medical transportation, medically tailored meals, adult day programs, caregiver support and respite, and personal care services. This literature suggests potential for cost savings for small, targeted populations using certain benefits such as non-emergency medical transportation and medically tailored meals. The literature also suggests smaller savings for more broadly applicable services such as personal care services and respite. Utilization assumptions for the underlying components of the HCBS benefit were developed using previously published literature and our experience with other programs offering similar benefits.

We did not independently perform studies to validate the previously published literature. We relied on the point estimates and confidence intervals presented in those studies, along with actuarial judgment about the applicability of the studies to the MAHCC model and adjustments to reflect the characteristics of the MAHCC model, to develop savings assumptions for this model. Many studies contained very broad confidence intervals that combined with the extended timeline of this model introduce a large amount of variability into the results. We generally chose assumptions from these studies that were in the lower half of confidence intervals, a conservative approach, given the variability. No single study provides definitive guidance on expected savings associated with this model due to the broad confidence intervals, the uniqueness of this model, regional differences in healthcare delivery, differences in demographics and health status of model enrollees, and other confounding factors including random variation. The use of extensive sensitivity testing in this paper provides insight into the variability of results to allow stakeholders to make an informed decision about the likelihood and magnitude of costs and savings generated by this model. The results are highly dependent on key assumptions and subject to variability.

To provide the information in this report, we constructed several projection models. Differences between our projections and actual amounts depend on the extent to which future experience conforms to the assumptions made for this analysis. It is certain that actual experience would not conform exactly to the assumptions used in this analysis. Actual amounts would differ from projected amounts to the extent that actual experience deviates from expected experience. Experience should be monitored as it emerges, and corrective actions taken when necessary.

⁵ Detail on CAPABLE literature is available in Section 4

⁶ Detail on HCBS literature is available in Section 4

Executive Summary

We examined whether the provision of service navigation, HCBS, and CAPABLE to Medicare beneficiaries with a minimum level of frailty under the MAHCC model could be expected to generate net savings to the fee-for-service Medicare program over a 10-year timeframe. The analysis included projecting the direct cost of the MAHCC model as well as a range of medical cost savings projections resulting from the provision of service navigation, HCBS and CAPABLE benefits.

We calculated the projected total net savings for the model across the 10-year analysis period as the total gross savings (reduction in Medicare paid claims for MAHCC model enrollees relative to paid claims in the absence of the MAHCC model) minus the estimated total model costs (the benefit and administrative costs). We analyzed results for the population across varying cohorts separated by dual eligibility and frailty level. The baseline scenario includes Medicare medical savings but does not include Medicaid savings or other savings associated with delaying frailty progression. See further in the Executive Summary for additional detail on the possible materiality of delayed frailty.

KEY FINDINGS

Under the baseline scenario, we estimate total net savings of \$528 million. The baseline scenario is presented as a point estimate but is not intended to be interpreted as a “most likely” scenario. Our analysis produces a range of positive and negative projected total net savings, ranging from roughly negative \$1.1 billion to positive \$1.8 billion.

The projected total net savings are highly sensitive to the included population in the MAHCC model, such as dual eligibility status or frailty level. We display results by population segment in this paper to demonstrate how projected total net savings vary depending on the population modeled. The variability of results by population segment should be considered when evaluating whether the MAHCC model would produce positive or negative total net savings.

The projected total net savings are highly sensitive to the underlying assumptions used. We use sensitivity testing in this paper to demonstrate the variability of results across various underlying assumptions. The wide range of potential outcomes should be considered when evaluating whether the MAHCC model would produce positive or negative total net savings.

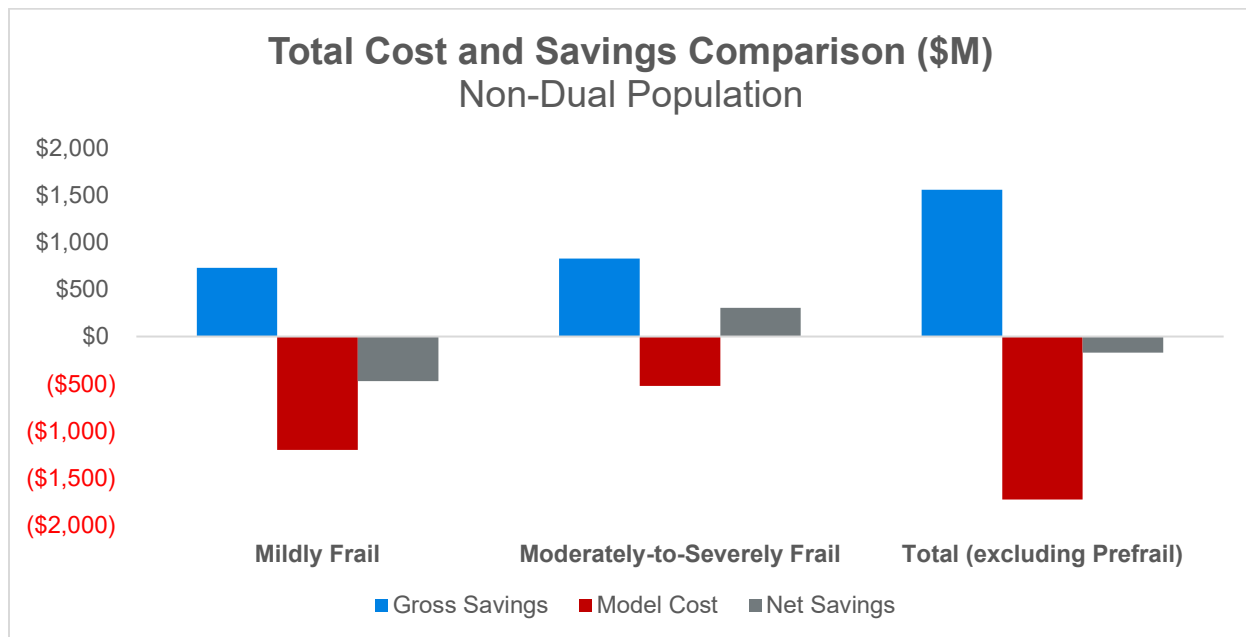
SUMMARY OF RESULTS: BASELINE SCENARIO

Based on the assumptions and methodology used for the baseline scenario, the MAHCC model would generate positive total net savings for the moderately-to-severely frail population (\$838M) but would generate negative total net savings for lower levels of frailty (\$310M) in the California FFS Medicare population projected to enroll in the model. However, the positive net savings generated for moderately-to-severely frail enrollees would be large enough that the inclusion of the mildly frail population still results in overall net savings of \$528M to Medicare in the baseline scenario. Table 1 and Figures 1-3 present total model costs (shown as negative amounts in Figures 1-3), gross savings, and net savings results from the baseline projection for moderately-to-severely frail and mildly frail populations. Results including the prefrail population are included in Appendix C.

TABLE 1 – SUMMARY OF RESULTS: BASELINE SCENARIO

DUAL STATUS ⁷	FRAILITY LEVEL	UNIQUE ENROLLEES ⁸	TOTAL MODEL COST (\$M)	TOTAL GROSS SAVINGS (\$M)	TOTAL NET SAVINGS (\$M) ⁹
Non-dual	Mildly Frail	130,086	\$1,202	\$728	(\$474)
	Moderately-to-Severely Frail	48,644	\$525	\$828	\$303
	Total	178,730	\$1,727	\$1,556	(\$171)
Dual	Mildly Frail	114,558	\$302	\$466	\$164
	Moderately-to-Severely Frail	67,962	\$227	\$762	\$535
	Total	182,520	\$529	\$1,228	\$699
All	Mildly Frail	244,645	\$1,504	\$1,194	(\$310)
	Moderately-to-Severely Frail	116,605	\$752	\$1,590	\$838
	Total	361,250	\$2,256	\$2,784	\$528

FIGURE 1 – TOTAL COST AND SAVINGS: NON-DUAL ELIGIBLE ENROLLEES



⁷ Dual status refers to an enrollee's Medicaid enrollment status, with dual enrollees being eligible and enrolled in both Medicare and Medicaid and non-dual enrollees being enrolled in Medicare only.

⁸ Enrollees could participate in this model for multiple years and therefore count in multiple years of annual enrollment. This unique enrollee count demonstrates the total unique individuals projected to participate in this model.

⁹ Negative values represent instances where the costs to administer the model are larger than the gross savings generated.

FIGURE 2 – TOTAL COST AND SAVINGS: DUAL ELIGIBLE ENROLLEES

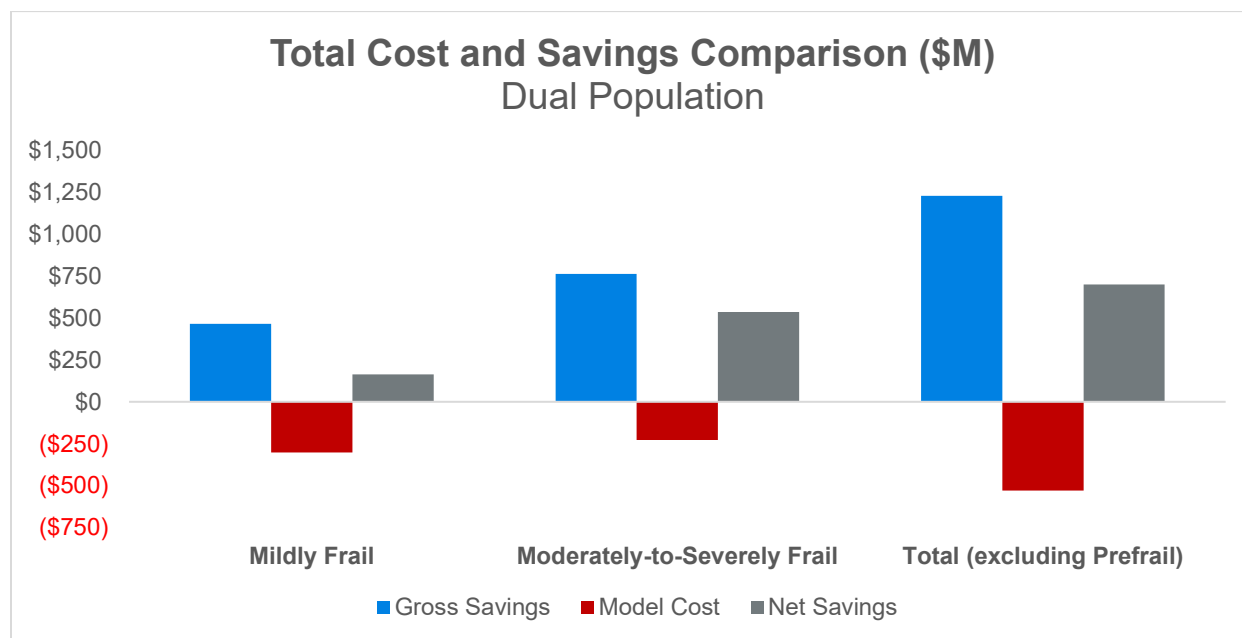
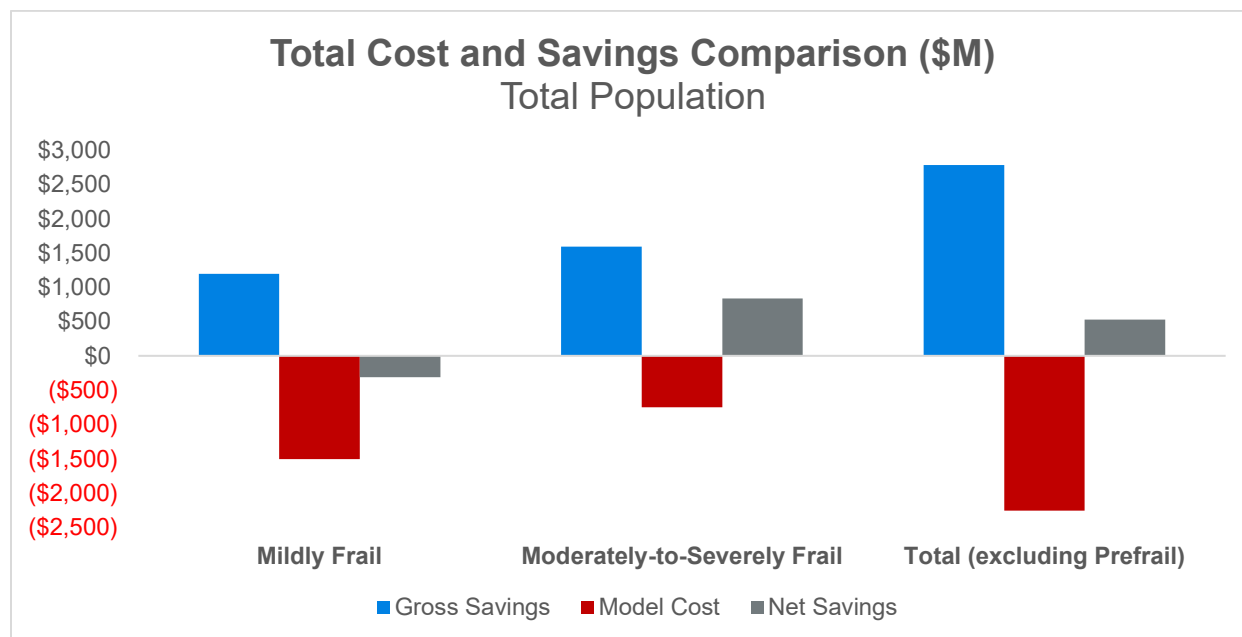


FIGURE 3 – TOTAL COST AND SAVINGS: TOTAL



Net savings are primarily driven by CAPABLE which, as modeled, has a greater savings to cost ratio than HCBS. Based on feedback from stakeholders including the CAPABLE National Center, the total utilizers across the 8-year model were targeted at 40% of the participating population. The assumptions on utilization vary by dual eligibility and non-dual eligibility and across the frailty cohorts with the assumption that higher frailty enrollees would more readily utilize the CAPABLE program due to its intensive nature. This leads to dual eligible enrollees driving a larger proportion of net savings since, in aggregate, they are expected to utilize CAPABLE at a similar 40% rate to non-dual enrollees but they are expected to access HCBS through this model at a much lower rate due to the availability of HCBS through Medi-Cal. These utilization assumptions are discussed in more detail in Section 5.

A key potential savings element that was not modeled in the baseline scenario, due to a lack of current literature supporting a savings estimate, is a long-term delay in overall frailty. Delayed frailty has the potential to create savings that were not modeled in the baseline scenario including maintaining a lower total claims profile for a longer duration, delaying the need to access Medicaid services including long term services and supports (LTSS), and/or contributing to the provision of HCBS in lieu of Medicaid-funded nursing facility care. We include high level sensitivity tests designed around some of these potential savings sources to highlight the possible impact. However, we excluded this potential source of savings from the baseline scenario due to the lack of substantial existing literature supporting these outcomes associated with the MAHCC model benefits. Other sources of Medicaid savings such as Medicare premium and cost sharing assistance for dual eligible beneficiaries were also excluded from the baseline scenario. There would be value in a robust study of these potential additional Medicare and Medicaid savings elements within the MAHCC model if implemented.

In addition to a baseline scenario, we performed sensitivity testing of key assumptions and model elements. The purpose of robust sensitivity testing was to highlight the wide range of possible savings outcomes driven by the long-term nature of this projection, the number of material assumptions, and the wide range of estimated savings in the research that we relied upon for this analysis. Three material assumptions that could positively or negatively impact the baseline scenario and ultimately this model's ability to generate savings are outlined below along with the results of the sensitivity tests. Additional sensitivity tests are available in Section 5 each with varying levels of materiality. These sensitivity tests are not exhaustive but provide insight into the materiality of many of the assumptions used to estimate MAHCC model enrollment, direct costs, and net savings.

SENSITIVITY TEST 1: BASELINE SAVINGS AMOUNTS ATTRIBUTABLE TO CAPABLE

The studies used to develop baseline model savings include large confidence intervals of estimated medical cost savings. In most cases, we used the point estimate or an estimate at the lower end of the confidence interval (less savings than the best estimate) to develop the savings assumption for each model element. This sensitivity test shows the variation in model savings generated by moving the point estimate for CAPABLE both up (i.e., higher expected savings) and down (i.e., lower expected savings) within the confidence interval relative to the baseline scenario, which relied on the 33rd percentile of CAPABLE savings from the CAPABLE program research. This sensitivity test demonstrates the extent to which assumed medical cost savings associated with CAPABLE drives overall MAHCC model results.

Scenario 1 – 25th percentile of CAPABLE savings – lower expected net savings

Scenario 2 – 40th percentile of CAPABLE savings – higher expected net savings

Scenario 3 – 50th percentile of CAPABLE savings – higher expected net savings

TABLE 2 – SENSITIVITY TEST RESULTS OF BASELINE SAVINGS ATTRIBUTABLE TO CAPABLE

DUAL STATUS	FRAILITY LEVEL	Scenario 1			Scenario 2		
		NET SAVINGS PEPM ¹⁰	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)	NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)
Non-Dual	Mildly Frail	(\$105.63)	(\$545)	(\$71)	(\$80.96)	(\$418)	\$57
	Moderately-to-Severely Frail	\$110.79	\$209	(\$95)	\$201.29	\$379	\$76
	Total	(\$47.76)	(\$336)	(\$165)	(\$5.49)	(\$39)	\$132
Dual	Mildly Frail	\$19.76	\$83	(\$82)	\$54.87	\$230	\$65
	Moderately-to-Severely Frail	\$200.17	\$400	(\$135)	\$322.01	\$643	\$108
	Total	\$78.04	\$482	(\$217)	\$141.17	\$872	\$173
All	Mildly Frail	(\$49.48)	(\$462)	(\$152)	(\$20.14)	(\$188)	\$122

¹⁰ Per enrollee per month

DUAL STATUS	FRAILITY LEVEL	Scenario 1			Scenario 2		
		NET SAVINGS PEPM ¹⁰	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)	NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)
	Moderately-to-Severely Frail	\$156.78	\$608	(\$230)	\$263.41	\$1,022	\$184
	Total	\$11.03	\$146	(\$382)	\$63.05	\$834	\$306

DUAL STATUS	FRAILITY LEVEL	Scenario 3		
		NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)
Non-Dual	Mildly Frail	(\$64.52)	(\$333)	\$141
	Moderately-to-Severely Frail	\$261.63	\$493	\$189
	Total	\$22.69	\$160	\$331
Dual	Mildly Frail	\$78.28	\$328	\$163
	Moderately-to-Severely Frail	\$403.24	\$805	\$270
	Total	\$183.25	\$1,133	\$433
All	Mildly Frail	(\$0.58)	(\$5)	\$305
	Moderately-to-Severely Frail	\$334.50	\$1,298	\$460
	Total	\$97.73	\$1,292	\$764

SENSITIVITY TEST 2: MIX CHANGE IN MODEL ENROLLEES

The population generating the most projected savings in this model consists of enrollees in the moderately-to-severely frail claims categorization from the CFI. Those enrollees have the highest medical costs, so relatively small percentage reductions in medical costs would be sufficient to generate net savings. If the proportion of individuals who enroll in this model skew toward the lower frailty levels, it would materially reduce projected savings generated by the model. Conversely, because moderately-to-severely frail individuals have the largest savings potential, more projected savings would be generated if a larger proportion of those individuals enroll in the model.

Scenario 1 – Larger proportion of mildly frail enrollees – lower expected net savings

Scenario 2 – Larger proportion of moderately-to-severely frail enrollees – higher expected net savings

TABLE 3 – SENSITIVITY TEST RESULTS OF MODEL ENROLLEE MIX CHANGE

DUAL STATUS	FRAILITY LEVEL	Scenario 1			Scenario 2		
		NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)	NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)
Non-Dual	Mildly Frail	(\$92.74)	(\$574)	(\$100)	(\$91.50)	(\$461)	\$13
	Moderately-to-Severely Frail	\$159.81	\$170	(\$133)	\$162.43	\$367	\$64
	Total	(\$55.75)	(\$405)	(\$234)	(\$12.90)	(\$94)	\$77

DUAL STATUS	FRAILITY LEVEL	Scenario 1			Scenario 2		
		NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)	NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)
Dual	Mildly Frail	\$37.89	\$190	\$26	\$40.16	\$163	(\$1)
	Moderately-to-Severely Frail	\$266.14	\$354	(\$181)	\$270.22	\$647	\$112
	Total	\$85.64	\$544	(\$155)	\$125.55	\$810	\$111
All	Mildly Frail	(\$34.25)	(\$384)	(\$74)	(\$32.78)	(\$298)	\$12
	Moderately-to-Severely Frail	\$218.89	\$523	(\$315)	\$217.90	\$1,014	\$176
	Total	\$10.24	\$139	(\$389)	\$52.06	\$716	\$188

SENSITIVITY TEST 3: ADDITIONAL UTILIZATION OF HCBS BENEFITS BY DUAL ELIGIBLE ENROLLEES

This sensitivity test compares projected model savings under varying levels of HCBS utilization for dual eligible enrollees. A core assumption in the baseline scenario is that dual eligible enrollees that are eligible for Medi-Cal HCBS would, in most cases, be referred to the comprehensive HCBS benefits available through Medi-Cal and would therefore not pursue HCBS services through the MAHCC model. As previously noted, HCBS are assumed to produce a lower savings relative to cost compared to CAPABLE. This leads to a reduction in projected net model savings for this scenario.

Since existing Medi-Cal services have a high degree of overlap with HCBS available through this model, there may be more limited incremental savings attributable to the model in cases where HCBS utilization increases for dual eligible enrollees. Additional sensitivity tests regarding this effect are available in Section 5.

Scenario 1 – HCBS benefit utilizers for dual eligible enrollees matches non-dual enrollees – lower expected net savings

TABLE 4 – SENSITIVITY TEST RESULTS OF ADDITIONAL HCBS UTILIZATION BY DUAL ELIGIBLE ENROLLEES

DUAL STATUS	FRAILITY LEVEL	Scenario 1		
		NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)
Non-Dual	Mildly Frail	(\$91.93)	(\$474)	\$0
	Moderately-to-Severely Frail	\$161.07	\$303	\$0
	Total	(\$24.28)	(\$171)	\$0
Dual	Mildly Frail	(\$61.60)	(\$258)	(\$422)
	Moderately-to-Severely Frail	\$236.09	\$471	(\$63)
	Total	\$34.56	\$214	(\$485)
All	Mildly Frail	(\$78.35)	(\$732)	(\$422)
	Moderately-to-Severely Frail	\$199.67	\$775	(\$63)
	Total	\$3.22	\$43	(\$485)

Section 1: Eligibility and Enrollment Projections

MODEL ELIGIBILITY AND ENROLLMENT REQUIREMENTS

CalHHS provided the MAHCC model's eligibility and enrollment requirements. We outline the key requirements below.

Individuals would be eligible to participate in the model if they meet the following criteria:

- Enrollment in Medicare fee-for-service Parts A and B, including Accountable Care Organizations (ACO) and non-ACO participants,
- Community-based living arrangements, including home-bound individuals,
- Residency in a model service area, and
- Level of frailty, as indicated by either the FRAIL Scale¹¹ or Edmonton Frail Scale¹² frailty assessment and defined by a frailty score of 3 or higher on the FRAIL Scale or 8 or higher on the Edmonton Frail Scale.

The following individuals would be excluded from the model, as they are already receiving similar services or are not living in the community:

- Individuals enrolled in Medicare Advantage plans,
- Individuals living in an institutional setting for more than 90 days, and
- Individuals in hospice.

Individuals would be identified as potentially eligible for the model via a claims-based frailty index (CFI)¹³. The model proposes that individuals who meet the CFI threshold and other eligibility requirements would receive outreach from administering agencies notifying them of their possible eligibility for this model. An individual would subsequently pursue a frailty assessment administered by a Medicare approved provider or a model administering organization. Administering organizations could include Area Agencies on Aging (AAAs), community-based providers, and other organizations¹⁴. Eligible individuals who pursue this assessment and meet the required frailty cut points could enroll in the model.

Individuals may also be referred to administering agencies by Medicare providers for a frailty evaluation even if they do not meet the initial CFI threshold and do not receive direct outreach from an administering agency. These individuals may enroll in the model after their frailty assessment if they meet all eligibility requirements previously described including the prerequisite level of frailty.

Enrollees would be rescreened annually by an administering agency to maintain enrollment in the model.

BASELINE ELIGIBILITY AND ENROLLMENT

To develop a baseline population projection, we calculated the Kim CFI for California Medicare beneficiary data from the 2022 CMS Medicare Limited Data Set (LDS) Standard Analytic Files (SAFs), which contain FFS Medicare claims and eligibility data. The Kim CFI is a claims-based model that attempts to predict an individual's clinical frailty level based on 12 months of medical claims experience. Per the request of CalHHS we relied on the Kim CFI as the basis for our population projection because the model proposes using the Kim CFI for identification and initial outreach to

¹¹ Commonwealth of Massachusetts. Frail Scale screening tool. 2019-07-22. <https://www.mass.gov/doc/frail-scale-screening-tool/download>

¹² Rose M, Yang A, Welz M, Masik A, Staples, M. Novel modification of the Reported Edmonton Frail Scale. *Australa J Ageing* 2018Dec;37(4):305-308. doi: 10.1111/ajag.12533

¹³ Detail on the claims-based frailty index available in Section 6

¹⁴ Administering organizations could include Area Agencies on Aging (AAAs), community-based providers, and other organizations. Administering organizations would meet the following minimum criteria: Develop and maintain a network of providers for services offered under the HCBS benefit and CAPABLE; Process billing and payments to community-based providers of model services and transmit associated data to required entities; Use of relevant Health Information Technology (HIT) systems, including use of care management platforms, service referral platforms, electronic health records, billing systems, and other technology platforms; Serve Medicare-eligible beneficiaries, older adults, and/or individuals with disabilities in the geography in which the organization operates based on demonstrated experience; and Establish/maintain a physical organizational presence in their anticipated model service area.

potential enrollees and because research supports the relationship between Kim CFI and clinical frailty measures anticipated to be used for the model^{15 16 17}.

The Medicare claims and eligibility data were limited to beneficiaries residing in California that meet the following requirements:

- Enrolled continuously in FFS Medicare for 12 months, including ACO and non-ACO participants,
- Receiving coverage from FFS Medicare under both Parts A and B,
- Not enrolled in a Medicare Advantage plan,
- Not residing in an institutionalized setting for more than 90 days, and
- Not under hospice care.

Individuals were categorized based on the following frailty cut points which align with the 2019 article in the *Journals of Gerontology: Medical Sciences*¹⁸. The focus of the subsequent modeling was individuals identified as above the mid-point of prefrail or higher on the CFI.

- A claim frailty value <0.15 is considered robust.
- A claim frailty value between 0.15 and 0.249 is considered prefrail. The analysis and remainder of this report focused on scores above 0.2.
- A claim frailty value between 0.25 and 0.349 is considered mildly frail.
- A claim frailty value greater than or equal to 0.35 is considered moderately-to-severely frail.

The application of the CFI to historical Medicare claims and enrollment data produced the model eligibility estimates for a single year for each of the cohorts displayed in Table 5. Initial eligibility was translated from a 2022 to 2026 basis by projecting the total California Medicare population and Medicare Advantage penetration rates based on recent trends. County level detail on 2022 eligibility data is available in Appendix A.

TABLE 5 – STATEWIDE MODEL ELIGIBILITY BY COHORT

FRAILITY LEVEL	BASELINE YEAR - 2022			PROJECTION YEAR 1 - 2026		
	Non-Dual	Dual	Total	Non-Dual	Dual	Total
Mildly Frail	114,650	95,033	209,684	114,935	95,270	210,205
Moderately-to-Severely Frail	26,307	28,396	54,703	26,372	28,467	54,839
Total	140,957	123,430	264,387	141,307	123,737	265,044

Assumptions were applied to baseline eligibility estimates to estimate the number of eligible individuals that would enroll in the model. These assumptions include:

- An assumption for those deemed eligible by the CFI who do not pursue a frailty assessment and therefore do not become an enrollee.
- An assumption for those deemed eligible by the CFI who pursue a frailty assessment but screen negative and therefore do not become an enrollee.
- An assumption for those deemed ineligible by the CFI who are referred to the model by a Medicare provider and screen positive in their frailty assessment therefore becoming an enrollee.

Detail on these cohorts is available in Section 6. After applying these assumptions, we estimate the following statewide enrolled populations by cohort for the first projection year of 2026.

¹⁵ Dae Hyun Kim, Sebastian Schneeweiss, Robert J Glynn, Lewis A Lipsitz, Kenneth Rockwood, Jerry Avorn, Measuring Frailty in Medicare Data: Development and Validation of a Claims-Based Frailty Index, *The Journals of Gerontology: Series A*, Volume 73, Issue 7, July 2018, Pages 980–987, <https://doi.org/10.1093/gerona/glx229>

¹⁶ Kim DH, Glynn RJ, Avorn J, Lipsitz LA, Rockwood K, Pawar A, Schneeweiss S. Validation of a Claims-Based Frailty Index Against Physical Performance and Adverse Health Outcomes in the Health and Retirement Study. *J Gerontol A Biol Sci Med Sci*. 2019 Jul 12;74(8):1271-1276. doi: 10.1093/gerona/gly197. PMID: 30165612; PMCID: PMC6625579.

¹⁷ Sison SDM, Shi SM, Oh G, Jeong S, McCarthy EP, Kim DH. Claims-Based Frailty Index and Its Relationship With Commonly Used Clinical Frailty Measures. *J Gerontol A Biol Sci Med Sci*. 2024 Jul 1;79(7):glae094. doi: 10.1093/gerona/glade094. PMID: 38557604; PMCID: PMC11167486.

¹⁸ *J Gerontol A Biol Sci Med Sci*, 2019, Vol. 74, No. 8, 1271–1276, doi:10.1093/gerona/gly197, Advance Access publication August 27, 2018

TABLE 6 – STATEWIDE ENROLLMENT BY COHORT FOR 2026

FRAILITY LEVEL	NON-DUAL	DUAL	TOTAL
Mildly Frail	26,609	21,714	48,323
Moderately-to-Severely Frail	12,831	13,747	26,578
Total	39,440	35,461	74,901

10-YEAR PROJECTION OF ELIGIBILITY AND ENROLLMENT

The 10-year projection of eligibility and enrollment includes assumptions that impact total enrollment levels each year. These assumptions include:

- Projected growth in the California population,¹⁹
- Changes in Medicare Advantage penetration rates for dual and non-dual eligible populations,
- Mortality rates for dual and non-dual eligible populations varied by frailty level,²⁰
- Voluntary and involuntary disenrollment rates,
- Newly eligible populations who pursue an assessment and become enrolled, and
- Model ramp-up period.

Table 7 outlines projected enrollment for the 8 active years of model participation.

TABLE 7 – PROJECTED MODEL ENROLLMENT BY COHORT

DUAL STATUS	FRAILITY LEVEL	2026	2027	2028	2029	2030	2031	2032	2033
Non-Dual	Mildly Frail	26,609	41,229	54,852	55,622	55,301	54,892	54,482	54,058
	Moderately-to-Severely Frail	12,831	16,814	20,140	20,307	20,184	20,034	19,885	19,730
	Total	39,440	58,043	74,993	75,929	75,485	74,926	74,366	73,787
Dual	Mildly Frail	21,714	33,727	44,841	45,305	44,910	44,449	43,986	43,512
	Moderately-to-Severely Frail	13,747	17,999	21,512	21,604	21,407	21,186	20,966	20,740
	Total	35,461	51,726	66,353	66,908	66,317	65,635	64,952	64,251
All	Mildly Frail	48,323	74,956	99,694	100,927	100,211	99,341	98,468	97,569
	Moderately-to-Severely Frail	26,578	34,813	41,652	41,911	41,591	41,221	40,850	40,469
	Total	74,901	109,769	141,346	142,837	141,802	140,561	139,319	138,039

¹⁹ State of California Department of Finance. Population Projections: Total population for California and Counties. [Projections | Department of Finance](#)

²⁰ *J Gerontol A Biol Sci Med Sci*, 2023, Vol. 78, No. 7, 1198–1203, <https://doi.org/10.1093/gerona/glad010>, Advance Access publication January 11, 2023

Section 2: Analysis of Model Cost

The MAHCC model would provide enrollees with HCBS benefits, the option to participate in the CAPABLE program, and service navigation. The service navigation benefit would be available throughout an individual's enrollment in the model to connect individuals to other social and medical programs (such as Veterans benefits) and support individuals in using their HCBS benefits to best meet their needs. The HCBS benefit is an annual fixed dollar amount that could be used on specified HCBS services, including personal care services, caregiver supports and respite, adult day programs, medically tailored meals (MTMs), and non-emergency medical transportation (NEMT). Model enrollees would also have the option, but would not be required, to participate in the CAPABLE program once during the duration of their enrollment in the model.

The following benefit cost components were included in our analysis of the cost of the model:

- Service navigation – The service navigation component of the per enrollee per month (PEPM) payment would be \$11.65 PEPM, paid to administering agencies, based on an estimated caseload of 500 enrollees per full-time service navigator paid \$28/hour with benefits.²¹ These costs include an initial call to establish the frailty assessment and continued communication to connect enrollees to model resources and other state-provided resources. These costs do not include the frailty assessment administration, which is discussed as an administrative cost below.
- HCBS – These services include personal care services, caregiver supports and respite, adult day programs, medically tailored meals (MTMs), and non-emergency medical transportation (NEMT). The initial annual limit for HCBS in this model would be \$2,500 with individuals who enroll partway through the year receiving a proportional amount of the annual limit based on their enrollment date.
- CAPABLE – This is a home-based, time-limited program that includes services to improve health, independence, and safety from an occupational therapist, registered nurse, and handy worker. Individuals would be able to participate in CAPABLE only once during their enrollment in the model regardless of whether they disenroll and then reenroll at any point during the 8-year model. The total allowable dollar amount for the CAPABLE benefit per model enrollee would be capped initially at \$5,500.

The model would also incur administrative costs. The following administrative costs were included in our analysis of the cost of the model:

- Assessment administration – The cost of assessments includes assessments referred through the CFI claims-based model outreach and those referred through other means including Medicare providers. The baseline scenario assumes a payment of \$9.00 per assessment. This assumes that most assessments would be administered by administering agency staff, not medical professionals, paid \$28 per hour with benefits and that assessments would take 15 minutes or less.
- Administering agency administrative costs – The baseline scenario assumes 5% of total benefits to cover billing, claims payment, network maintenance, and staff costs for the administering agency. The payments to cover these costs would be made on a PEPM basis. Costs for downstream network administration are included in CAPABLE and HCBS rates and built into benefit costs and therefore not explicitly modeled.
- Infrastructure funding – Requested, one-time costs of \$75,000 for any non-profit administering agency in alignment with the precedent of the GUIDE model. Infrastructure funding would be awarded to all selected administering agencies, but its use would be restricted to specific activities.²² A total amount of \$1,000,000 across all non-profit administering agencies was assumed for purposes of our modeling.

BENEFIT COST ANALYSIS

Based on a review of publicly available research in collaboration with ATI Advisory, our experience with case management workloads and costs, managed care programs for Medicare beneficiaries, and stakeholder feedback, the service navigation costs are estimated to be \$11.65 PEPM for 2026. Given the 8-year duration of this model, this PEPM payment was inflated annually using the 5-year average wage index for private industry from 2019-2023.²³

²¹ Salary based on the [U.S. Bureau of Labor and Statistics 2023](#) data for the mean hourly wage of a Community Health Worker in California

²² CMS. (2024). GUIDE Payment Methodology Paper. <https://www.cms.gov/files/document/guide-payment-methodology-paper.pdf>

²³ U.S Bureau of Labor and Statistics 2023. [Compensation in private industry and state and local government, 3-month percent change data](#)

Service navigation costs in each year of the model are included in Table 8 and costs do not vary by frailty level and dual eligibility status.

TABLE 8 – SERVICE NAVIGATION COSTS PEPM

DUAL STATUS	FRAILITY LEVEL	2026	2027	2028	2029	2030	2031	2032	2033
All	All	\$11.65	\$11.76	\$11.87	\$11.98	\$12.09	\$12.21	\$12.32	\$12.44

HCBS benefit costs were calculated as a PEPM cost based on expected average utilization patterns of individuals participating in the model. The \$2,500 annual benefit would be available to enrollees in proportion to when they enroll in the model, creating a \$208.33 per month HCBS maximum allowance. For example, an individual who enrolls in July of their first year would receive \$1,250 of maximum benefit for the first year. Assumptions are then applied to the proportion of enrollees in the model who use their benefit each month and the amount of the maximum they use to establish a final PEPM cost.

The assumptions on utilization vary by dual eligibility status. Given that model enrollment would be voluntary and limited to those with a minimum level of frailty and because there is considerable flexibility in the types of HCBS that may be utilized, we expect very high usage of the model's HCBS benefit by non-dual eligible enrollees. We expect a much lower usage of the model's HCBS benefit by dual eligible enrollees due to the overlap of HCBS benefits with those available to dual eligible individuals through Medi-Cal and an expectation that service navigators would guide dual eligible enrollees to available Medi-Cal benefits. Assumptions were consistently applied across all frailty cohorts as the flexibility of the HCBS benefit allows both low and high frailty enrollees to easily utilize the benefit and tailor it to their needs. Assumptions were also consistently applied across all 8 years of the model, apart from a benefit ramp for non-dual enrollees in the first two years, under the assumption that benefit limits would not change and utilization patterns would be relatively consistent throughout the duration of the model. Expected PEPM costs separately for dual and non-dual eligible enrollees are included in Table 9 and PEPM costs do not vary by frailty level.

TABLE 9 – HCBS BENEFIT COSTS PEPM BY DUAL STATUS

DUAL STATUS	FRAILITY LEVEL	2026	2027	2028	2029	2030	2031	2032	2033
Non-Dual	All	\$169.78	\$180.39	\$197.58	\$197.58	\$197.58	\$197.58	\$197.58	\$197.58
Dual	All	\$6.37	\$6.37	\$6.37	\$6.37	\$6.37	\$6.37	\$6.37	\$6.37

CAPABLE benefit costs were calculated as a per enrollee cost based on expected average utilization patterns of individuals participating in the model. Enrollment in CAPABLE is a one-time event for a given enrollee with a maximum allowance of \$5,500. Assumptions are then applied to the proportion of enrollees in the model each year who utilize the CAPABLE program and the amount of the allowance they use. Based on feedback from stakeholders including the CAPABLE National Center, the total utilizers across the 8-year model were targeted at 40% of the participating population. The assumptions on utilization vary by dual eligibility and non-dual eligibility and across the frailty cohorts with the assumption that higher frailty enrollees would more readily utilize the CAPABLE program due to its intensive nature with the moderately-to-severely frail cohort expected to utilize CAPABLE at rates near 80%. The assumption on the amount of the allowance that is used by each enrollee that utilizes CAPABLE is constant across each cohort and relatively high under the assumption that most enrollees that utilize the benefit would use most of the allowance.

While CAPABLE cost assumptions do not vary across the 8 years of the model under the assumption that CAPABLE benefit limits would not change throughout the duration of the model, the actual cost of CAPABLE benefits would vary materially throughout the duration of the model due to the one-time nature of the CAPABLE expense and expectation that many enrollees would enter in the early phases of the model and remain in the model multiple years while their CAPABLE participation would conclude after approximately five months. Expected PEPM costs by year and population are included in Table 10. Note that as a simplifying assumption, we have attributed all CAPABLE costs to the year in which the CAPABLE benefit was initialized.

TABLE 10 – CAPABLE BENEFIT COSTS PEPM BY YEAR AND DUAL STATUS

DUAL STATUS	FRAILITY LEVEL	2026	2027	2028	2029	2030	2031	2032	2033
Non-Dual	Mildly Frail	\$115.44	\$87.39	\$94.90	\$49.64	\$46.76	\$46.52	\$46.51	\$46.46
	Moderately-to-Severely Frail	\$230.88	\$134.63	\$137.60	\$80.75	\$77.42	\$77.11	\$77.10	\$77.02
	Total	\$152.99	\$101.07	\$106.37	\$57.96	\$54.96	\$54.70	\$54.69	\$54.63
Dual	Mildly Frail	\$115.44	\$88.73	\$96.49	\$51.48	\$48.72	\$48.49	\$48.47	\$48.41
	Moderately-to-Severely Frail	\$230.88	\$136.52	\$139.71	\$83.21	\$80.12	\$79.84	\$79.82	\$79.73
	Total	\$160.19	\$105.36	\$110.51	\$61.72	\$58.86	\$58.61	\$58.59	\$58.52

ADMINISTRATIVE COST ANALYSIS

Assessment administration costs are calculated as the total number of expected frailty assessments in a year multiplied by the cost per assessment. Assessments would be performed for actual enrollees on an annual basis as well as for individuals who attempt to enroll in the model but are deemed ineligible through the assessment process. The cost per assessment is \$9.00 which translates to the annual PEPM values in Table 11.

TABLE 11 – ASSESSMENT ADMINISTRATION COSTS PEPM BY YEAR AND DUAL STATUS

DUAL STATUS	FRAILITY LEVEL	2026	2027	2028	2029	2030	2031	2032	2033
Non-Dual	All	\$0.93	\$0.94	\$0.94	\$0.95	\$0.95	\$0.95	\$0.95	\$0.95
Dual	All	\$0.93	\$0.94	\$0.94	\$0.95	\$0.95	\$0.95	\$0.95	\$0.95

Administering agency administrative cost payments are calculated as a percent of total benefit spend annually. Based on our research into similar programs and stakeholder feedback this percent was set to 5% of total benefit spend. The PEPM values for each year associated with those administrative costs are in Table 12.

TABLE 12 – AGENCY ADMINISTRATION COSTS PEPM BY YEAR AND DUAL STATUS

DUAL STATUS	FRAILITY LEVEL	2026	2027	2028	2029	2030	2031	2032	2033
Non-Dual	All	\$16.18	\$14.12	\$15.24	\$12.82	\$12.67	\$12.66	\$12.66	\$12.66
Dual	All	\$8.37	\$5.63	\$5.89	\$3.45	\$3.31	\$3.30	\$3.30	\$3.29

Infrastructure payments would be provided in year 1 when administering agencies who qualify for infrastructure support join the model. There is uncertainty at this time as to the total number of administering agencies, so an estimate was used to develop this one-time cost. Due to the limited nature of these payments, this assumption does not have a material impact on the model.

Section 3: Baseline medical costs

HISTORICAL MEDICARE COST ANALYSIS

Allowed Medicare claims levels for California FFS Medicare beneficiaries identified using the CFI as described in the Eligibility and Enrollment section were compiled from CMS Medicare claims and eligibility data as the baseline of claims costs for model enrollees. Claims PEPM amounts were developed for each county, CFI cohort, and dual eligibility status.

Medical claims were initially classified into detailed service categories using the Milliman HCG Grouper²⁴, as outlined in Section 6. The claims costs were further broken into the following service categories: inpatient, outpatient, ambulance, emergent, primary care, specialist, and post-acute. Table 13 shows baseline 2022 allowed costs by service category by level of frailty and dual eligibility status.

TABLE 13 – 2022 COSTS PEPM BY SERVICE CATEGORY, COHORT AND DUAL STATUS

SERVICE CATEGORY	NON-DUAL		DUAL	
	MILDLY FRAIL	MODERATELY-TO-SEVERELY FRAIL	MILDLY FRAIL	MODERATELY-TO-SEVERELY FRAIL
Inpatient	\$2,089.89	\$4,455.00	\$2,342.29	\$5,560.96
Outpatient	\$676.10	\$703.66	\$682.65	\$812.19
Ambulance	\$64.14	\$149.28	\$72.39	\$166.15
Emergent	\$152.80	\$241.06	\$150.59	\$265.18
Primary Care	\$98.81	\$110.14	\$97.13	\$104.15
Specialist	\$494.62	\$526.81	\$402.53	\$424.72
Post-acute	\$1,164.11	\$3,394.05	\$1,402.14	\$3,326.03
Total	\$4,740.47	\$9,580.01	\$5,149.72	\$10,659.37

Based on published research, consultation with clinical experts, and our experience with managed-care programs only claim categories that were deemed impactable by the model benefits were included in these service category roll-ups. Detailed information on the categorical inclusions and exclusions is included in Appendix B. The most impacted categories were outpatient and specialist. In total these exclusions remove varying cost depending on the cohort and dual status with non-dual mildly frail having the highest proportion of cost excluded (20%) based on their utilization patterns and the moderately-to-severely frail dual cohort having the lowest proportion of cost excluded (4%).

These costs were further adjusted to account for enrollees initially deemed ineligible by the CFI who are referred and enroll in the model. These costs, after adjustments, are the basis for the baseline scenario savings and the sensitivity testing within this report.

10-YEAR PROJECTION OF MEDICARE COST

To develop the 10-year projection of Medicare medical costs in the absence of the model, which includes 8 active benefit years and 2 years of savings run out, claims were trended forward from 2022 to 2026 using known and short-term trends to establish values for the initial year of the model. The subsequent model projection uses long term trend estimates beginning in 2026. The basis for the trends includes the following:

- Medicare Trustees' Reports,
- Information published in the Federal Registers as well as other published documents and legislation regarding changes in Medicare provider reimbursement rates,
- Announcement of Calendar Year 2025 Medicare Advantage Capitation Rates (2025 Rate Announcement),

²⁴ The HCGs are created by Milliman annually and represent both published and unpublished data aggregated with Milliman's experience, research, and actuarial judgment to create standardized benchmarks of healthcare utilization and cost in each county. The HCG Grouper is software that can be used to categorize and analyze cost and utilization of medical claims data.

- Actuarial Bid Call Announcements, Questions, and Responses,
- CMS Office of the Actuary (OACT) Medicare Unit Cost Increases,
- Medicare fee schedules including Physician Fee Schedule (PFS), Hospital Inpatient Prospective Payment System (IPPS), Outpatient Prospective Payment System (OPPS), and skilled nursing facilities (SNF) PPS, and
- Analysis of historical claims trends across six years of CMS Medicare claims data. These aggregate trends were the basis of the long-term claims projections for utilization and allowed cost at the service category level. Trends were established separately for dual and non-dual populations.

Table 14 shows average annual allowed cost trends by service category between incurred period for the historical Medicare claims data that serves as the basis of the analysis (CY 2022) and the expected model launch date (CY 2026) as well as over the duration of the model.

TABLE 14 – ANNUALIZED ALLOWED TRENDS BY SERVICE CATEGORY

SERVICE CATEGORY	2022-2026	2027+
Inpatient	1.025	1.020
Outpatient	1.097	1.050
Ambulance	1.060	1.020
Emergent	1.060	1.040
Primary Care	1.025	1.030
Specialist	1.021	1.030
Post-acute	1.022	1.020

Section 4: Analysis of Savings

SAVINGS DRIVERS

The savings analysis is focused on two broad types of medical cost savings: reduction in utilization of Medicare services, in particular inpatient, emergent, ambulance, and post-acute and the slowed progression of activities of daily living (ADLs) deficits. There is robust literature around CAPABLE preventing utilization of Medicare services and improving outcomes including reducing falls and depression, improving ADL limitations, and reducing Medicare spending. There is somewhat less robust literature directly linking the provision of HCBS services to reductions in utilization of Medicare services for frail populations. Given our reliance on previously published literature, our savings assumptions align with the component pieces of the model in Table 15:

TABLE 15 – SAVINGS ASSUMPTIONS BY MODEL BENEFIT²⁵

MODEL BENEFIT	SAVINGS DRIVER	MODEL APPLICATION – SERVICE CATEGORY IMPACT
CAPABLE	Falls reduction ²⁶	Decreases in emergent ²⁷ , ambulance ²⁸ , inpatient, post-acute, primary care, and specialist services
CAPABLE	General medical cost savings including ADL progression delay ²⁹	Decreases in emergent, ambulance, inpatient, outpatient, post-acute, and specialist services
HCBS	Non-emergency medical transportation ³⁰	Decreases in emergent ²¹ , inpatient, and post-acute services with increases in primary care and specialist services ³¹
HCBS	Medically tailored meals ³²	Decreases in ambulance, emergent, inpatient, and post-acute services
HCBS	Caregiver support and respite, adult day programs, and personal care services ³³	Decreases in emergent ³⁴ , ambulance ²⁴ , inpatient, and post-acute services

Due to the high level of variability and large confidence intervals in previous studies, the long-term nature of this projection, and the number of material assumptions within the analysis, robust sensitivity testing was performed to generate a range of possible outcomes. These sensitivity tests are presented in Section 5 of this paper.

²⁵ As noted in the ATI companion document, we researched additional reference material to validate assumptions. The citations in Table 15 represent the reports used to generate the point estimates in this paper.

²⁶ Florence CS, Bergen G, Atherly A, Burns E, Stevens J, Drake C. Medical Costs of Fatal and Nonfatal Falls in Older Adults. *J Am Geriatr Soc*. 2018 Apr;66(4):693-698. doi: 10.1111/jgs.15304. Epub 2018 Mar 7. PMID: 29512120; PMCID: PMC6089380.

²⁷ Ashman JJ, Schappert SM, Santo L. Emergency department visits among adults aged 60 and over: United States, 2014–2017. *NCHS Data Brief*, no 367. Hyattsville, MD: National Center for Health Statistics. 2020.

²⁸ Faul M, Stevens JA, Sasser SM, Alee L, Deokar AJ, Kuhls DA, Burke PA. Older Adult Falls Seen by Emergency Medical Service Providers: A Prevention Opportunity. *Am J Prev Med*. 2016 Jun;50(6):719-726. doi: 10.1016/j.amepre.2015.12.011. Epub 2016 Feb 4. PMID: 26853845; PMCID: PMC4932831.

²⁹ Ruiz S, Snyder LP, Rotondo C, Cross-Barnet C, Colligan EM, Giuriceo K. Innovative Home Visit Models Associated With Reductions In Costs, Hospitalizations, And Emergency Department Use. *Health Aff (Millwood)*. 2017 Mar 1;36(3):425-432. doi: 10.1377/hlthaff.2016.1305. PMID: 28264943.

³⁰ Hwang AS, Atlas SJ, Cronin P, Ashburner JM, Shah SJ, He W, Hong CS. Appointment "no-shows" are an independent predictor of subsequent quality of care and resource utilization outcomes. *J Gen Intern Med*. 2015 Oct;30(10):1426-33. doi: 10.1007/s11606-015-3252-3. Epub 2015 Mar 17. PMID: 25776581; PMCID: PMC4579240.

³¹ Rust G, Ye J, Baltrus P, Daniels E, Adesunloye B, Fryer GE. Practical barriers to timely primary care access: impact on adult use of emergency department services. *Arch Intern Med*. 2008 Aug 11;168(15):1705-10. doi: 10.1001/archinte.168.15.1705. PMID: 18695087.

³² Berkowitz SA, Terranova J, Hill C, Ajayi T, Linsky T, Tishler LW, DeWalt DA. Meal Delivery Programs Reduce The Use Of Costly Health Care In Dually Eligible Medicare And Medicaid Beneficiaries. *Health Aff (Millwood)*. 2018 Apr;37(4):535-542. doi: 10.1377/hlthaff.2017.0999. PMID: 29608345; PMCID: PMC6324546.

³³ Kelsey McNamara, Ellen Rudy, Anne Armao, Kerri Towsley, Samantha Lang, Carla Perissinotto, COMPANION CARE ASSOCIATED WITH REDUCTION IN ADMISSIONS AND EMERGENCY DEPARTMENT USE AMONG OLDER ADULTS, *Innovation in Aging*, Volume 6, Issue Supplement_1, November 2022, Pages 812–813, <https://doi.org/10.1093/geroni/igac059.2927>

³⁴ Oregon Health and Science University. Center for Health Systems Effectiveness, Medicaid Transformation Project Evaluation (2020)

MODEL SAVINGS DEVELOPMENT

A core component of the savings projections is Milliman's Health Cost Guidelines (HCGs). The HCGs are created by Milliman annually and represent both published and unpublished data aggregated with Milliman's experience, research, and actuarial judgment to create standardized benchmarks of healthcare utilization and cost in each county. Critical to this project are the degree of healthcare management (DoHM) and area factors of the HCGs.

The purpose of evaluating DoHM within the HCGs is to determine the relative difference in expected claims cost between FFS Medicare and a well-managed delivery system. FFS Medicare has a limited DoHM whereas a well-managed system exhibits utilization patterns seen more frequently in effective managed care programs. Well-managed benchmarks are developed using data from US Preventive Services Task Force guidelines, population health research, Medicare Advantage, and FFS Medicare.

The gap in utilization patterns between FFS Medicare and a well-managed system is a focus area of this analysis. We refer to this gap as the "addressable utilization." We translated our savings estimates outlined in Table 12 to a percentage of addressable utilization and bounded the savings amounts to the total addressable utilization. This assumes that providing HCBS and CAPABLE services would move the population toward the well-managed benchmark utilization. It is important to note that a well-managed delivery system is not meant to represent a system with no opportunities to improve utilization. However, for this analysis we use the relativity of well-managed to FFS Medicare utilization and costs to translate savings amounts and to define an upper bound on potential savings for these interventions.

Area factors, which reflect differences in utilization, average charge, and claim cost by geographic area, allow for analysis that is targeted to the geographic differences in California baseline spend. Many counties in California already exhibit utilization patterns that are near or even beyond the well-managed benchmarks for certain service categories and therefore have limited to no savings projected for that service category. It is important to note that these low utilization starting points are not the norm in FFS Medicare populations and represent a unique aspect of some areas in California. If this model was projected in other states, different utilization starting points could influence the modeled savings with higher savings opportunity available in high utilization areas.

BASELINE SAVINGS

Assumptions were developed based on published literature to determine what proportion of the addressable utilization would be impacted by the specific model benefits.

Assumptions were developed separately by dual eligibility status, CFI cohort, and service category and applied to the baseline cost, after the removal of service category exclusions, in each county to create a savings PEPM. As previously described, these savings values were capped by the maximum difference between FFS Medicare and a well-managed system in each county. As a final step, the allowed claims amounts were converted to estimated paid claims amounts by accounting for FFS Medicare cost sharing. The resulting range of aggregate impact to claims costs across the 10-year model is displayed in Table 16 for each frailty cohort and for dual and non-dual enrollees.

TABLE 16 – BASELINE AGGREGATE ANNUAL GROSS SAVING IMPACTS (MEASURED AS A PERCENTAGE OF MEDICARE ALLOWED COSTS) BY COHORT AND DUAL STATUS

NON-DUAL		DUAL	
Mildly Frail	Moderately-to-Severely Frail	Mildly Frail	Moderately-to-Severely Frail
0.8% - 4.5%	1.5% - 6.2%	0.6% - 3.4%	1.3% - 5.0%

Each model element is expected to have differing impact on total savings based on previously published research. The sensitivity testing allows stakeholders to view the relative impacts of each model element.

10-YEAR PROJECTION OF MEDICAL COST SAVINGS

The 10-year projection of medical cost savings was developed by applying the medical cost savings assumptions developed in the baseline savings section to the projected Medicare costs described in Section 3. Comparing the final projected claims costs with and without these impacts allows for gross savings that can be compared against benefit and administrative costs to develop projected net savings.

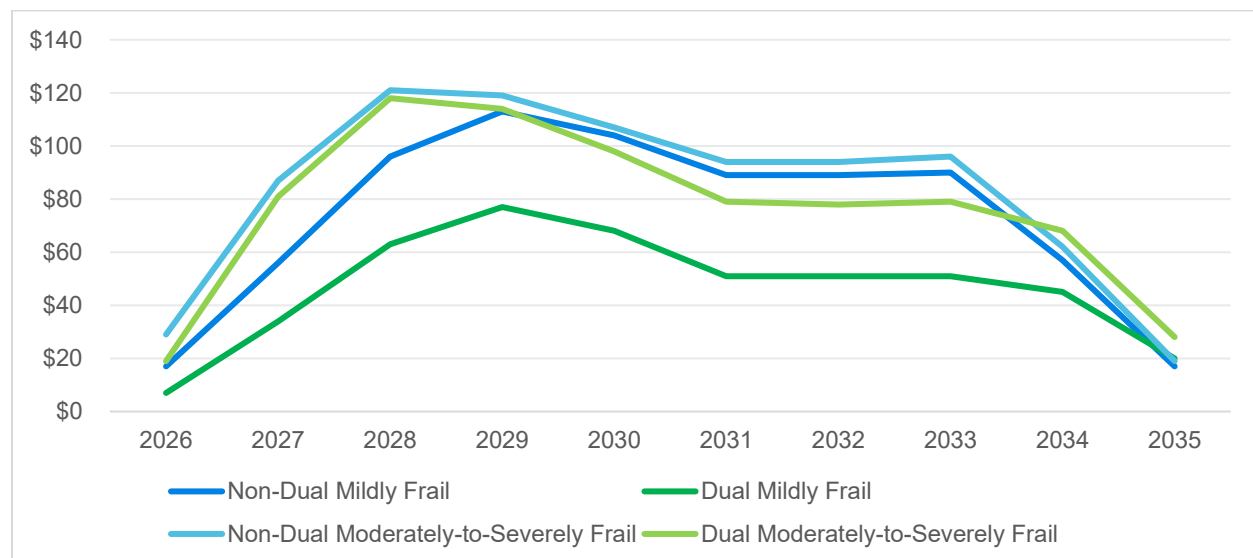
Some of the claim cost impacts are expected to occur within the same year as the associated model element that drives the claim cost impact. For example, an increase in primary and specialist care office visits would be expected to occur in the same period as the transportation benefit. However, other claims cost impacts generated by this model are not expected to occur instantaneously. For example, general medical cost savings associated with CAPABLE have been shown to occur over the 2-year timeframe following the completion of CAPABLE³⁵. The 10-year model allows for a lag in savings to be recognized with 8 years of active model participation and 2 years of runout to account for continued accrual in savings.

The culmination of all modeling elements leads to a baseline, 10-year projection of medical cost impacts displayed in Table 17 and Figure 4.

TABLE 17 – BASELINE 10-YEAR PROJECTION OF MEDICAL COST GROSS SAVINGS (\$M)

YEAR	NON-DUAL			DUAL			ALL		
	MILDLY FRAIL	MODERATELY -TO- SEVERELY FRAIL	TOTAL	MILDLY FRAIL	MODERATELY -TO- SEVERELY FRAIL	TOTAL	MILDLY FRAIL	MODERATELY -TO- SEVERELY FRAIL	TOTAL
2026	\$17	\$29	\$47	\$7	\$19	\$25	\$24	\$48	\$72
2027	\$56	\$87	\$143	\$34	\$81	\$115	\$90	\$168	\$258
2028	\$96	\$121	\$217	\$63	\$118	\$181	\$159	\$239	\$398
2029	\$113	\$119	\$232	\$77	\$114	\$192	\$190	\$234	\$424
2030	\$104	\$107	\$210	\$68	\$98	\$166	\$172	\$204	\$376
2031	\$89	\$94	\$183	\$51	\$79	\$130	\$140	\$173	\$313
2032	\$89	\$94	\$184	\$51	\$78	\$129	\$140	\$173	\$313
2033	\$90	\$96	\$186	\$51	\$79	\$130	\$141	\$175	\$316
2034	\$57	\$62	\$120	\$45	\$68	\$112	\$102	\$130	\$232
2035	\$17	\$19	\$35	\$20	\$28	\$47	\$36	\$47	\$83

FIGURE 4 – ANNUAL GROSS SAVINGS (\$M) BY DUAL STATUS AND FRAILTY LEVEL



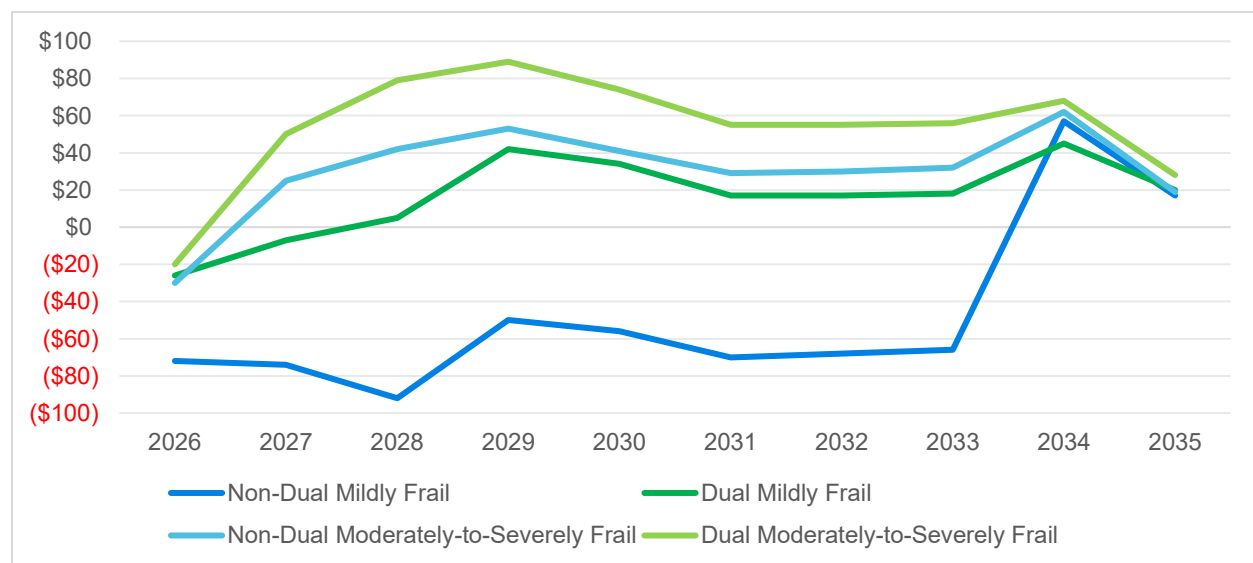
³⁵ Innovative Home Visit Models Associated With Reductions In Costs, Hospitalizations, And Emergency Department Use Sarah Ruiz, Lynne Page Snyder, Christina Rotondo, Caitlin Cross-Barnet, Erin Murphy Colligan, and Katherine Giuriceo. Health Affairs 2017 36:3, 425-432

Net savings are disproportionately driven by CAPABLE which, as modeled, has a higher savings to cost ratio than HCBS. Because of expected utilization patterns this leads to dual eligible enrollees driving a larger proportion of projected net savings since they are expected to utilize CAPABLE at a similar rate to non-dual enrollees but expected to access HCBS through this model at a much lower rate. These utilization assumptions are discussed in more detail in Section 5. The 10-year projection of net savings is displayed in Table 18 and Figure 5.

TABLE 18 – BASELINE 10-YEAR PROJECTION OF MEDICAL COST NET SAVINGS (\$M)

YEAR	NON-DUAL			DUAL			ALL		
	MILDLY FRAIL	MODERATELY -TO- SEVERELY FRAIL	TOTAL	MILDLY FRAIL	MODERATELY -TO- SEVERELY FRAIL	TOTAL	MILDLY FRAIL	MODERATELY-TO-SEVERELY FRAIL	TOTAL
2026	(\$72)	(\$30)	(\$103)	(\$26)	(\$20)	(\$46)	(\$99)	(\$50)	(\$149)
2027	(\$74)	\$25	(\$49)	(\$7)	\$50	\$43	(\$81)	\$75	(\$6)
2028	(\$92)	\$42	(\$50)	\$5	\$79	\$85	(\$87)	\$121	\$34
2029	(\$50)	\$53	\$3	\$42	\$89	\$131	(\$8)	\$142	\$134
2030	(\$56)	\$41	(\$15)	\$34	\$74	\$108	(\$22)	\$115	\$93
2031	(\$70)	\$29	(\$40)	\$17	\$55	\$73	(\$52)	\$85	\$32
2032	(\$68)	\$30	(\$38)	\$17	\$55	\$72	(\$51)	\$85	\$34
2033	(\$66)	\$32	(\$34)	\$18	\$56	\$74	(\$48)	\$88	\$40
2034	\$57	\$62	\$120	\$45	\$68	\$112	\$102	\$130	\$232
2035	\$17	\$19	\$35	\$20	\$28	\$47	\$36	\$47	\$83

FIGURE 5 – ANNUAL NET SAVINGS (\$M) BY DUAL STATUS AND FRAILTY LEVEL



MEDICAID COST SAVINGS

While Medicaid cost savings were not modeled in this analysis, Medicaid costs could be impacted by the MAHCC model. Medicaid assists with coverage of Medicare premiums, deductibles, and/or coinsurance for dual eligible beneficiaries. To the extent that the MAHCC model reduces Medicare costs for dual eligible enrollees, then it would also reduce Medicaid liability for Medicare cost sharing. Medicaid cost impacts would be more limited than Medicare cost impacts because Medicare cost sharing, which varies by type of service, is a relatively small portion of gross

Medicare costs and because state Medicaid “lesser of” policies result in states typically reimbursing less than the full cost sharing amount.

A primary goal of the MAHCC model is to delay or avoid the need for nursing facility care. For dual eligible beneficiaries, a reduction in the need for nursing facility care would likely result in direct Medicaid savings, as Medicaid is the primary payer for nursing facility care. Nationwide, the average monthly cost of providing Medicaid nursing facility care is more than \$6,000 PEPM³⁶ whereas the cost to provide Medicaid HCBS is typically much lower³⁷, so even a relatively modest reduction in nursing facility care for dual eligible beneficiaries could produce significant Medicaid savings. A reduction in nursing facility care or other LTSS could also result in Medicaid savings for non-dual eligible participants whose income is greater than the Medicaid income limit but low enough to qualify through spend-down due to high nursing facility or other LTSS expenses. Enabling those participants to continue living in the community may reduce or eliminate their need for Medicaid-funded LTSS.

³⁶ Estimates of Medicaid Nursing Facility Payments Relative to Costs, MACPAC Issue Brief 2023 Jan. <https://www.macpac.gov/wp-content/uploads/2023/01/Estimates-of-Medicaid-Nursing-Facility-Payments-Relative-to-Costs-1-6-23.pdf>

³⁷ Priya Chidambaram and Alice Burns. How Many People Use Medicaid Long-Term Services and Supports and How Much Does Medicaid Spend on Those People? Kaiser Family Foundation 2023 Aug 14. <https://www.kff.org/medicaid/issue-brief/how-many-people-use-medicaid-long-term-services-and-supports-and-how-much-does-medicaid-spend-on-those-people>

Section 5: Actuarial Modeling Assumptions Sensitivity Testing

In addition to a baseline scenario, we performed sensitivity testing of key assumptions and model elements. The purpose of robust sensitivity testing was to highlight the wide range of potential cost and savings outcomes. Due to the wide range in estimated medical cost savings in published literature, the long-term nature of this projection, and the number of material assumptions within the model, the sensitivity testing provided in this section should be carefully considered when evaluating the potential for savings within this model. While we performed sensitivity testing for many variables, the sensitivity tests should not be considered comprehensive. Other sources of variation may cause results to differ from the baseline scenario. Additionally, the ranges presented in the sensitivity testing should not be considered minimum or maximum outcomes. Deviations further than those presented in the scenario testing may be possible.

Section 5.1: Benefit Allowance

This section of sensitivity testing focuses on saving impacts of benefits changes from the HCBS and CAPABLE programs.

BENEFIT INFLATION

Table 19 shows the impact of inflating the HCBS and CAPABLE benefits over time instead of maintaining a static benefit for the lifetime of the model. Consideration of this scenario is important since a static benefit loses value across a model of this duration and inflation has a compounding impact on the model. A critical simplifying assumption in the baseline scenario is that a static benefit does not, over time, lead to reduced gross savings. Because of that simplifying assumption this alternate scenario increases costs without a material change in gross savings leading to a complete loss of net savings in the 5% inflation scenario.

TABLE 19 – SENSITIVITY TESTING RESULTS OF BENEFIT INFLATION

Scenario 1 – Annual Benefit Inflation Rate of 2% - lower expected net savings

Scenario 2 – Annual Benefit Inflation Rate of 5% - lower expected net savings

DUAL STATUS	FRAILITY LEVEL	Scenario 1			Scenario 2		
		NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)	NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)
Non-Dual	Mildly Frail	(\$109.07)	(\$563)	(\$88)	(\$137.46)	(\$709)	(\$235)
	Moderately-to-Severely Frail	\$141.65	\$267	(\$37)	\$109.50	\$206	(\$97)
	Total	(\$42.03)	(\$296)	(\$125)	(\$71.42)	(\$503)	(\$332)
Dual	Mildly Frail	\$35.16	\$147	(\$17)	\$28.39	\$119	(\$46)
	Moderately-to-Severely Frail	\$261.47	\$522	(\$13)	\$250.94	\$501	(\$34)
	Total	\$108.26	\$669	(\$30)	\$100.28	\$620	(\$79)
All	Mildly Frail	(\$44.49)	(\$416)	(\$106)	(\$63.20)	(\$590)	(\$280)
	Moderately-to-Severely Frail	\$203.31	\$789	(\$49)	\$182.28	\$707	(\$131)
	Total	\$28.21	\$373	(\$155)	\$8.83	\$117	(\$411)

Section 5.2: Benefit Utilization

This section of sensitivity testing focuses on changes in benefit utilization and the impact of utilizing similar benefits in other programs.

BENEFIT UTILIZATION MIX

Table 20 shows results from varying the total assumed utilizers of HCBS and CAPABLE. They show how varying the mix of benefits used by enrollees changes the overall model savings. The first two scenarios show the impact of an increase in the proportion of enrollees utilizing CAPABLE and a commensurate decrease in the proportion of enrollees utilizing HCBS. The final two scenarios show the impact of the proportion of enrollees shifting toward HCBS utilization. CAPABLE is the main driver of savings in the model and therefore mix shifts towards CAPABLE drives a significant increase in projected savings and vice versa.

TABLE 20 – SENSITIVITY TESTING RESULTS OF BENEFIT UTILIZATION MIX

Scenario 1 – HCBS benefit utilizers decrease by 2% while CAPABLE benefit utilizers increase by 2% - higher expected net savings

Scenario 2 – HCBS benefit utilizers decrease by 4% while CAPABLE benefit utilizers increase by 4% - higher expected net savings

Scenario 3 – HCBS benefit utilizers increase by 2% while CAPABLE benefit utilizers decrease by 2% - lower expected net savings

Scenario 4 – HCBS benefit utilizers increase by 4% while CAPABLE benefit utilizers decrease by 4% - lower expected net savings

DUAL STATUS	FRAILTY LEVEL	Scenario 1			Scenario 2		
		NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)	NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)
Non-Dual	Mildly Frail	(\$88.81)	(\$458)	\$16	(\$85.67)	(\$442)	\$32
	Moderately-to-Severely Frail	\$166.57	\$314	\$10	\$172.14	\$324	\$21
	Total	(\$20.52)	(\$145)	\$26	(\$16.73)	(\$118)	\$53
Dual	Mildly Frail	\$43.03	\$180	\$16	\$45.78	\$192	\$27
	Moderately-to-Severely Frail	\$274.59	\$548	\$13	\$281.12	\$561	\$26
	Total	\$117.83	\$728	\$29	\$121.80	\$753	\$54
All	Mildly Frail	(\$29.78)	(\$278)	\$32	(\$26.81)	(\$250)	\$60
	Moderately-to-Severely Frail	\$222.16	\$862	\$24	\$228.22	\$885	\$47
	Total	\$44.14	\$584	\$56	\$48.01	\$635	\$107

DUAL STATUS	FRAILTY LEVEL	Scenario 3			Scenario 4		
		NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)	NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)
Non-Dual	Mildly Frail	(\$95.03)	(\$490)	(\$16)	(\$98.10)	(\$506)	(\$32)
	Moderately-to-Severely Frail	\$155.64	\$293	(\$10)	\$150.27	\$283	(\$20)
	Total	(\$28.00)	(\$197)	(\$26)	(\$31.69)	(\$223)	(\$52)
Dual	Mildly Frail	\$35.53	\$149	(\$16)	\$31.82	\$133	(\$31)

DUAL STATUS	FRAILITY LEVEL	Scenario 3			Scenario 4		
		NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)	NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)
	Moderately-to-Severely Frail	\$261.21	\$521	(\$13)	\$254.64	\$508	(\$26)
	Total	\$108.43	\$670	(\$29)	\$103.80	\$641	(\$58)
	Mildly Frail	(\$36.57)	(\$342)	(\$32)	(\$39.93)	(\$373)	(\$63)
All	Moderately-to-Severely Frail	\$209.96	\$815	(\$24)	\$203.98	\$791	(\$47)
	Total	\$35.76	\$473	(\$55)	\$31.63	\$418	(\$110)

CAPABLE UTILIZERS

Table 21 shows the results of varying the total CAPABLE utilizers across the duration of the model while maintaining the relative mix of enrollees utilizing CAPABLE in each cohort. As in the benefit mix scenario, since CAPABLE is assumed to be the main driver of savings, higher CAPABLE utilization drives a significant increase in projected savings and vice versa.

TABLE 21 – SENSITIVITY TESTING RESULTS OF CAPABLE UTILIZERS

Scenario 1 – CAPABLE utilizers increase by 5% - higher expected net savings

Scenario 2 – CAPABLE utilizers decrease by 5% - lower expected net savings

DUAL STATUS	FRAILITY LEVEL	Scenario 1			Scenario 2		
		NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)	NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)
	Mildly Frail	(\$89.03)	(\$459)	\$15	(\$94.70)	(\$489)	(\$14)
Non-Dual	Moderately-to-Severely Frail	\$172.74	\$325	\$22	\$149.72	\$282	(\$21)
	Total	(\$19.04)	(\$134)	\$37	(\$29.34)	(\$207)	(\$36)
	Mildly Frail	\$44.48	\$186	\$22	\$34.26	\$143	(\$21)
Dual	Moderately-to-Severely Frail	\$283.54	\$566	\$31	\$252.59	\$504	(\$30)
	Total	\$121.70	\$752	\$53	\$104.78	\$648	(\$51)
	Mildly Frail	(\$29.25)	(\$273)	\$37	(\$36.96)	(\$345)	(\$35)
All	Moderately-to-Severely Frail	\$229.75	\$891	\$53	\$202.66	\$786	(\$52)
	Total	\$46.74	\$618	\$90	\$33.34	\$441	(\$87)

NON-DUAL HCBS PERCENT OF BENEFIT USED

Table 22 shows the impact of reducing the average amount of the HCBS benefit that is utilized annually by non-dual enrollees. While a lower spend in the HCBS category does result in a projected cost reduction in the model, our assumption is that a minimum level of spend per enrollee is necessary to drive savings with the HCBS benefit. Therefore, savings may deteriorate as the average HCBS benefit amount reduces. This scenario assesses the

impact of a savings reduction associated with a lower average HCBS utilization amount. Initially, the decrease in cost outpaces the reduction in savings leading to improved net savings. However, at an inflection point, the savings quickly deteriorate toward zero causing net savings to decline.

Note that the baseline scenario assumes the HCBS benefit amount (\$2,500 annually) is sufficient to drive the modeled savings. These scenarios may also be useful in understanding the potential impact if that amount is insufficient.

TABLE 22 – SENSITIVITY TESTING RESULTS OF NON-DUAL HCBS PERCENT OF BENEFIT USED

Scenario 1 – HCBS percent of benefit used decrease to 80% - higher expected net savings

Scenario 2 – HCBS percent of benefit used decrease to 60% - lower expected net savings

DUAL STATUS	FRAILITY LEVEL	Scenario 1			Scenario 2		
		NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)	NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)
Non-Dual	Mildly Frail	(\$82.36)	(\$425)	\$49	(\$109.91)	(\$567)	(\$93)
	Moderately-to-Severely Frail	\$150.47	\$283	(\$20)	(\$0.65)	(\$1)	(\$305)
	Total	(\$20.11)	(\$142)	\$29	(\$80.69)	(\$568)	(\$397)

DUAL ELIGIBLE OVERLAP WITH OTHER PROGRAMS

Dual eligible enrollees present complexities when accruing savings due to their Medicaid coverage.

- Because of the robust benefits offered under various Medi-Cal programs there is some duplication of services between this model and Medi-Cal. Therefore, some of the savings in this model may already be realized through the provision of Medi-Cal programs and should not be counted as savings attributable to this model.
- Dual eligible enrollees are allowed to switch to Medicare Advantage plans monthly (with some restrictions including the need to choose an integrated plan) meaning it is more likely that some dual eligible beneficiaries may enroll in Medicare Advantage following receipt of model benefits and savings could ultimately accrue to Medicare Advantage.

In our baseline scenario we do not assume any reduction in savings associated with dual eligible enrollees for the following reasons:

- The assumed HCBS utilization for dual eligible enrollees is very low (3%) and HCBS is the set of benefits that most directly overlap existing Medi-Cal benefits.
- While certain CAPABLE services are individually available to select enrollees through Medi-Cal, our understanding is that the comprehensive and coordinated nature of the CAPABLE program and broad availability in this model make it a meaningfully different and new benefit to dual eligible enrollees in California.

Table 23a shows the impact to the model if gross savings for dual eligible enrollees are reduced or accrue to other programs. This scenario presents a significant reduction in net savings.

TABLE 23a – SENSITIVITY TESTING RESULTS OF DUAL ELIGIBLE OVERLAP WITH OTHER PROGRAMS

Scenario 1 – 10% of savings reduced due to overlapping with other programs – lower expected net savings

Scenario 2 – 35% of savings reduced due to overlapping with other programs – lower expected net savings

Scenario 3 – 50% of savings reduced due to overlapping with other programs – lower expected net savings

Scenario 4 – 75% of savings reduced due to overlapping with other programs – lower expected net savings

DUAL STATUS	FRAILITY LEVEL	Scenario 1			Scenario 2		
		NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)	NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)
Dual	Mildly Frail	\$28.12	\$118	(\$47)	\$0.26	\$1	(\$163)
	Moderately-to-Severely Frail	\$229.70	\$459	(\$76)	\$134.29	\$268	(\$267)
	Total	\$93.24	\$576	(\$123)	\$43.55	\$269	(\$430)
All	Mildly Frail	(\$38.17)	(\$357)	(\$47)	(\$50.65)	(\$473)	(\$163)
	Moderately-to-Severely Frail	\$196.38	\$762	(\$76)	\$147.29	\$571	(\$267)
	Total	\$30.64	\$405	(\$123)	\$7.42	\$98	(\$430)

DUAL STATUS	FRAILITY LEVEL	Scenario 3			Scenario 4		
		NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)	NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)
Dual	Mildly Frail	(\$16.46)	(\$69)	(\$233)	(\$44.33)	(\$185)	(\$350)
	Moderately-to-Severely Frail	\$77.05	\$154	(\$381)	(\$18.36)	(\$37)	(\$571)
	Total	\$13.74	\$85	(\$614)	(\$35.94)	(\$222)	(\$921)
All	Mildly Frail	(\$58.14)	(\$543)	(\$233)	(\$70.61)	(\$660)	(\$350)
	Moderately-to-Severely Frail	\$117.83	\$457	(\$381)	\$68.74	\$267	(\$571)
	Total	(\$6.51)	(\$86)	(\$614)	(\$29.73)	(\$393)	(\$921)

DUAL ELIGIBLE HCBS BENEFIT UTILIZERS

A critical assumption in this model is dual eligible enrollees would use limited HCBS through the model because of the significant overlap with the robust Medi-Cal HCBS benefits. Table 23b demonstrates the large negative impact to model net savings if dual eligible enrollees utilize HCBS through the model at the same rate as non-dual enrollees. Note, this is a companion test to the dual eligible overlap with other programs sensitivity test shown in Table 23a and contains an assumed increase in dual eligible HCBS utilizers in addition to Scenarios 2 and 4 from above to show the compounding impact.

TABLE 23b – SENSITIVITY TESTING RESULTS OF DUAL ELIGIBLE HCBS BENEFIT UTILIZERS

Scenario 1 – HCBS benefit utilizers for dual eligible matches non-dual – lower expected net savings

Scenario 2 – HCBS benefit utilizers for dual eligible matches non-dual and 35% of savings reduced due to overlapping other programs – lower expected net savings

Scenario 3 – HCBS benefit utilizers for dual eligible matches non-dual and 75% savings reduced due to overlapping other programs – lower expected net savings

DUAL STATUS	FRAILITY LEVEL	Scenario 1			Scenario 2		
		NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)	NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)
Dual	Mildly Frail	(\$61.60)	(\$258)	(\$422)	(\$122.25)	(\$511)	(\$676)
	Moderately-to-Severely Frail	\$236.09	\$471	(\$63)	\$54.95	\$110	(\$425)
	Total	\$34.56	\$214	(\$485)	(\$65.01)	(\$402)	(\$1,101)

DUAL STATUS	FRAILITY LEVEL	Scenario 3		
		NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)
Dual	Mildly Frail	(\$191.56)	(\$801)	(\$966)
	Moderately-to-Severely Frail	(\$152.07)	(\$304)	(\$838)
	Total	(\$178.81)	(\$1,105)	(\$1,804)

Section 5.3: Savings Assumptions

This section of sensitivity testing focuses on the baseline savings assumptions for a subset of impactful benefit categories.

CAPABLE SAVINGS

The CAPABLE study used to project savings in the model contained a large confidence interval for estimated medical cost savings. The baseline scenario uses the 33rd percentile of savings within that confidence interval as a basis for the savings estimate assumed in the baseline scenario to maintain conservatism in the actuarial modeling compared to using the point estimate of the study. Note that additional adjustments were made to estimated savings to reflect time period, geography, population, and other differences between this projection and the CAPABLE study. Table 24 shows the impact of varying the estimated CAPABLE savings within the confidence interval. Given the materiality of CAPABLE savings this is one of the most impactful drivers of net savings.

TABLE 24 – SENSITIVITY TESTING RESULTS OF CAPABLE SAVINGS

Scenario 1 – Assume the 25th percentile of savings within the confidence interval – lower expected net savings

Scenario 2 – Assume the 40th percentile of savings within the confidence interval – higher expected net savings

Scenario 3 – Assume the 50th percentile of savings within the confidence interval – higher expected net savings

DUAL STATUS	FRAILITY LEVEL	Scenario 1			Scenario 2		
		NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)	NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)
Non-Dual	Mildly Frail	(\$105.63)	(\$545)	(\$71)	(\$80.96)	(\$418)	\$57
	Moderately-to-Severely Frail	\$110.79	\$209	(\$95)	\$201.29	\$379	\$76
	Total	(\$47.76)	(\$336)	(\$165)	(\$5.49)	(\$39)	\$132
Dual	Mildly Frail	\$19.76	\$83	(\$82)	\$54.87	\$230	\$65

DUAL STATUS	FRAILITY LEVEL	Scenario 1			Scenario 2		
		NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)	NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)
	Moderately-to-Severely Frail	\$200.17	\$400	(\$135)	\$322.01	\$643	\$108
	Total	\$78.04	\$482	(\$217)	\$141.17	\$872	\$173
All	Mildly Frail	(\$49.48)	(\$462)	(\$152)	(\$20.14)	(\$188)	\$122
	Moderately-to-Severely Frail	\$156.78	\$608	(\$230)	\$263.41	\$1,022	\$184
	Total	\$11.03	\$146	(\$382)	\$63.05	\$834	\$306

Scenario 3				
DUAL STATUS	FRAILITY LEVEL	NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)
Non-Dual	Mildly Frail	(\$64.52)	(\$333)	\$141
	Moderately-to-Severely Frail	\$261.63	\$493	\$189
	Total	\$22.69	\$160	\$331
Dual	Mildly Frail	\$78.28	\$328	\$163
	Moderately-to-Severely Frail	\$403.24	\$805	\$270
	Total	\$183.25	\$1,133	\$433
All	Mildly Frail	(\$0.58)	(\$5)	\$305
	Moderately-to-Severely Frail	\$334.50	\$1,298	\$460
	Total	\$97.73	\$1,292	\$764

USE OF MEDICALLY TAILORED MEALS

The use of medically tailored meals has been shown to have a very significant impact when provided to a small targeted population. Our baseline scenario assumes a small amount of total savings associated with medically tailored meals due to the small proportion of enrollees expected to benefit from medically tailored meals. Table 25 shows the impact of varying the percent of utilizers of this benefit that need and utilize the intervention. Changes in the proportion of enrollees who use this benefit have a limited impact on results due to the low expected utilization starting point for this intervention.

TABLE 25 – SENSITIVITY TESTING RESULTS OF MEDICALLY TAILORED MEALS

Scenario 1 – The proportion of enrollees who benefit from the medically tailored meals decreases by 25% - lower expected net savings

Scenario 2 – The proportion of enrollees who benefit from the medically tailored meals increases by 25% - higher expected net savings

DUAL STATUS	FRAILITY LEVEL	Scenario 1			Scenario 2		
		NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)	NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)
Non-Dual	Mildly Frail	(\$94.02)	(\$485)	(\$11)	(\$89.92)	(\$464)	\$10
	Moderately-to-Severely Frail	\$156.06	\$294	(\$9)	\$165.86	\$312	\$9
	Total	(\$27.15)	(\$191)	(\$20)	(\$21.53)	(\$152)	\$19
Dual	Mildly Frail	\$39.19	\$164	(\$0)	\$39.34	\$165	\$0
	Moderately-to-Severely Frail	\$267.67	\$534	(\$0)	\$268.04	\$535	\$0
	Total	\$112.99	\$698	(\$1)	\$113.22	\$700	\$1
All	Mildly Frail	(\$34.37)	(\$321)	(\$11)	(\$32.04)	(\$299)	\$11
	Moderately-to-Severely Frail	\$213.49	\$828	(\$10)	\$218.44	\$847	\$9
	Total	\$38.35	\$507	(\$21)	\$41.45	\$548	\$20

FALLS PREVENTION

Fall prevention is noted in multiple sources as a potential favorable outcome of CAPABLE and driver of cost savings³⁸
³⁹. Table 26 shows the impact of varying the assumed percentage of falls avoided from enrollees utilizing CAPABLE. An increase in falls avoidance increases net savings and vice versa.

TABLE 26 – SENSITIVITY TESTING RESULTS OF FALLS PREVENTION

Scenario 1 – Falls prevention assumption decreases by 5% - lower expected net savings

Scenario 2 – Falls prevention assumption increases by 5% - higher expected net savings

DUAL STATUS	FRAILITY LEVEL	Scenario 1			Scenario 2		
		NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)	NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)
Non-Dual	Mildly Frail	(\$94.72)	(\$489)	(\$14)	(\$89.13)	(\$460)	\$14
	Moderately-to-Severely Frail	\$150.81	\$284	(\$19)	\$171.32	\$323	\$19
	Total	(\$29.07)	(\$205)	(\$34)	(\$19.49)	(\$137)	\$34
Dual	Mildly Frail	\$35.54	\$149	(\$16)	\$43.00	\$180	\$16
	Moderately-to-Severely Frail	\$255.37	\$510	(\$25)	\$280.34	\$560	\$25
	Total	\$106.55	\$658	(\$41)	\$119.67	\$740	\$41
All	Mildly Frail	(\$36.39)	(\$340)	(\$30)	(\$29.97)	(\$280)	\$30

³⁸ Breyse J, Dixon S, Wilson J, Szanton S. Aging Gracefully in Place: An Evaluation of the Capability of the CAPABLE© Approach. J Appl Gerontol. 2022 Mar;41(3):718-728. doi: 10.1177/07334648211042606. Epub 2021 Sep 2. PMID: 34474609.

³⁹ Spoelstra SL, Sikorskii A, Gitlin LN, Schueller M, Kline M, Szanton SL. Dissemination of the CAPABLE model of care in a Medicaid Waiver program to improve physical function. J Am Geriatr Soc. 2019;67(2):363-370. https://doi.org/10.1111/jgs.15713

DUAL STATUS	FRAILITY LEVEL	Scenario 1			Scenario 2		
		NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)	NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)
	Moderately-to-Severely Frail	\$204.62	\$794	(\$44)	\$227.42	\$882	\$44
	Total	\$34.32	\$454	(\$74)	\$45.55	\$602	\$74

HCBS SAVINGS VALUE

Like the CAPABLE scenario above, the assumed HCBS savings in our baseline scenario is subject to significant variation. The HCBS savings assumption consists of multiple components, each estimated separately: general HCBS savings, medically tailored meals, and non-emergency transportation. Table 27 shows the impact of reduced HCBS savings due to a higher proportion of enrollees utilizing HCBS with diminished or no associated savings. While impactful, this scenario has a much less material impact on net savings than the CAPABLE savings changes presented in Table 24.

TABLE 27 – SENSITIVITY TESTING RESULTS OF HCBS VALUE TO UTILIZERS

Scenario 1 – The medical savings associated with HCBS decreases by 10% - lower expected net savings

Scenario 2 – The medical savings associated with HCBS decreases by 25% - lower expected net savings

Scenario 3 – The medical savings associated with HCBS decreases by 50% - lower expected net savings

Scenario 4 – The medical savings associated with HCBS decreases to 0% - lower expected net savings

DUAL STATUS	FRAILITY LEVEL	Scenario 1			Scenario 2		
		NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)	NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)
Non-Dual	Mildly Frail	(\$95.62)	(\$493)	(\$19)	(\$101.16)	(\$522)	(\$48)
	Moderately-to-Severely Frail	\$152.29	\$287	(\$17)	\$139.13	\$262	(\$41)
	Total	(\$29.33)	(\$207)	(\$36)	(\$36.91)	(\$260)	(\$89)
Dual	Mildly Frail	\$39.13	\$164	(\$1)	\$38.91	\$163	(\$1)
	Moderately-to-Severely Frail	\$267.52	\$534	(\$1)	\$267.02	\$533	(\$2)
	Total	\$112.90	\$698	(\$1)	\$112.60	\$696	(\$3)
All	Mildly Frail	(\$35.28)	(\$330)	(\$20)	(\$38.44)	(\$359)	(\$49)
	Moderately-to-Severely Frail	\$211.59	\$821	(\$17)	\$204.94	\$795	(\$43)
	Total	\$37.15	\$491	(\$37)	\$32.97	\$436	(\$92)

DUAL STATUS	FRAILITY LEVEL	Scenario 3			Scenario 4		
		NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)	NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)
	Mildly Frail	(\$110.39)	(\$570)	(\$95)	(\$128.85)	(\$665)	(\$191)

DUAL STATUS	FRAILITY LEVEL	Scenario 3			Scenario 4		
		NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)	NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)
Non-Dual	Moderately-to-Severely Frail	\$117.19	\$221	(\$83)	\$73.30	\$138	(\$165)
	Total	(\$49.54)	(\$349)	(\$178)	(\$74.80)	(\$527)	(\$356)
Dual	Mildly Frail	\$38.56	\$161	(\$3)	\$37.85	\$158	(\$6)
	Moderately-to-Severely Frail	\$266.18	\$531	(\$3)	\$264.50	\$528	(\$7)
	Total	\$112.09	\$693	(\$6)	\$111.06	\$686	(\$13)
All	Mildly Frail	(\$43.69)	(\$408)	(\$98)	(\$54.21)	(\$506)	(\$196)
	Moderately-to-Severely Frail	\$193.85	\$752	(\$86)	\$171.69	\$666	(\$172)
	Total	\$26.00	\$344	(\$184)	\$12.07	\$160	(\$368)

CAPABLE VALUE TO UTILIZERS

For CAPABLE, our baseline assumption is that the intensity and comprehensive nature of the intervention would limit utilization to those most likely to benefit and result in medical cost savings. Table 28 shows the impact if the assumed CAPABLE savings are reduced due to a higher proportion of enrollees utilizing CAPABLE with diminished savings. Given the significance of CAPABLE savings in the model, this has a material impact on projected net savings.

TABLE 28 – SENSITIVITY TESTING RESULTS OF CAPABLE VALUE TO UTILIZERS

Scenario 1 – The medical cost savings value of the CAPABLE program decreases by 25% - lower expected net savings

Scenario 2 – The medical cost savings value of the CAPABLE program decreases by 50% - lower expected net savings

DUAL STATUS	FRAILITY LEVEL	Scenario 1			Scenario 2		
		NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)	NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)
Non-Dual	Mildly Frail	(\$108.73)	(\$561)	(\$87)	(\$125.53)	(\$648)	(\$173)
	Moderately-to-Severely Frail	\$99.51	\$187	(\$116)	\$37.94	\$71	(\$232)
	Total	(\$53.05)	(\$374)	(\$203)	(\$81.82)	(\$576)	(\$405)
Dual	Mildly Frail	\$15.74	\$66	(\$98)	(\$7.79)	(\$33)	(\$197)
	Moderately-to-Severely Frail	\$186.40	\$372	(\$163)	\$104.94	\$210	(\$325)
	Total	\$70.87	\$438	(\$261)	\$28.63	\$177	(\$522)
All	Mildly Frail	(\$52.99)	(\$495)	(\$185)	(\$72.81)	(\$680)	(\$370)
	Moderately-to-Severely Frail	\$144.22	\$560	(\$279)	\$72.42	\$281	(\$557)
	Total	\$4.87	\$64	(\$464)	(\$30.20)	(\$399)	(\$927)

Section 5.4: Medical Costs

This section of sensitivity testing focuses on medical trend and enrollment patterns.

ALLOWED CLAIMS TRENDS

Table 29 demonstrates the impact of changes in allowed claims trends. Since the model savings are generated by assumed avoided utilization, as claims trends rise the savings rise and vice versa.

TABLE 29 – SENSITIVITY TESTING RESULTS OF ALLOWED CLAIMS TRENDS

Scenario 1 – All service category trends increase by 1% - higher expected net savings

Scenario 2 – All service category trends decrease by 1% - lower expected net savings

DUAL STATUS	FRAILITY LEVEL	Scenario 1			Scenario 2		
		NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)	NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)
Non-Dual	Mildly Frail	(\$86.92)	(\$449)	\$26	(\$96.74)	(\$499)	(\$25)
	Moderately-to-Severely Frail	\$175.62	\$331	\$27	\$147.07	\$277	(\$26)
	Total	(\$16.72)	(\$118)	\$53	(\$31.55)	(\$222)	(\$51)
Dual	Mildly Frail	\$42.92	\$180	\$15	\$35.75	\$150	(\$15)
	Moderately-to-Severely Frail	\$279.59	\$558	\$23	\$256.56	\$512	(\$23)
	Total	\$119.37	\$738	\$39	\$107.08	\$662	(\$37)
All	Mildly Frail	(\$28.78)	(\$269)	\$41	(\$37.42)	(\$350)	(\$40)
	Moderately-to-Severely Frail	\$229.12	\$889	\$51	\$203.41	\$789	(\$49)
	Total	\$46.88	\$620	\$92	\$33.24	\$440	(\$88)

REFERRAL RATE

Table 30 demonstrates the impact of changing the rate at which individuals who are not identified as potentially eligible for the model by the claims-based frailty index are assumed to be referred into the model. Since we assume these enrollees have a lower starting claims cost than the rest of their cohort, an increase in referred enrollees reduces savings and vice versa. However, it would take a material increase in referrals to make a sizeable impact on the model.

TABLE 30 – SENSITIVITY TESTING RESULTS OF REFERRAL RATE

Scenario 1 – Referral rate increases by 50% - lower expected net savings

Scenario 2 – Referral rate decreases by 50% - higher expected net savings

DUAL STATUS	FRAILITY LEVEL	Scenario 1			Scenario 2		
		NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)	NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)
Non-Dual	Mildly Frail	(\$92.66)	(\$482)	(\$8)	(\$91.19)	(\$466)	\$8
	Moderately-to-Severely Frail	\$159.73	\$302	(\$1)	\$162.40	\$304	\$1

DUAL STATUS	FRAILITY LEVEL	Scenario 1			Scenario 2		
		NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)	NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)
	Total	(\$25.17)	(\$180)	(\$9)	(\$23.38)	(\$162)	\$9
Dual	Mildly Frail	\$38.97	\$164	(\$1)	\$39.57	\$165	\$1
	Moderately-to-Severely Frail	\$267.29	\$535	\$0	\$268.43	\$535	(\$0)
	Total	\$112.72	\$699	(\$0)	\$113.49	\$699	\$0
All	Mildly Frail	(\$34.09)	(\$318)	(\$8)	(\$32.29)	(\$302)	\$8
	Moderately-to-Severely Frail	\$215.84	\$837	(\$1)	\$216.20	\$839	\$1
	Total	\$39.24	\$519	(\$9)	\$40.62	\$537	\$9

INITIAL ASSESSMENT RATE

Table 31 demonstrates the impact of changes to the rate at which eligible enrollees pursue an assessment and ultimately enroll in the model. If the assessment rates change at equal percentages by frailty cohort (as done in this scenario) a higher assessment rate reduces overall model savings. This is because the proportion of eligible enrollees skews toward mildly frail. With more mildly frail enrollments from a higher initial assessment rate, the proportion of mildly frail enrollees increases at a faster rate driving a decrease in net savings.

TABLE 31 – SENSITIVITY TESTING RESULTS OF INITIAL ASSESSMENT RATES

Scenario 1 – Initial assessment rate decreases uniformly by 2.0% - lower expected net savings

Scenario 2 – Initial assessment rate increases uniformly by 2.0% - higher expected net savings

DUAL STATUS	FRAILITY LEVEL	Scenario 1			Scenario 2		
		NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)	NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)
Non-Dual	Mildly Frail	(\$91.93)	(\$456)	\$19	(\$91.92)	(\$493)	(\$19)
	Moderately-to-Severely Frail	\$161.33	\$296	(\$7)	\$160.83	\$310	\$7
	Total	(\$24.21)	(\$159)	\$12	(\$24.34)	(\$183)	(\$12)
Dual	Mildly Frail	\$39.34	\$158	(\$6)	\$39.20	\$171	\$6
	Moderately-to-Severely Frail	\$268.29	\$522	(\$13)	\$267.46	\$547	\$13
	Total	\$113.30	\$680	(\$19)	\$112.93	\$718	\$19
All	Mildly Frail	(\$31.85)	(\$298)	\$12	(\$34.51)	(\$322)	(\$12)
	Moderately-to-Severely Frail	\$210.98	\$819	(\$20)	\$221.07	\$858	\$20
	Total	\$39.39	\$521	(\$7)	\$40.47	\$535	\$7

Section 5.5: Other Assumptions

This section of sensitivity testing focuses on various assumptions that impact model costs, such as administrative expenses and service areas.

ADMINISTERING AGENCY ADMINISTRATIVE COSTS

Administering agency administrative cost payments are calculated as a percentage of total benefit spend annually. Table 32 shows the impact of both higher and lower than expected administering agency administrative cost payments. While administrative cost payments are proportional to total benefit spend this assumption has a limited impact to generated net savings when compared to other assumptions.

TABLE 32 – SENSITIVITY TESTING RESULTS OF ADMINISTRATIVE COSTS

Scenario 1 – Admin as a percent of total cost decrease by 3% - higher expected net savings

Scenario 2 – Admin as a percent of total cost increase by 3% - lower expected net savings

DUAL STATUS	FRAILITY LEVEL	Scenario 1			Scenario 2		
		NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)	NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)
Non-Dual	Mildly Frail	(\$85.56)	(\$441)	\$33	(\$98.30)	(\$507)	(\$33)
	Moderately-to-Severely Frail	\$168.74	\$318	\$14	\$153.40	\$289	(\$14)
	Total	(\$17.56)	(\$124)	\$47	(\$31.00)	(\$218)	(\$47)
Dual	Mildly Frail	\$41.04	\$172	\$7	\$37.49	\$157	(\$7)
	Moderately-to-Severely Frail	\$270.81	\$541	\$6	\$264.90	\$529	(\$6)
	Total	\$115.26	\$712	\$13	\$110.95	\$686	(\$13)
All	Mildly Frail	(\$28.87)	(\$270)	\$40	(\$37.49)	(\$350)	(\$40)
	Moderately-to-Severely Frail	\$221.26	\$858	\$20	\$210.78	\$818	(\$20)
	Total	\$44.52	\$589	\$61	\$35.35	\$467	(\$61)

SERVICE AREA

As discussed in the executive summary, variations in geographic Medicare utilization patterns play a large role in the projection of PEPM savings for this model. California has a high degree of variation in utilization patterns through the state with some areas exhibiting relatively high utilization rates and other areas exhibiting relatively low utilization rates in the Medicare FFS population. We project greater potential savings in areas with relatively high Medicare utilization rates, particularly for inpatient and post-acute services. Table 33 demonstrates the variability in PEPM savings by varying geography.

- **Eight targeted counties:** These targeted counties were selected by CalHHS as examples of counties that have both high levels of engagement from community organizations and dense population centers although this is not an exhaustive list that meets those selection criteria. These targeted counties drive the model savings due to the large population basis, population mix, and high Medicare utilization rates. In isolation they generate 93% of the statewide baseline scenario net savings. Of note in the selected counties is that the inclusion of the prefrail population still generates positive net savings under the baseline model assumptions. These results are shared in Appendix C.
- **Los Angeles County:** High levels of Medicare utilization even in the mildly frail population and a large population basis allows this single county to generate 85% of the statewide baseline scenario net savings.

Of note in Los Angeles is that the inclusion of the prefrail population still generates positive net savings under the baseline model assumptions.

- San Francisco County: Low levels of utilization and population mix lead to low savings expectations even in the moderately-to-severely frail cohort.

TABLE 33 – SENSITIVITY TESTING RESULTS OF DIFFERENT SERVICE AREA

****Note that in this test, the final column is percent of Baseline Scenario savings**

Scenario 1 – Eight targeted counties (Los Angeles, San Diego, San Francisco, Ventura, San Bernadino, San Mateo, Santa Clara, Stanislaus)

Scenario 2 – Los Angeles

Scenario 3 – San Francisco

DUAL STATUS	FRAILITY LEVEL	Scenario 1			Scenario 2		
		NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	% OF BASELINE SAVINGS	NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	% OF BASELINE SAVINGS
Non-Dual	Mildly Frail	(\$73.10)	(\$157)		(\$49.78)	(\$46)	
	Moderately-to-Severely Frail	\$204.95	\$170		\$292.54	\$117	
	Total	\$7.21	\$13		\$58.12	\$70	
Dual	Mildly Frail	\$51.14	\$120		\$59.14	\$97	
	Moderately-to-Severely Frail	\$315.93	\$357		\$360.97	\$280	
	Total	\$135.60	\$477		\$153.77	\$377	
All	Mildly Frail	(\$12.14)	(\$37)		\$15.93	\$51	
	Moderately-to-Severely Frail	\$263.36	\$526		\$333.70	\$397	
	Total	\$71.59	\$490	93%	\$115.77	\$447	85%

DUAL STATUS	FRAILITY LEVEL	Scenario 3		
		NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	% OF BASELINE SAVINGS
Non-Dual	Mildly Frail	(\$126.47)	(\$9)	
	Moderately-to-Severely Frail	\$25.62	\$1	
	Total	(\$80.98)	(\$8)	
Dual	Mildly Frail	(\$14.09)	(\$2)	
	Moderately-to-Severely Frail	\$71.77	\$4	
	Total	\$9.25	\$2	
All	Mildly Frail	(\$56.55)	(\$11)	

DUAL STATUS	FRAILITY LEVEL	Scenario 3		
		NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	% OF BASELINE SAVINGS
	Moderately-to-Severely Frail	\$52.87	\$4	
	Total	(\$25.65)	(\$7)	-1%

Section 5.6: Frailty Delay

This section demonstrates the standalone sensitivity tests on frailty delay.

DELAYED FRAILITY

As discussed in the executive summary, there is not sufficient evidence in the literature to model frailty delay as part of the baseline scenario. Table 34 demonstrates possible savings that could accrue if frailty delays from CAPABLE continue to drive Medicare savings beyond the two-year window modeled in the baseline scenario for CAPABLE. As discussed in Section 4, there may also be Medicaid savings associated with frailty delay that are not modeled here. There would be value in a robust study of these potential savings elements within this model if implemented.

Scenario 1 – Delayed frailty results in one year of additional savings for CAPABLE enrollees – higher net expected savings

Scenario 2 – Delayed frailty results in two years of additional savings for CAPABLE enrollees – higher net expected savings

TABLE 34 – SENSITIVITY TESTING RESULTS OF DELAYED FRAILITY

DUAL STATUS	FRAILITY LEVEL	Scenario 1			Scenario 2		
		NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)	NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)
Non-Dual	Mildly Frail	(\$53.20)	(\$274)	\$200	(\$27.24)	(\$141)	\$334
	Moderately-to-Severely Frail	\$275.24	\$518	\$215	\$342.65	\$645	\$342
	Total	\$34.62	\$244	\$415	\$71.67	\$505	\$676
Dual	Mildly Frail	\$77.65	\$325	\$161	\$106.04	\$444	\$279
	Moderately-to-Severely Frail	\$377.10	\$753	\$218	\$449.04	\$896	\$362
	Total	\$174.38	\$1,078	\$379	\$216.84	\$1,340	\$641
All	Mildly Frail	\$5.39	\$50	\$360	\$32.44	\$303	\$613
	Moderately-to-Severely Frail	\$327.65	\$1,271	\$433	\$397.40	\$1,542	\$704
	Total	\$99.94	\$1,322	\$894	\$139.52	\$1,845	\$1,317

Section 6: Data and Methodology

KEY DATA SOURCES AND ADJUSTMENTS

MEDICARE ENROLLMENT AND CLAIMS DATA

Eligibility and baseline medical cost data for this analysis was sourced from the CMS Medicare 5% Limited Data Set files (LDS) Standard Analytic Files (SAFs). The SAFs contain beneficiary-level demographic and detailed claims information and have been cleaned and summarized through the Milliman HCG Grouper. For this analysis, the following elements of the SAFs were used.

- Member-level demographic data elements including monthly eligibility, geographic information (e.g. state, zip code, and FIPS county code), dual eligibility status, hospice status, as well as counts of Hierarchical Condition Categories (HCCs), among other details.
- Detailed claims data including the following clinical codes: ICD Diagnosis codes, ICD Procedure codes, HCPCS/CPT, revenue code, DRG, CMS provider specialty, and CMS place of service.
- Service utilizations and their frequencies and financial information such as allowed amount, paid amount, and patient cost sharing.

The data includes all Medicare beneficiary and claims information from the 2022 SAFs. The SAFs were limited to individuals residing in California that meet the following requirements to align with model eligibility:

- Enrolled continuously in FFS Medicare for 12 months, including ACO and non-ACO participants,
- Receiving coverage from FFS Medicare under both Parts A and B,
- Not residing in an institutionalized setting for more than 90 days, and
- Not under hospice care

The SAFs contain only a sample population of Medicare beneficiaries in each county in California. We assume that the sample is representative of the FFS Medicare population within California but did not audit the sample to determine how representative it is of the full Medicare population. To produce final population estimates and cost and savings projections, the SAF data is scaled to represent the entire population in each county.

MILLIMAN HEALTH COST GUIDELINES™ (HCGs)

Milliman's HCGs incorporate more than 70 years of research and healthcare consulting into an industry gold standard used by insurers, managed care organizations, and third-party administrators to estimate expected claim costs and model healthcare utilization. The HCGs are updated annually to address the latest trends and regulatory compliance issues. The HCGs are used to adjust national average costs to specific geographic areas and are used to rate Medicare Advantage, Medicare Supplement, and retiree medical plans.

Multiple components of the HCGs were relied upon for this analysis, including the following:

- HCG service category mapping – the HCG service category mapping was used to classify Medicare claims data into service categories, using the HCG Grouper software. Exclusions, trends, and savings assumptions were applied separately by service category.
- Degree of healthcare management (DoHM) – DoHM measures the relative difference in expected claims cost between FFS Medicare and a well-managed delivery system. DoHM was used in the application of savings assumptions.
- Area factors - Area factors reflect differences in utilization, average charge, and claim cost by geographic area. Area factors were used in this analysis to reflect geographic differences in California baseline spend by county and the extent to which additional interventions could change healthcare utilization.

ADDITIONAL METHODOLOGICAL DETAILS

An outline of the methodology underlying the analysis is provided in Sections 1- 4. Below we provide additional details on select aspects of the analysis.

KIM CLAIMS-BASED FRAILITY INDEX (CFI)

Frailty is a clinical condition associated with an elevated risk of adverse health outcomes, including falls, disability, hospitalization and increased mortality. The Kim claims-based Frailty Index (CFI)⁴⁰ is a valuable tool for estimating a deficit-accumulation frailty index using members' clinical information. One study⁴¹ shows that the CFI excels in predicting claims-based outcomes for various medical services, such as hospitalization, nursing facility stays and other healthcare utilization metrics. By leveraging detailed clinical data, the CFI provides a robust measure that could help to identify at-risk individuals more accurately.

The CFI development team at Harvard has released and continues to regularly maintain the SAS programs⁴² specifically designed to calculate CFI for targeted populations. To replicate this, we utilized data elements from the Medicare 5% sample data, including ICD diagnosis codes, CPT codes and HCPCS codes from the prior 12 months of claims data, and processed these through the SAS programs to calculate the CFI for each member. Once the CFI is calculated, the specific cut points are defined to categorize members into various frailty levels, as described in Section 1. These levels help to stratify the population in a manner that aligns with and advances CalHHS's goals for the model.

The requirement for a frailty assessment prior to enrollment and the ability for participation in the model without meeting the CFI threshold introduces the possibility of differences in the number and characteristics of actual model enrollment compared to a strict application of the CFI to historical Medicare claims data. Differences may occur for the following reasons:

- Some individuals identified as potentially eligible through the claims-based model would not screen to a high enough frailty level in the FRAIL Scale or Edmonton Frail Scale assessment to be eligible for model enrollment. Applying an assumption about these individuals reduces overall enrollment relative to the population identified as potentially eligible through the CFI.
- Other individuals do not meet the claims-based eligibility criteria but could be referred to the model by a Medicare provider or other means and screen to a high enough frailty level in the FRAIL Scale or Edmonton Frail Scale assessment to be eligible for model participation. Applying an assumption about these individuals increases overall enrollment relative to the population identified as potentially eligible through the CFI.

The total population can be broken down into the categorizations in Table 35:

TABLE 35 – POPULATION CATEGORIZATION

	PASS ASSESSMENT	FAIL ASSESSMEENT
Above CFI thresholds	True Positive	False Positive
Below CFI thresholds	False Negative	True Negative

We assume that a higher proportion of individuals that are mis-classified by the CFI as being eligible for the model are in lower frailty buckets since the likelihood of a Medicare eligible enrollee being classified as moderately-to-severely frail on the CFI but robust or prefrail on a clinical basis is limited. While we expect this dynamic to have an impact on the total estimated eligible population, we do not expect mis-classified individuals within a given frailty category to have a material impact on the medical cost profile within their frailty category as we assume a similar claims profile to others within the same CFI cohort.

Individuals that do not meet the claims-based eligibility criteria but are eligible for the model do not have a sufficient level of medical claims and/or diagnoses on medical claims to satisfy the CFI threshold but are still clinically frail. Therefore, we expect that those individuals have a lower average medical claim cost than enrollees identified through the CFI algorithm and have assumed that these enrollees have claim costs that resemble a lower level of frailty.

⁴⁰Kim DH, Schneeweiss S, Glynn RJ, Lipsitz LA, Rockwood K, Avorn J. Measuring Frailty in Medicare Data: Development and Validation of a Claims-Based Frailty Index. *J Gerontol A Biol Sci Med Sci*. 2018 Jun 14;73(7):980-987. doi: 10.1093/gerona/glx229. PMID: 29244057; PMCID: PMC6001883.

⁴¹RAND Health Care, Reviewing, Refining, and Validating Claims-Based Algorithms of Frailty and Functional Impairment

⁴²Kim, Dae Hyun; Gautam, Nileesa, 2020, "SAS Programs - Claims-Based Frailty Index", Harvard Dataverse, V15, NF:6:bnfNfdccNq1mGW3HZBUY8YA== [fileUNF]

APPLICATION OF COST ELEMENTS

Table 36 outlines the general method of applying costs in the 8-year model.

TABLE 36 – COST ELEMENTS BY MODEL ELEMENTS

MODEL ELEMENT COST	COST CATEGORY	COST ESTIMATE METHODOLOGY
Service Navigator	Benefit	A PEPM payment applied to all individuals enrolled in each year of the model
HCBS	Benefit	A PEPM cost projected by applying assumptions for the proportion of enrolled individuals utilizing the HCBS benefit and the average proportion of the total \$2,500 allowance used.
CAPABLE	Benefit	A PEPM cost developed by applying assumptions for the proportion of enrolled individuals utilizing the CAPABLE benefit and the average proportion of the total \$5,500 allowance used.
Assessment Administration	Administrative	An annual payment developed by applying the cost of the frailty assessment to all Medicare beneficiaries who pursue an assessment (includes enrollees and those screened out of the model)
Administering Agency Administrative Costs	Administrative	Developed as a percent of total benefit costs to scale with enrollment and utilization assumptions.
Infrastructure Funding	Administrative	A one-time payment applied to the total estimated number of non-profit administering agencies across the 8-year model, assumed to be a total of \$1,000,000 in the model.

CORE MEDICAL COST SAVINGS CALCULATION

The projected savings generated from HCBS and CAPABLE were developed using previously published literature. These assumptions were developed in multiple steps:

- 1) Assumptions from published literature were researched, compiled, and converted into percent of spend impacted by service category for each model element. Assumptions were converted to a percentage of addressable savings by service category.
- 2) Assumptions were developed on the proportion of the population that would benefit from each source of potential savings. These assumptions considered those who would utilize the benefit, had a need for the specific benefit, and would ultimately benefit from the intervention. By developing these proportions and applying them to Step 1 we created assumptions that could be applied to the total population by county, CFI category, and service category.
- 3) Assumptions were aggregated for those utilizing HCBS only, CAPABLE only, and both interventions.

Section 7: Caveats and Limitations

This report has been prepared for the internal business use of, and is only to be relied upon by, the management of ATI Advisory and California Health and Human Services Agency (CalHHS). We understand this report may be shared with other interested parties. We do not intend to benefit or create a legal duty to any third-party recipient of its work.

This report was prepared for the specific purpose of evaluating possible Medicare savings due to the introduction of a limited set of benefits (service navigation, CAPABLE, and HCBS) to a subset of California's Medicare population. This report should not be used for any other purpose. This report should only be reviewed in its entirety. The results of this analysis may not be appropriate for every stakeholder. The results of this report are technical in nature and are dependent upon specific assumptions and methods. No party should rely on these results without a thorough understanding of those assumptions and methods. Such an understanding may require consultation with qualified professionals.

We developed and relied upon certain models to estimate the values included in this report. The intent of the models was to estimate the impact of providing a limited set of HCBS benefits to a subset of California's Medicare beneficiaries. We reviewed the models, including their inputs, calculations, and outputs, for consistency, reasonableness, and appropriateness to the intended purpose and in compliance with generally accepted actuarial practice and relevant actuarial standards of practice (ASOPs).

The models rely on data and information as input to the models. We relied upon previously published research, the CMS Limited Data Set (LDS) Standard Analytic files (SAFs), information provided by CalHHS, ATI Advisory, and other data sources to develop the analyses shown in this report. We did not audit this data and other information. If the underlying data or information is inaccurate or incomplete, the results of our analysis may likewise be inaccurate or incomplete. We performed a limited review of the data used directly in our analysis for reasonableness and consistency, and we did not find material defects in the data. If there are material defects in the data, it is possible they would be uncovered by a detailed, systematic review and comparison of the data to search for data values that are questionable, or for relationships that are materially inconsistent. Such a review was beyond the scope of our engagement.

This report represents our best estimate of future experience given the assumptions described in this report and information that is currently available. Differences between the projected amounts in this report and actual model experience would depend on the extent to which future experience conforms to the assumptions made in the calculations. It is certain that actual experience would not conform exactly to the assumptions used in the calculations due to differences in health care trend, economic changes, provider reimbursement levels, regulatory or legislative changes, consumer behavior, population changes, and many other factors.

The authors of this report are actuaries for Milliman, members of the American Academy of Actuaries, and meet the Qualification Standards of the Academy to render the actuarial opinion contained herein. To the best of their knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices.

The terms of Milliman's subcontract with ATI Advisory to provide an actuarial analysis of the MAHCC model costs and savings apply to this report and its use.

Appendix A: County Level Eligibility Information

Appendix A includes member months for different cohorts included in this analysis at a county level.

- From 5% LDS SAF: Includes robust, prefrail, mildly frail, and moderately-to-severely frail populations who meet initial eligibility criteria and do not fall under excluded populations.
- Baseline Analysis: Removes robust individuals highlighting the population included in the broader baseline analysis that is the focus of Appendix C.
- Mildly frail & moderately-to-severely frail: Removes prefrail individuals highlighting the population included in the narrowed baseline analysis that is the focus of the main paper.

COUNTY	NON-DUAL MEMBER MONTHS			DUAL MEMBER MONTHS		
	FROM 5% LDS SAF	BASELINE ANALYSIS	MILDLY FRAIL & MODERATELY-TO-SEVERELY FRAIL	FROM 5% LDS SAF	BASELINE ANALYSIS	MILDLY FRAIL & MODERATELY-TO-SEVERELY FRAIL
Alameda	33,745	5,081	2,268	22,329	4,498	2,320
Alpine	121	12	*	47	12	0
Amador	4,006	628	293	694	144	84
Butte	16,534	2,685	1,223	5,491	1,414	772
Calaveras	5,635	929	424	997	180	115
Colusa	1,336	138	55	604	125	64
Contra Costa	35,589	5,058	2,347	12,130	2,435	1,271
Del Norte	2,394	342	132	1,174	310	169
El Dorado	12,344	1,870	778	1,737	362	141
Fresno	29,427	5,573	2,126	13,440	3,618	1,630
Glenn	2,300	361	140	847	245	90
Humboldt	11,781	1,621	620	3,838	808	418
Imperial	4,839	881	327	6,247	2,368	1,110
Inyo	1,591	229	89	453	169	100
Kern	22,018	4,103	1,688	12,636	3,651	1,753
Kings	4,348	886	354	2,281	627	317
Lake	5,664	990	412	2,770	891	454
Lassen	1,964	308	127	683	174	90
Los Angeles	191,960	33,429	14,464	138,274	48,472	26,654
Madera	5,310	961	348	2,239	476	219
Marin	15,399	1,973	813	2,257	447	184
Mariposa	2,064	392	103	596	123	84
Mendocino	8,903	1,092	295	3,276	660	279
Merced	10,498	2,020	732	5,970	1,412	599
Modoc	1,090	138	60	320	117	60

COUNTY	NON-DUAL MEMBER MONTHS			DUAL MEMBER MONTHS		
	FROM 5% LDS SAF	BASELINE ANALYSIS	MILDLY FRAIL & MODERATELY-TO- SEVERELY FRAIL	FROM 5% LDS SAF	BASELINE ANALYSIS	MILDLY FRAIL & MODERATELY-TO- SEVERELY FRAIL
Mono	909	122	20	155	12	0
Monterey	24,597	4,120	1,746	8,271	1,924	910
Napa	6,558	1,025	375	2,279	542	338
Nevada	11,390	1,168	494	1,601	418	264
Orange	88,848	17,112	7,484	32,545	10,115	5,333
Placer	18,106	3,156	1,274	2,850	689	315
Plumas	2,366	267	81	683	206	113
Riverside	56,010	10,676	4,444	16,740	4,256	2,365
Sacramento	34,607	6,412	2,759	18,127	4,396	2,151
San Benito	3,216	508	219	848	236	132
San Bernardino	29,493	4,880	2,274	17,783	4,381	2,449
San Diego	98,736	15,246	6,400	23,091	6,206	2,980
San Francisco	18,561	2,610	1,117	20,170	3,782	1,992
San Joaquin	18,186	3,247	1,342	9,048	1,907	1,023
San Luis Obispo	25,907	3,213	1,119	4,179	904	375
San Mateo	26,876	3,361	1,439	4,111	738	258
Santa Barbara	27,776	4,261	1,607	6,909	1,410	688
Santa Clara	50,007	7,280	3,336	16,736	3,401	1,604
Santa Cruz	17,766	1,973	729	4,486	1,019	443
Shasta	17,753	2,964	1,140	5,296	1,558	845
Sierra	355	31	*	93	12	0
Siskiyou	5,704	801	308	1,883	458	253
Solano	14,370	2,148	993	5,279	1,009	428
Sonoma	21,052	3,663	1,600	5,951	1,315	584
Stanislaus	13,012	2,215	903	7,835	2,013	1,043
Sutter	6,015	1,182	507	2,257	633	255
Tehama	5,374	857	309	1,860	498	233
Trinity	1,606	195	84	383	99	33
Tulare	15,199	3,195	1,370	9,062	2,269	1,075
Tuolumne	7,003	1,320	533	1,209	428	160

COUNTY	NON-DUAL MEMBER MONTHS			DUAL MEMBER MONTHS		
	FROM 5% LDS SAF	BASELINE ANALYSIS	MILDLY FRAIL & MODERATELY-TO- SEVERELY FRAIL	FROM 5% LDS SAF	BASELINE ANALYSIS	MILDLY FRAIL & MODERATELY-TO- SEVERELY FRAIL
Ventura	39,993	7,285	3,231	9,973	2,919	1,492
Yolo	5,585	827	500	2,913	674	273
Yuba	4,126	806	342	1,748	463	219
Statewide	1,147,922	189,826	80,317	487,684	134,628	69,603

Appendix B: Service Category Inclusion and Exclusion

SERVICE CATEGORY	SUB-CATEGORY	INCLUDE/EXCLUDE
Inpatient	Inpatient Facility: Medical	Include
Inpatient	Inpatient Facility: Surgical	Include
Inpatient	Inpatient Facility: Psychiatric and Substance Use Disorders	Include
Inpatient	Inpatient Surgery – Surgeon Professional Services	Include
Inpatient	Inpatient Surgery – Anesthesia Professional Services	Include
Inpatient	Inpatient Visits – Professional Services	Include
Inpatient	Radiology – Inpatient Professional	Include
Inpatient	Pathology/Lab – Inpatient Professional	Include
Outpatient	Outpatient Facility: Hospital Outpatient Surgery	Exclude
Outpatient	Outpatient Facility: Outpatient Surgery Professional Services	Exclude
Outpatient	Outpatient Facility: Outpatient Surgery Office	Exclude
Outpatient	Outpatient Facility: Outpatient Surgery Anesthesia	Exclude
Emergent	Outpatient Facility: Observation	Include
Emergent	Outpatient Facility: Emergency Department	Include
Emergent	Emergency Department Visits and Observation Care	Include
Outpatient	Outpatient Facility: Ambulatory Surgery Center	Exclude
Outpatient	Outpatient Facility: Preventive	Include
Outpatient	Outpatient Facility: Radiology – Therapeutic	Exclude
Outpatient	Outpatient Radiology Therapeutic – Professional Services	Exclude
Outpatient	Outpatient Facility: Radiology – Diagnostic	Include
Outpatient	Radiology – Outpatient Diagnostic Professional Services	Include
Outpatient	Outpatient Facility: Radiology – CT/MRI/PET	Include
Outpatient	Radiology – Outpatient – CT/MRI/PET Diagnostic Professional Services	Include
Outpatient	Outpatient Facility: Pathology/Lab	Include
Outpatient	Pathology/Lab – Outpatient Professional Services	Include
Outpatient	Outpatient Facility: Cardiovascular	Include
Outpatient	Outpatient Facility: Psychiatric/Substance Use Disorders	Include
Outpatient	Outpatient Facility: Other Services	Include
Outpatient	Outpatient Facility: Pharmacy	Exclude
Ambulance	Ambulance	Include
Primary Care	Office/Home Visits – PCP	Include
Primary Care	Immunizations (Medicare Covered)	Include

SERVICE CATEGORY	SUB-CATEGORY	INCLUDE/EXCLUDE
Primary Care	Physical Exams	Include
Primary Care	Other Preventive	Include
Primary Care	Vision Exams (Medicare Covered)	Include
Primary Care	Hearing and Speech Exams (Medicare Covered)	Include
Specialist	Office/Home Visits – Specialist and Urgent Care	Include
Specialist	Cardiovascular	Include
Specialist	Miscellaneous Medical	Include
Specialist	Radiology – Office Diagnostic	Include
Specialist	Radiology – Office Therapeutic	Exclude
Specialist	Radiology – Office CT/MRI/PET	Include
Specialist	Pathology/Lab – Office	Include
Specialist	Office Administered Drugs	Exclude
Specialist	Chiropractic	Include
Specialist	Psychiatric/Substance Use Disorders	Include
Specialist	Allergy Testing	Exclude
Specialist	Allergy Immunotherapy	Exclude
Pharmacy	Prescription Drugs	Exclude
Post-acute	Inpatient Facility: Rehabilitation	Include
Post-acute	Skilled Nursing Facility	Include
Post-acute	Home Health Care	Include
Post-acute	Outpatient Facility: PT/OT/ST	Include
Post-acute	Physical Therapy	Include
Post-acute	DME and Supplies	Include
Post-acute	Prosthetics	Include

REASON FOR EXCLUSIONS

Based on published research, consultation with clinical experts, and Milliman's experience with managed-care programs there are categories of claims that would not be or would be minimally impacted by this model. These categories were removed from the base data to avoid assigning savings to them. These exclusions can be summarized in a few broad categories:

- 1) Outpatient and Ambulatory Surgical Center Surgery – These categories and their associated professional claims were removed as these services tend to be scheduled, non-emergent treatments that would not be influenced by the specific benefits being offered in this model.
- 2) Drugs – Both office-administered and prescription drug categories were removed as this model is not a pharmaceutical intervention. We recognize that there could be small impacts to utilization and adherence patterns from CAPABLE and the transportation benefit but deemed the impacts to be too limited to model.
- 3) Therapeutic Radiology – These treatments of cancer and other diseases are generally required after a diagnosis and not impactable by the benefits of this model.

2022 COST SUMMARY (\$M) BY SERVICE CATEGORY

SERVICE CATEGORY	INCLUDED	EXCLUDED	TOTAL	% INCLUDED
Inpatient	\$573	\$0	\$574	99.9%
Outpatient	\$36	\$173	\$208	17.1%
Ambulance	\$17	\$0	\$17	100.0%
Emergent	\$41	\$0	\$41	100.0%
Primary Care	\$30	\$0	\$30	100.0%
Specialist	\$85	\$51	\$136	62.6%
Post-acute	\$322	\$0	\$322	100.0%
Total	\$1,104	\$224	\$1,328	83.1%

Appendix C: Prefrail

Appendix C outlines the results of the baseline scenario including the prefrail population. It additionally includes the two sensitivity tests that most positively and negatively impact net savings for prefrail enrollees in proportion to the assumption changed.

BASELINE RESULTS INCLUDING PREFRAIL

DUAL STATUS	FRAILITY LEVEL	UNIQUE ENROLLEES	TOTAL MODEL COST (\$M)	TOTAL GROSS SAVINGS (\$M)	TOTAL NET SAVINGS (\$M)
Non-dual	Prefrail	142,841	\$1,085	\$183	(\$901)
	Mildly Frail	130,086	\$1,202	\$728	(\$474)
	Moderately-to-Severely Frail	48,644	\$525	\$828	\$303
	Total	321,571	\$2,812	\$1,740	(\$1,072)
Dual	Prefrail	67,549	\$101	\$46	(\$55)
	Mildly Frail	114,558	\$302	\$466	\$164
	Moderately-to-Severely Frail	67,962	\$227	\$762	\$535
	Total	250,069	\$630	\$1,274	\$644
All	Prefrail	210,391	\$1,186	\$229	(\$957)
	Mildly Frail	244,645	\$1,504	\$1,194	(\$310)
	Moderately-to-Severely Frail	116,605	\$752	\$1,590	\$838
	Total	571,641	\$3,442	\$3,014	(\$428)

SELECT SENSITIVITY TESTS INCLUDING PREFRAIL

HCBS PERCENT OF BENEFIT USED: NON-DUAL – LARGEST POSITIVE IMPACT TO PREFRAIL NET SAVINGS

This scenario reduces the average amount of the HCBS benefit that is utilized annually by non-dual enrollees. While a lower spend in the HCBS category does create cost savings in the model our assumption is that a minimum level of spend is necessary to drive savings with the HCBS benefit. Therefore, savings also deteriorate as the average HCBS benefit amount reduces. Because of their low starting claims cost prefrail enrollees' cost reduction greatly outweighs the lost savings in scenarios where HCBS usage falls. However, the net savings increase for prefrail enrollees is not sufficient to offset the lost savings for mildly and moderately-to-severely frail enrollees.

SENSITIVITY TESTING RESULTS OF HCBS PERCENT OF BENEFIT USED: NON-DUAL

Scenario 1 – HCBS percent of benefit used decrease to 80% - higher expected net savings

DUAL STATUS	FRAILITY LEVEL	NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)
Non-dual	Prefrail	(\$136.94)	(\$803)	\$98
	Mildly Frail	(\$82.36)	(\$425)	\$49
	Moderately-to-Severely Frail	\$150.47	\$283	(\$20)

DUAL STATUS	FRAILITY LEVEL	NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)
	Total	(\$72.81)	(\$945)	\$128

Scenario 2 – HCBS percent of benefit used decrease to 60% - lower expected net savings

DUAL STATUS	FRAILITY LEVEL	NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)
Non-dual	Prefrail	(\$117.97)	(\$692)	\$209
	Mildly Frail	(\$109.91)	(\$567)	(\$93)
	Moderately-to-Severely Frail	(\$0.65)	(\$1)	(\$305)
	Total	(\$97.25)	(\$1,260)	(\$188)

BENEFIT INFLATION

These alternate scenarios show the impact of inflating the HCBS and CAPABLE benefits over time instead of maintaining a static benefit for the lifetime of the model. Since prefrail enrollees are already unable to generate enough gross savings to overcome cost, this scenario drives prefrail net savings further negative.

Scenario 1 – Annual Benefit Inflation Rate of 2% - lower expected net savings

DUAL STATUS	FRAILITY LEVEL	NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)
Non-dual	Prefrail	(\$168.05)	(\$985)	(\$84)
	Mildly Frail	(\$109.07)	(\$563)	(\$88)
	Moderately-to-Severely Frail	\$141.65	\$267	(\$37)
	Total	(\$98.83)	(\$1,281)	(\$209)
Dual	Prefrail	(\$17.62)	(\$60)	(\$5)
	Mildly Frail	\$35.16	\$147	(\$17)
	Moderately-to-Severely Frail	\$261.47	\$522	(\$13)
	Total	\$63.65	\$609	(\$35)
All	Prefrail	(\$112.63)	(\$1,046)	(\$89)
	Mildly Frail	(\$44.49)	(\$416)	(\$106)
	Moderately-to-Severely Frail	\$203.31	\$789	(\$49)
	Total	(\$29.88)	(\$673)	(\$244)

Scenario 2 – Annual Benefit Inflation Rate of 5% - lower expected net savings

DUAL STATUS	FRAILITY LEVEL	NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)
Non-dual	Prefrail	(\$191.87)	(\$1,125)	(\$224)

DUAL STATUS	FRAILITY LEVEL	NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)	CHANGE FROM BASE (\$M)
	Mildly Frail	(\$137.46)	(\$709)	(\$235)
	Moderately-to-Severely Frail	\$109.50	\$206	(\$97)
	Total	(\$125.56)	(\$1,628)	(\$556)
	Prefrail	(\$19.97)	(\$68)	(\$13)
	Mildly Frail	\$28.39	\$119	(\$46)
	Moderately-to-Severely Frail	\$250.94	\$501	(\$34)
Dual	Total	\$57.77	\$551	(\$92)
	Prefrail	(\$128.54)	(\$1,193)	(\$237)
	Mildly Frail	(\$63.20)	(\$590)	(\$280)
All	Moderately-to-Severely Frail	\$182.28	\$707	(\$131)
	Total	(\$47.83)	(\$1,077)	(\$648)

SERVICE AREA

This scenario shows the impact of selecting a limited service area. In this limited service area, the savings generated by the moderately-to-severely frail and dual mildly frail populations are positive enough to generate total positive net savings even with the inclusion of the prefrail population.

Scenario 1 – Eight targeted counties (Los Angeles, San Diego, San Francisco, Ventura, San Bernadino, San Mateo, Santa Clara, Stanislaus)

DUAL STATUS	FRAILITY LEVEL	NET SAVINGS PEPM	TOTAL NET SAVINGS (\$M)
Non-dual	Prefrail	(\$152.31)	(\$358)
	Mildly Frail	(\$73.10)	(\$157)
	Moderately-to-Severely Frail	\$204.95	\$170
	Total	(\$64.52)	(\$345)
Dual	Prefrail	(\$13.96)	(\$25)
	Mildly Frail	\$51.14	\$120
	Moderately-to-Severely Frail	\$315.93	\$357
	Total	\$86.05	\$452
All	Prefrail	(\$92.59)	(\$383)
	Mildly Frail	(\$8.20)	(\$37)
	Moderately-to-Severely Frail	\$269.01	\$526
	Total	\$5.64	\$107



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