

Estimated Effects of Unified Financing in California:

Summary of Methodology for Analysis

March 15, 2022

This document summarizes the methodology underlying the analytic findings included in the draft report “Key Design Considerations for a Unified Financing System in California” dated March 15, 2022. The substance of the analysis was presented to the Healthy California for All Commission at its May 21, 2021 and November 17, 2021 meetings; a few subsequent adjustments are noted in the July 8, 2021 slides and in footnotes in the “Estimated new revenues by potential source” section of this document. Those slides and other related materials are posted here: <https://www.chhs.ca.gov/healthycforall/>.

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California health expenditures at baseline

Baseline health expenditures in California are estimated through 2031, which would be year 10 if Unified Financing started in 2022. Baseline expenditures are estimated primarily using 2014 Health Expenditures by State of Residence data from the Center for Medicare and Medicaid Services (CMS), grown based on historical national trends from 2015 to 2019 and projected national trends for 2020 to 2028 from CMS National Health Expenditure Accounts.¹ Average projected growth rates for 2026 through 2028 are used for 2029 through 2031. Expenditure estimates for 2023 and beyond are presented in 2022 dollars, adjusted using CMS projections of the Consumer Price Index.

Total baseline expenditures from CMS are adjusted using two factors that mostly offset each other. First, Medi-Cal expenditures grew more quickly than national Medicaid expenditures in most years since 2014, likely in large part due to the state's strong implementation of the ACA Medicaid expansion. Comparing Medi-Cal expenditure growth rates from the California Department of Finance (DOF) for 2015 to 2020 to national CMS Medicaid projections indicates that California health expenditures in 2020 are likely approximately 3.2% higher than indicated by national growth rates. Second, this analysis excludes approximately 2.6% to 2.8% of health expenditures (depending on year) that will be paid by the Veterans Administration,² Military Health System (including but not limited to TRICARE),³ and Indian Health Services,⁴ as those federal programs are assumed to continue to serve as primary sources of coverage for Californians eligible for those programs. The net change resulting from these two factors in each year is applied to baseline expenditures for each category of goods and services.

Baseline expenditures by provider type are estimated using 2014 CMS data for the available categories. However, CMS's State of Residence data do not provide estimates for spending on government administration, net cost of health insurance, government public health activities, and investment. State estimates for those spending categories are based on California's estimated share of national expenditures in those categories from 2014 to 2019,⁵ grown by national CMS projected growth rates for those categories. Additionally, CMS state-level data aggregates Prescription Drugs and Other Non-Durable Medical Products; that combined category is broken down into its two subcategories using the national proportions in 2014. Baseline expenditures in each category are then increased slightly using the net adjustment factor described in the prior paragraph so that the sum of expenditures by category is equal to the adjusted total baseline expenditures.

¹ The most recent CMS estimates for health spending by state are for 2014.

² Veterans Administration medical expenditures in California for 2014 through 2019 are based on data from the National Center for Veterans Analysis and Statistics, with 2020 and beyond estimated based on projected CMS growth rates for "other insurance programs." <https://www.va.gov/vetdata/Expenditures.asp>

³ Military Health System expenditures are estimated based on California's share of Military Health System population (page 29) and \$53.67 billion in national expenditures (page 30) in 2018. [Evaluation of the TRICARE Program: Fiscal Year 2019 Report to Congress](#).

⁴ Indian Health Services expenditures for California's 14% share of American Indian population (Current Population Survey 2019) multiplied by 2019 national Indian Health Services expenditures from CMS. CMS, [National Health Expenditure Accounts: Methodology Paper, 2019](#).

⁵ California's share of Government Administration expenditures is estimated using the state's 14.34% share of national Medicaid plus Medicare enrollment in 2014 (CMS). California's share of Net Cost of Health Insurance expenditures is estimated using the state's 11.42% share of national private insurance enrollment in 2014 (CMS). California's share of Government Public Health Activities and Investment expenditures is estimated using the state's 12.14% share of U.S. population in 2014 (CMS).

Baseline expenditures by source and sponsor

The total estimated health expenditures described are broken into expenditure estimates by source of funds (Medicare, Medi-Cal, private insurance, etc.) and sponsors including employers, households, federal government, state/ local government, and other sponsors.

Federal expenditures include all Medicare expenditures, the estimated federal share of Medi-Cal and IHSS spending, and estimated ACA Advance Premium Tax Credits.

- Federal Medicare expenditures are based on CMS-estimated Medicare expenditures in California in 2014 and CMS projections of national Medicare growth.
- Medi-Cal expenditures are based on California DOF estimates by source through 2021, inflated by CMS Medicaid growth projections, and assume that the federal share remains at the 64.5% average projected (prior to COVID) for 2019-2021.
- Federal IHSS expenditures are based on California Department of Social Services Appropriation estimates for Fiscal Year 2021-22,⁶ inflated by the CMS projected national growth rate for home health.
- ACA expenditures reflect federal Advance premium tax credit estimates for 2021 assuming that American Resue Plan level enhanced subsidies continue⁷ and are inflated by CMS national projections for private health insurance.

State and local expenditures include Medi-Cal and IHSS expenditures, using the same data sources used for federal expenditures.

Employer and household spending includes private insurance premiums, out of pocket spending, and workers' compensation. Employer spending includes both private and public employer spending as state and local government spending on employee health benefits is treated similarly to spending on private sector employee health benefits.

- Private health insurance spending includes employer sponsored insurance, individual market, and Medigap coverage premiums. CMS-estimated private health insurance expenditures on personal health care in CA in 2014 is adjusted up based on the national ratio of net cost of health insurance (i.e. administration and profits) for private insurance to personal health care expenditures for private insurance, then inflated based on CMS national projections for private insurance. As the last step, ACA APTCs are subtracted out because they are included in the federal expenditures.
 - Total employer-sponsored insurance premium spending in California is based on national public and private employer and household spending on employer-sponsored insurance premiums in 2019 according CMS estimates, adjusted for California's 11.7% of U.S. employer sponsored insurance enrollment in 2019⁸

⁶ [California Department of Social Services 2021-22 Appropriation](#).

⁷ ACA premium tax credit expenditures for California are estimated assuming \$6.91 billion in expenditures in 2020 (Kaiser Family Foundation), grown by \$2.60 billion in 2021 to reflect enhancements under the American Rescue Plan (Congressional Budget Office), which are assumed to be made permanent. These expenditures are grown by the projected national growth rate for private health insurance (CMS). Kaiser Family Foundation, [State Health Facts: Estimated Total Premium Tax Credits Received by Marketplace Enrollees](#). Congressional Budget Office, [Estimated Budgetary Effects of H.R. 1319 American Rescue Plan Act of 2021](#), March 10, 2021, Detailed Table, Title 9.

⁸ Kaiser Family Foundation, [Health Insurance Coverage of the Total Population, Multiple Sources of Coverage](#), 2019.

and the California average employer sponsored insurance premium being 99.5% of the U.S. average premium.⁹ The worker and employer share of premium expenditures is based on a weighted average from the California Employer Health Benefits Survey 2018. Employer sponsored premiums are inflated by CMS national projections for private health insurance.

- Other premiums are the remainder of private health insurance spending minus employer and worker premiums.
- Out-of-pocket spending is estimated using out-of-pocket spending as percentage of total projected health spending in U.S. in 2022 (CMS), then inflated based on CMS-projected growth for national out of pocket spending. Medical benefits paid via workers comp are estimated based on a National Academy of Social Insurance estimate for California in 2019¹⁰ inflated by CMS national projections for other third party payers.

Other spending includes all other expenditures not listed above such as public health expenditures, research spending, and a variety of other small programs.

California health expenditures under Unified Financing

The change in health expenditures is estimated under various scenarios for Unified Financing using evidence generated by health service research. This analysis relies heavily on estimates made by the Congressional Budget Office,¹¹ adapted to the unique health care environment of California. This analysis includes the simplifying assumption that all policy changes are fully implemented in the first year of the policy, or in 2022. All estimates are subject to substantial uncertainty.

The estimated effects, discussed further in subsequent sections of this document, include:

- Universal coverage;
- Expanding adult dental;
- Reducing cost sharing;
- Lower drug prices;
- Changes in health care spending due to less use of capitation in the scenario based on direct payment;
- Provider administrative savings;
- Payer administrative savings;
- Costs to facilitate a just transition for workers in billing and insurance related functions who experience job loss;
- Costs for reserves;
- Expanding Long Term Supports and Services; and
- Reducing the growth rate of health expenditures.

⁹ Kaiser Family Foundation, [Average Annual Single Premium per Enrolled Employee for Employer-Based Health Insurance](#), 2020.

¹⁰ National Academy of Social Insurance, [Workers' Compensation: Benefits, Coverage and Costs](#), October 2021.

¹¹ Congressional Budget Office, [How CBO Analyzes Proposals for a Single-Payer Health Care System](#), December 10, 2020.

Estimated total health expenditures under each scenario are shown as a percentage of California Gross State Product in 2022 and 2031.¹² Expenditure estimates for 2023 and beyond are presented in 2022 dollars, adjusted using CMS projections of the Consumer Price Index.

We also estimate the percentage change in health expenditures in 2022 for each of the effects listed above, shown step-by-step in the order listed above. The order in which these changes are considered affects the estimated change in expenditures at each step. For example, the increase in expenditures associated with reduced cost sharing reflects the expanded covered population due to universal coverage and the expansion of dental coverage, but it does not reflect the lower drug prices under Unified Financing because lower drug prices are modeled in a later step in the sequence.

Unified Financing expenditures by source and sponsor

The expenditures paid by each sponsor under Unified Financing will depend on the agreement reached between California and the federal government and the extent to which the federal government insists on capturing some or all of the savings created by Unified Financing.

Federal expenditures in year one are assumed to remain the same as they otherwise would be in the baseline scenario. Two scenarios are analyzed in year two and beyond: 1) a scenario in which federal savings remain the same as in the baseline and the state therefore captures all savings from Unified Financing, and 2) a scenario in which the federal government captures all of their savings, estimated by assuming that Medicare, Medi-Cal, IHSS, and ACA expenditures grow by the baseline rate¹³ minus 0.5% or 1.3% depending on whether total costs grow at the rate of National Health Expenditure growth minus 0.5% or GDP (equivalent to NHE minus 1.3%).

State and local expenditures in year one are assumed to remain the same as they otherwise would be in the baseline scenario. In year two and beyond, state and local expenditures grow by the baseline rate minus 0.5% or 1.3% depending on whether total costs grow at the rate of National Health Expenditure growth minus 0.5% or GDP (equivalent to NHE minus 1.3%).

Other spending including public health, investment, etc. remains the same as under baseline in all scenarios.

In the Unified Financing scenarios with cost sharing, total cost sharing payments are estimated at 4.7% of personal health expenditures based on the estimated 95.3% actuarial value under the income-based cost sharing scenario, and total spending is estimated to be 3.8% lower than under scenarios with no cost sharing.¹⁴

¹² Gross State Product estimates are from the Federal Reserve Bank of St. Louis for 2014 to 2020, grown by national CMS projections for GDP growth.

¹³ Medicare and Medi-Cal baseline growth rates are based on national CMS projections for expenditures for each program. IHSS baseline growth rate is based on national CMS projections for home health care. ACA growth rate is based on CMS projections for private health insurance.

¹⁴ See "Reducing Cost Sharing" section.

The new revenues needed are estimated to be equivalent to the total expenditures minus federal, state and local expenditures, cost sharing payments (in relevant scenarios), and other expenditures.

Estimated Effects

Universal coverage

To estimate the additional health care expenditures associated with covering the uninsured we first estimate the baseline mean annual health care expenditures for the uninsured. We then use data from the published literature and our own analysis of health care expenditures across health insurance types to estimate the expected increase in expenditures from covering the uninsured. We describe each of these steps below.

Uninsured Expenditures

To estimate the current health care expenditures for the uninsured we use expenditure data from the Medical Expenditure Panel Survey (MEPS), calibrated to the 2016 California population. Calculations from the MEPS data imply that a typical uninsured individual spent approximately \$1,817 annually on health care in 2016. Although MEPS data captures a significant portion of spending by the uninsured on health care, they do not capture all expenditures related to health care services received by the uninsured. These missing expenditures are related to health care services for which providers did not receive any compensation. A detailed analysis of the value of uncompensated care provided to the uninsured finds that uncompensated care comprises approximately 25% of the total uninsured expenditures.¹⁵ Accounting for uncompensated care increases total annual health care expenditures for the uninsured from \$1,817 to \$2,423.

Additional Expenditures from Covering the Uninsured

Decades of empirical research finds that health insurance coverage increases health care expenditures. To estimate the expected increase in health care expenditures due to coverage we combine information from the Oregon Health Insurance Experiment (Oregon HIE), a 2008 state lottery for enrolling low-income uninsured individuals in Medicaid,¹⁶ with propensity score analyses which compare health care expenditures for individuals in employer-sponsored insurance plans with health care expenditures for uninsured individuals. The strength of using information from an experiment such as the Oregon HIE is that one can be relatively confident that the estimated expenditure increase is unbiased. But the drawback from only using the estimate from the Oregon HIE is that it represents data from one state and represents an

¹⁵ Karpman, M., Coughlin, T.A., Garfield R. Declines in Uncompensated Care Costs for The Uninsured under the ACA and Implications of Recent Growth in the Uninsured Rate. Kaiser Family Foundation, April 6, 2021.

¹⁶ Finkelstein, A., Taubman, S., Wright, B., Bernstein, M., Gruber, J., Newhouse, J. P., Allen, H., Baicker, K., & Oregon Health Study Group (2012). THE OREGON HEALTH INSURANCE EXPERIMENT: EVIDENCE FROM THE FIRST YEAR. *The quarterly journal of economics*, 127(3), 1057–1106. <https://doi.org/10.1093/qje/qjs020>

expenditure increase due to Medicaid. In comparison, propensity score analyses provide an estimate of the expected health expenditure increase from covering the uninsured through employer sponsored health insurance. But in contrast to experimental data, estimates from propensity score analyses are more susceptible to criticisms related to omitted variables bias.

Given the tradeoffs with respect to each method, we apply equally weighted estimates from each method to our baseline expenditures for the uninsured.¹⁷ Results from the Oregon HIE imply that covering the uninsured will result in a 25% increase in health care expenditures (Finkelstein et al. (2012)). Propensity score analyses shifting the uninsured into a typical employer-sponsored insurance plan imply a 54% increase in health care expenditures from covering the uninsured. Applying the average of these two estimates to our baseline estimate implies an increase in annual spending of 39%, from \$2,423 to \$3,378.

After applying these estimates of the increase in per-person expenditures to the 3.7 million Californians uninsured in 2016, the additional expenditures from covering the uninsured are expected to increase total California health care expenditures by 1.7%.¹⁸ This 1.7% increase in expenditures is applied to all Personal Health Care expenditure categories except other non-durable medical products, which are not typically covered by insurance, and Other Health, Residential, and Personal Care, and Nursing Care Facilities and Continuing Care Retirement Communities. It is assumed that the increase in long-term care expenditures under UF would primarily originate from an expansion of covered benefits rather than an expansion in eligibility for the overall program.

Comparison to Other Estimates in the Literature

We compare our estimates of covering the uninsured with other published estimates. Prior state level analyses of the costs of covering the uninsured, from New York (Friedman, 2015), Maryland (Friedman, 2013), Minnesota (Lewin Group, 2012) and Pennsylvania (Friedman, 2013), resulted in .65% to 4.2% estimated increases in total state health care expenditures.¹⁹ The wide range in estimates is likely due to a variety of factors, including the uninsured rate in a given state at the time of the analysis, which in some cases was prior to the ACA coverage expansions. A prior analysis of covering the uninsured in California by Pollin et al. (2017)²⁰

¹⁷ This approach is similar to that used by the Congressional Budget Office in a recent working paper on modelling the costs of a single payor system for the United States: “CBO’s Single-Payer Health Care Systems Team. 2020. How CBO Analyzes the Costs of Proposals for Single-Payer Health Care Systems That Are Based on Medicare’s Fee-for-Service Program (Working Paper 2020-08). Washington, D.C”.

¹⁸ California Simulation of Insurance Markets (CalSIM) version 3.

¹⁹ Friedman G, Economic Analysis of New York Health Act, April 2015, <https://www.healthcare-now.org/wp-content/uploads/2017/08/New-York-Friedman-2015.pdf>. Friedman G, Financing the Maryland Health Security Act, February 2013, <https://www.healthcare-now.org/single-payer-studies/maryland-friedman-2013/>. The Lewin Group, Beyond the Affordable Care Act: An Economic Analysis of a Unified System of Health Care for Minnesota, March 2012, <https://www.healthcare-now.org/single-payer-studies/minnesota-lewin-group-2012/>. Friedman G, The Pennsylvania Health Care Plan Impact and Implementation, March 2013, <https://www.healthcare-now.org/single-payer-studies/pennsylvania-gerald-friedman-2013/>.

²⁰ Pollin R, Heintz J, Arno P, Wicks-Lim J. Economic Analysis of the Healthy California Single-Payer Health Care Proposal (SB-562). Amherst, MA: Political Economy Research Institute (PERI), May 2017.

estimated that covering the uninsured would increase total health care expenditures by approximately 4.3%. The difference between our estimates and the estimates in Pollin et al. is primarily due to our assumption of a spending increase of 39% per year per person compared to the Pollin, et. al. assumption of a doubling in spending per uninsured person.

Expanding adult dental

We assumed that dental benefits would be expanded to all Californians under Unified Financing. Because we model insuring the uninsured in a separate section, all assumptions below apply only to the approximately 36.4 million Californians who have some kind of health insurance. We estimated the increase in expenditures from greater utilization under the following assumptions:

(1) Providers would be paid according to the weighted average of current private, Medi-Cal, and other/uninsured rates. This assumption implies that payment rates will decline slightly for dentists who currently see very few Medi-Cal patients, and will increase substantially for the relatively small number of dentists with many Medi-Cal patients in their practice. Under current policy, projected dental expenditures for 2022 would be \$18 billion spent by private dental plans and enrollees, \$2 billion in Medi-Cal, and another \$2 billion on the uninsured and those with other public coverage.²¹

(2) We use the CBO's estimate that the uninsured will increase use of "other services", including dental, by 41% under a single payer model²². This assumption applies to approximately 7.5 million insured Californians who are without private dental insurance or dental benefits through Medi-Cal.

(3) We assume that those with dental coverage through Medi-Cal will behave under Unified Financing more similarly to the uninsured than to those with private insurance and will also increase utilization by 41%. This group totals approximately 9 million Californians.²³ We assume increased dental utilization among Medi-Cal enrollees under Unified Financing based on the following: there are fewer dental providers who accept Medi-Cal than accept private insurance²⁴; survey results indicate that many Medi-Cal enrollees are unaware of their dental benefits²⁵; and our own analysis shows that about two-thirds of Medi-Cal enrollees have no dental expenditures in a given year, compared with three-fourths of the uninsured and one half of those with private insurance. In addition, analysis of Medical Expenditures Panel Survey (MEPS)²⁶ data weighted to the 2016 California population shows that estimated per capita dental expenditures for Medi-Cal enrollees -- \$226 -- are similar to per capita expenditures for the uninsured and people with other public benefits -- \$297 -- and much lower than per capita expenditures for people covered by private dental insurance -- \$901.

²¹ All values in 2022 USD.

²² Congressional Budget Office, [How CBO Analyzes Proposals for a Single-Payer Health Care System](#), December 10, 2020.

²³ This Medi-Cal enrollment total is based on Medical Expenditure Panel Survey data and is lower than enrollment shown in administrative data.

²⁴ Pourat, Nadereh, and Maria Ditter. [Income Disparities Widen the Gap in Oral Health of California Adults](#). UCLA Center for Health Policy Research, Nov. 2020.

²⁵ [AskCHIS](#). (n.d.). Retrieved May 25, 2021

²⁶ [Medical Expenditure Panel Survey Public Use Files](#). (n.d.). Retrieved May 25, 2021

(4) Most private dental insurance includes annual maximum benefit amounts, as well as significant (often 50%) coinsurance on orthodontia, crowns, and other major procedures. Assuming that the limitations on dental coverage were reduced or eliminated under Unified Financing, dental utilization and expenditures for people currently covered by private insurance would be expected to increase. However, we are not aware of research that would provide guidance on how much change in expenditures to expect among those covered by private insurance. Further, because dental expenditures are a relatively small part of total health expenditures, we have chosen not to invest additional analytic resources in estimating the increase in expenditures from eliminating or reducing benefit limitations in current dental policies. As a result, our estimates should be interpreted as estimates of the effects of providing the average level of benefits in status quo private dental insurance to all Californians, and not to the effects of providing unlimited dental coverage with no patient cost sharing. The latter would certainly result in higher dental spending than we estimate here.

To model all of these assumptions, we analyzed 2016 and 2017 dental expenditures data from the MEPS and inflated total expenditures for each insurance group by our estimates. The result is an estimated 7% increase in dental expenditures under Unified Financing.

Reducing cost sharing

We estimate the change in health expenditures under two cost-sharing scenarios. In the first scenario we assume a full coverage, 100% Actuarial Value (AV) option, in which patients make no out-of-pocket payments for health care services. In the second scenario we assume income related cost sharing, where people in families with income between 0-138% of the Federal Poverty Level receive full coverage with no cost sharing; people in families with income between 138% and 400% of FPL pay, on average, 6% of allowed medical care expenditures, and people in families with incomes above 400% of FPL pay, on average, 15% of expenditures. In the scenario with income related cost sharing, we also assume that employers that currently offer plans with AV that is above 85% will provide supplemental insurance to employees to assure that cost sharing for employees does not increase under Unified Financing. Similarly, we assume that cost sharing will not increase for Medicare beneficiaries who currently have employer-provided Medicare supplemental policies.

For each of the cost-sharing scenarios we use data from the California Health Interview Survey and other data sources to identify the number of individuals in each of the different health insurance types at baseline. We then use data from published sources to estimate a baseline AV for each of the health insurance types:

- For employer-sponsored insurance (ESI), we estimate an AV of 89%. There is no comprehensive data source on AVs in the ESI market in California; we arrive at the 89% estimate as described below. We begin with data from California Department of Managed Health Care (DHMC)²⁷ which shows an average AV of approximately 92% for fully insured large group plans in California. We supplement the CA DHMC information

²⁷ Phillips, J. (2020). Public Meeting on Large Group Aggregate Rates and Prescription Drug Costs [Power Point Slides].

<https://www.dhmc.ca.gov/Portals/0/Docs/DO/LargeGroupAggregateRateandPrescriptionDrugCostPowerPointAccessible.pdf?ver=2020-03-04-162744-357>

with data from US Department of Labor²⁸ and the Bureau of Labor Statistics (BLS) on overall AV and AV differences between fully insured and self-insured plans in the national ESI market²⁹. Each of those data sources indicate that average AV for PPO plans is approximately 4 percentage points below the average AV for HMOs. If that were true in California, then self-insured plans, with 60% of the market, would have an average AV of 88%, and the average AV for ESI would be 89.6%. We reduce the 89.6% estimate to 89% to account for high deductible health plans and for plans offered by small employers, each of which have lower AVs, but which account for relatively small shares of the ESI market. Although the estimate of an 89% AV for ESI will seem too high to many observers, it is consistent with the DHMC estimate that the average AV for the fully insured market is 92%, and that the fully insured market accounts for a substantial share of the ESI market.³⁰

- Medicare AV is dependent on whether an individual is enrolled in Traditional Medicare or Medicare Advantage and whether individuals in traditional Medicare are also covered by Medi-Cal, employer sponsored retiree coverage, or have purchased a Medigap policy. Although Traditional Medicare has an AV of 83%³¹, most Medicare beneficiaries are either enrolled in Medicare Advantage, are dual-eligibles, or have supplemental coverage. For Medicare Advantage and Medicare enrollees with supplemental coverage we assume an AV of 95% and an AV of 100% for dual-eligibles. Combining this information with data from CHIS on the number of individuals in each of these coverage types we estimate an average AV of 95% for Medicare individuals.
- Medi-cal has only nominal cost-sharing thus all individuals in Medicaid are assigned an AV of 100%.
- For the individual market we used detailed information directly from Covered California on the number of individuals in Bronze, Silver, Gold and Platinum exchange plans and enrollment information reported by plans to estimate the total size of the individual market.³² We are not aware of a data source on AV values for CA individuals in off-exchange plans, thus we assign the on-exchange AV distribution for unsubsidized enrollees to off-exchange individuals. Using these values we calculate a weighted AV of 73% for the entire CA individual market.
- Averaging across all payor sources, we estimate an average AV in California at baseline of 92.8%.

²⁸ US Department of Labor. Health Insurance Coverage Bulletin: Abstract of Auxiliary Data for the March 2016 Annual Social and Economic Supplement to the Current Population Survey. July 25, 2017.

²⁹ Thomas G. Moehrle, "Measuring the generosity of employer-sponsored health plans: an actuarial-value approach," *Monthly Labor Review*, U.S. Bureau of Labor Statistics, June 2015, <https://doi.org/10.21916/mlr.2015.16>.

³⁰ California Health Care Foundation, California Employer Health Benefits Survey 2019, <https://www.chcf.org/publication/2019-edition-california-employer-health-benefits/>

³¹ Mike, D. et al. Average annual beneficiary health care costs for various Medicare coverage options. Milliman Report, October 2019. (<https://www.milliman.com/-/media/milliman/pdfs/articles/medicare-advantage-ffs-benefit-value.ashx>)

³² We obtain the Covered California information from the "2019 June Profile" excel data file retrieved from: <https://hbex.coveredca.com/data-research/>

To estimate the increase in expenditures due to changes in cost-sharing we use estimates from the RAND Health Insurance Experiment³³. As discussed by the CBO, the RAND HIE results imply a semi-elasticity of -1.2, meaning that for each percentage point decline in out-of-pocket costs as a percent of total health expenditures, a 1.2 percent increase in utilization is expected.³⁴

Full Coverage - No Cost-Sharing Scenario

For the full coverage scenario, we assume that AV will increase from 92.8% at baseline to 100% under Unified Financing, an increase of 7.2 percentage points. Using the semi-elasticity estimate of -1.2 from the RAND HIE, we estimate an increase in expenditures of 8.7%. This 8.7% increase in expenditures is applied to all Personal Health Care expenditure categories except other non-durable medical products, which are not typically covered by insurance, and Other Health, Residential, and Personal Care, and Nursing Care Facilities and Continuing Care Retirement Communities because the change in long-term care utilization due to expanded benefits is included in the long-term care expansion estimates.

Income Related Cost-Sharing Scenario

For the income related cost-sharing scenario, ideally we would use data with a distribution of AVs and expenditures for individuals by health insurance plan type and FPL. To our knowledge such data is not available, particularly for ESI. In our review the best available data on the distribution of AVs in the CA ESI market comes from the California Department of Managed Health Care (Phillips, 2020). We modify the DHMC distribution to be consistent with an ESI AV of 89% for the entire ESI market and assign the modified AV distribution to each of the ESI FPL groupings.³⁵ Using information on the proportion of individuals in each health insurance type and FPL grouping, the respective baseline AVs and the semi-elasticity estimate from the RAND HIE, we calculate a weighted average increase in AV of 2.5%.

Lower drug prices

A RAND study compared U.S. drug prices adjusted for rebates and other discounts to prices paid in 26 other countries and estimated that an average drug price reduction of 47% would be achieved if the U.S. were to adopt the average price of these other countries. The gap between prices in the U.S. and other countries was largest for brand-name originator drugs and biologics. U.S. prices were 84% of prices in all non-U.S. countries for unbranded generic drugs.³⁶

Congress is considering a bill, HR 3, that would require the U.S. Department of Health and Human Services to negotiate directly with drug manufacturers in the Medicare program,

³³ Newhouse, Joseph P. 1993. *Free for All?: Lessons From the Rand Health Insurance Experiment*. Cambridge, Mass: Harvard University Press.

³⁴ Congressional Budget Office, [How CBO Analyzes Proposals for a Single-Payer Health Care System](#), December 10, 2020.

³⁵ It seems likely that lower income workers are, on average, in lower AV plans than upper income workers. However, our analysis did not adjust for this possibility.

³⁶ Andrew W. Mulcahy, Christopher M. Whaley, et al., (RAND) [International Prescription Drug Price Comparisons](#), Current Empirical Estimates and Comparisons with Previous Studies, 2021.

targeting at least 50 drugs, and up to 250 drugs. Those negotiations would generally be bound by an upper price limit based on 120% of each drug's average price in Australia, Canada, France, Germany, Japan, and the United Kingdom. The CBO estimates that HR 3 would reduce prices on the targeted drugs by between 57% and 75%.³⁷ These price reductions would apply to approximately 37% to 60% of Medicare Part D spending, depending on how many drugs are targeted for negotiations.³⁸

Comparing drug prices paid by the Department of Veterans Administration (VA) to Medicare prices shows the savings achieved through the VA's use of direct negotiation with manufacturers and tight use of a formulary. In 2020, GAO estimated that the VA's prices were on average 54% lower than Medicare Part D prices: 68% lower for the 203 generic drugs examined and 49% lower for the 196 brand-name drugs. The drugs examined constituted 44% of Medicare Part D spending. Given that these drugs were chosen based on being the highest expenditure, highest utilization, or highest cost per use drugs, these drugs may not be representative of trends for all drugs.³⁹ A separate analysis published in JAMA in 2019 found that Medicare would have saved 44% on drugs if it had used VA list prices in 2016, based on analysis of prices for the top 50 oral drugs dispensed based on Medicare spending.⁴⁰

The greatest potential for drug price reductions is within the 72% of U.S. retail drug expenditures that are paid by Medicare Part D and private insurance.⁴¹ Medicaid paid for approximately 10% of retail drug expenditures⁴² and Medicaid drug prices are already generally lower than those paid by Medicare due to a complex set of federal and state Medicaid drug pricing policies.

This analysis assumes that an average retail price reduction of 40% is achievable in California if the Unified Financing authority negotiates directly with manufacturers and employs tight use of formulary, such as using the VA approach or an international price index policy, for at least a select set of drugs. This estimate is based on the estimated price savings achieved by the VA and comparisons to prices in other countries, and reflects that the savings estimated in other analyses do not necessarily apply to all drug expenditures and that the reduction in prices compared to Medicare would not apply to the same extent to drugs purchased by Medicaid. This estimate is also consistent with the 40% drug price reduction used by Robert Pollin and

³⁷ Kristi Martin (Commonwealth Fund), [Essential Facts About Drug Pricing Reform: Allowing Medicare to Negotiate Drug Prices](#), May 5, 2021.

³⁸ The top 50 drugs with the highest Medicare Part D spending accounted for 37% of drug spending in 2019 and the top 250 drugs accounted for nearly 60% of spending. Juliette Cubanski and Tricia Neuman (Kaiser Family Foundation), [Relatively Few Drugs Account for a Large Share of Medicare Prescription Drug Spending](#), April 19, 2021.

³⁹ Government Accountability Office, [Prescription Drugs: Department of Veterans Affairs Paid About Half as Much as Medicare Part D for Selected Drugs in 2017](#), December 2020.

⁴⁰ Brett Venker, Kevin B. Stephenson, Walid F. Gellad, Research Letter: Assessment of Spending in Medicare Part D If Medication Prices From the Department of Veterans Affairs Were Used, *JAMA* 179(3):431-433, 2019.

⁴¹ In addition, price reductions would also affect the portion of the 14% of drug expenditures that are paid out-of-pocket by households at full price or based on a co-insurance percentage.

⁴² Juliette Cubanski, Matthew Rae, Katherine Young, and Anthony Damico (Kaiser Family Foundation), [How Does Prescription Drug Spending and Use Compare Across Large Employer Plans, Medicare Part D, and Medicaid?](#) May 20, 2019.

colleagues at the University of Massachusetts Amherst Political Economy Research Institute in their national research on the Medicare for All Act of 2017.⁴³

Achieving these savings would likely require the state to be willing to say ‘no’ to certain drug manufacturers in price negotiations, or be willing to exclude particular drugs from a formulary if a price agreement cannot be reached. The Medicare and VA price differences in part reflect that Medicare Part D plans must cover all drugs in protected classes which reduces the plans bargaining leverage with manufacturers, while the VA has a national formulary “in which the agency agrees to the preferred or exclusive use of certain drugs, within a class of drugs, on the basis of safety, efficacy, and price.”⁴⁴ As one point of reference, the VA formulary covered 163 out of the top 200 most prescribed Medicare Part D drugs in 2015, according to Avalere.⁴⁵ In summary, one tradeoff involved in substantially reducing drug prices is that some drugs that are available in other states may not be covered in California.

In addition to including a price reduction for retail drugs, we also assumed that the prices paid by hospitals, physicians and clinics, and nursing homes for drugs administered in those settings would decrease by 40%. This translates to a 4.0% reduction in total expenditures for physician and clinical services, a 1.3% reduction in total hospital expenditures, and 4.1% reduction in total nursing home expenditures, based on applying 40% reduction to the non-retail drug expenditures in each of those sectors, and then dividing by the total expenditures in each sector.⁴⁶

Unwinding Managed Care

Currently, managed care is the dominant mechanism through which health care is provided in California.⁴⁷ An important analytic consideration is the extent to which health expenditures will change if managed care enrollees are shifted to a system with free choice of providers and without risk-bearing intermediaries. We assume that without risk-bearing intermediaries, payments to physicians and other non-institutional providers would largely be made on a fee-for-service basis and hospitals would be paid based on global budgets.

To estimate the effects of unwinding managed care we reviewed the theoretical and empirical literature on managed care effects on health care utilization and health care expenditures, a literature which dates back to the 1980s. Theoretically, managed care can affect utilization and expenditures through mechanisms such as utilization review, provider selection, provider payment contracts such as capitation, and lower negotiated prices via their ability to

⁴³ Robert Pollin, James Heintz, Peter Arno, Jeannette Wicks-Lim, and Michael Ash (University of Massachusetts Amherst Political Economy Research Institute), *Economic Analysis of Medicare for All*, November 2018.

⁴⁴ Congressional Budget Office, [A Comparison of Brand-Name Drug Prices Among Selected Federal Programs](#), February 2021.

⁴⁵ Avalere, [VA National Formulary Covers 16 Percent Fewer Top Prescription Drugs than Medicare Part D Plans](#), June 17, 2015.

⁴⁶ As one example of these calculations, for physicians and clinics Altarum estimated \$70.4 billion in non-retail drug sales in 2017. A 40% price reduction would be equivalent to \$28.2 billion, or 4.0% of the estimated \$710 billion in drug expenditures in physician and clinical services in 2017 based on CMS estimates. Altarum, [Projections of the Prescription Drug Share of National Health Expenditures Including Non-Retail](#), May 2018.

⁴⁷ California Health Care Foundation, [California Health Insurers, Enrollment](#), July 2020.

channel patients to specific providers.⁴⁸ There has only been one randomized experiment in the U.S. comparing the effects of managed care on health care utilization and expenditures compared to traditional Fee-For-Service (RAND HIE). In addition to testing the effects of cost-sharing, the RAND HIE randomized individuals into a managed care plan and tested the effects of managed care compared to FFS. In their analyses RAND researchers found that the managed care plan enrollees had substantially fewer admissions, total hospital days and 28% lower expenditures compared in a free care managed care plan compared to a free care FFS plan.⁴⁹

In contrast to the experimental literature, the non-experimental managed care literature is vast.

A recent review of the Medicare Advantage literature concludes that Medicare Advantage has substantial effects on reducing utilization. In a systematic review of 48 studies published between 2009 and 2020, Agarwal et al. (2021) conclude that Medicare Advantage plans are associated with lower inpatient admissions, lower inpatient length of stays and lower health expenditures when compared to Medicare FFS.⁵⁰ Because the prices for hospital care paid by Medicare Advantage plans are similar to Medicare FFS prices, most of the effect of Medicare Advantage on health care expenditures is likely due to effects on utilization, and not on prices.⁵¹

Similarly, a recent review of 32 studies from the Medicaid managed care literature found that most of the studies that analyzed the effects of Medicaid managed care on costs found that managed care reduced inpatient hospital utilization and resulted in cost savings.⁵² The authors note many gaps in the research base, and find mixed results on access and quality.

In contrast to the robust literature on Medicare and Medicaid managed care, there are relatively few recent studies of the effects of managed care on commercially insured patients, and we did not identify any recent systematic reviews. Reviews of published work from the 1980-2000 period have been conducted by Miller and Luft (1994, 2002) and Glied (2000).⁵³ These reviews conclude that managed care plans typically reduce inpatient utilization and lower

⁴⁸ Glied, S. (2000). Chapter 13 Managed care. In *Handbook of Health Economics* (PART A ed., pp. 707-753). (Handbook of Health Economics; Vol. 1, No. PART A). Elsevier. <https://www.sciencedirect.com/handbook/handbook-of-health-economics/vol/1/part/PA>

⁴⁹ Newhouse JP. Free for All: Lessons from the RAND Health Insurance Experiment. Harvard University Press, 1993. Tables 8.4 and 8.5.

⁵⁰ Agarwal R, Connolly J, Gupta S, Navathe AS. Comparing Medicare Advantage And Traditional Medicare: A Systematic Review. *Health Aff (Millwood)*. 2021 Jun;40(6):937-944. doi: 10.1377/hlthaff.2020.02149. PMID: 34097516.

Format:

⁵¹ Maeda JLK, Nelson L. How Do the Hospital Prices Paid by Medicare Advantage Plans and Commercial Plans Compare With Medicare Fee-for-Service Prices? *Inquiry*. 2018 Jan-Dec; 55: Published online 2018 Jun 11. doi: 10.1177/0046958018779654

⁵² Daniela Franco Montoya DF, Puneet Kaur Chehal, PK, Adams EK
Medicaid Managed Care's Effects on Costs, Access, and Quality: An Update.
Vol. 41:537-549. <https://doi.org/10.1146/annurev-publhealth-040119-094345>

⁵³ Miller RH, Luft HS. Managed care plan performance since 1980. A literature analysis. *JAMA*. 1994 May 18;271(19):1512-9. PMID: 8176832; Miller RH, Luft HS. HMO plan performance update: an analysis of the literature, 1997-2001. *Health Aff (Millwood)*. 2002 Jul-Aug;21(4):63-86. doi: 10.1377/hlthaff.21.4.63. PMID: 12117154.

health expenditures, but also highlight heterogeneity in findings across studies, which may be due to heterogeneity in managed care models, as well as heterogeneity in the data and methods used in the research.

The weight of the evidence from our review implies that managed care reduces health care utilization and expenditures compared to FFS. The implication of this conclusion is that if managed care is replaced with FFS, utilization and expenditures will increase. The most directly relevant estimate of the magnitude of change comes from the Integrated Health Association (IHA).⁵⁴ Using 2017 data from California, and controlling for geography and patient risk, per capita spending is approximately 10% lower in full and partial risk health plans than in PPO plans in which providers are not at financial risk. The effect is manifested primarily through lower inpatient hospital utilization. The Congressional Budget Office (CBO) has independently estimated that a switch from Medicare Advantage to Medicare FFS would increase the supply and demand for services resulting from a switch from Medicare Advantage to Medicare FFS by 10%.⁵⁵

Using data from the California Department of Managed Health Care, we estimate that 59% of Californians are in commercial HMOs, Medi-Cal managed care plans, or Medicare Advantage plans⁵⁶. Based on the congruence of findings from IHA and CBO, we apply the estimated 10% increase in spending to that base.

This 5.9% increase in expenditures is applied to all Personal Health Care expenditure categories except other non-durable medical products, which are not typically covered by insurance, and Other Health, Residential, and Personal Care, and Nursing Care Facilities and Continuing Care Retirement Communities, for which utilization is not likely to change significantly with direct payment to providers.

Hospital pricing adjustment

As discussed above, we estimate that utilization will increase as a result of insuring the uninsured, eliminating (or reducing) cost sharing, and, in the direct payment scenario, as a result of unwinding managed care. In this section we consider two points. First, whether the supply of services will be sufficient to meet the increased demand. And second, how much will be paid for increased utilization.

Although the CBO estimated that supply constraints would cause substantial portions of the increased demand associated with universal coverage to be unmet, following the approach taken by Pollin, et al., in their analysis of SB 562, we assume that in implementing Unified Financing California would assure that the workforce was sufficient to meet the increased demand from insuring the uninsured, from reducing cost sharing, and, potentially, from unwinding managed care.

⁵⁴ IHA, Cost and Quality Atlas, <https://atlas.iha.org/story/risk>. The analysis excludes Kasier.

⁵⁵ Congressional Budget Office, [How CBO Analyzes Proposals for a Single-Payer Health Care System](#), December 10, 2020, Exhibit 6-1.

⁵⁶ This estimate reflects 2019 health insurance enrollment data (CHCF) divided by 39.5 million Californians in 2019 (Census Bureau). California Health Care Foundation, [California Health Insurers Enrollment](#), July 2020.

We assume that increases in hospital utilization would be paid at 50% of average cost, based on an estimate that marginal cost is approximately 50% of average cost. That is, if hospitals are paid using global budgets, we assume that the budget would increase as volume increases, although the increase in the budget for an additional unit of service would be 50% of the average cost for that unit of service. Although it is possible to design a payment system in which global budgets are invariant to volume changes, we think it is more likely, and, arguably, more desirable, that, as in Maryland (and in earlier years, in the all-payer rate setting systems in New York, New Jersey, and Massachusetts), global budgets would adjust for volume changes.

Provider administrative savings

Unified Financing is expected to produce savings for providers of health care services because of reductions in time and effort spent on administrative activities, mainly billing and insurance-related (BIR) expenses. In a scenario with direct payment from the Unified Financing authority to health care providers, BIR savings should accrue to providers that no longer have to negotiate with a myriad of private insurers, deal with billing requirements that are not standardized, or comply with pre-approval authorizations and coverage verifications that can vary across payers. Further, if hospitals are paid using a global budget, substantial savings will accrue from eliminating the need to bill for each discharge. (However, since those budgets might well be adjusted for volume, or, even if there is no volume adjustment, the hospital will almost certainly need to provide information about the volume of services it delivered and to whom those services were delivered, hospitals will need to maintain the capacity to generate substantial amounts of 'billing-like' information.)

In a scenario in which health plans or health systems are used as intermediaries, in which per capita payments are made to the plans or systems, and the plans or systems then pay providers, substantial BIR savings relative to the status quo are also anticipated, although smaller savings than would be expected in the direct payment scenario. In the status quo, a single health insurer is likely to have multiple contracts with a given provider – one contract for Medicare Advantage, one for Medi-Cal, multiple contracts for employer-sponsored insurance, and potentially one for Covered California business. Each contract has unique rules for covered services, payment methods and rates, prior approval requirements, and appeal rights. Under Unified Financing, even if intermediaries are used, there is likely to be only one contract between a health plan and a health care provider. Further, while a given health care provider may have contracts with more than one health plan, the covered services will be identical across plans, and there will almost certainly be many fewer health plans than under the status quo.

Key Assumptions:

1. In a scenario with direct payment of providers, we assume that BIR savings will produce reductions in total expenses, by type of service, equal to:
 - a. Hospitals 5.0 percentage points (50% of BIR, 10% to 5.0%)
 - b. Physicians 7.0 percentage points (50% of BIR, 14% to 7%)
 - c. Prescriptions 1.0 percentage points (11% of BIR, 9% to 8%)
 - d. Other 5.0 percentage points (50% of BIR, 10% to 5%)

- e. LTSS 5.0 percentage points (50% of BIR, 10% to 5%)

These levels and reductions are based on CBO (2020), Kahn et al. (2005), Jiwani et al. (2014), and Hsiao et al. (2011).⁵⁷

2. In a scenario with health plans or health systems used as intermediaries, we assume BIR savings to providers will be 50% of the amounts shown above.

Estimates of provider administrative savings are adjusted down by 17.4% to reflect Kaiser's large role in health care delivery in this state and the assumption that Kaiser has already achieved much of the administrative savings that would be possible at the provider level under Unified Financing given that Kaiser is an integrated delivery system consisting of health plan, hospital, and medical group entities. This downward adjustment is proportional to Kaiser's share of California health expenditures.⁵⁸

Payer administrative savings

The administrative savings from Unified Financing system occur primarily from consolidating some or all of the insurance functions of private and public insurers, including negotiations regarding payment rates, provider networks, covered benefits, copayments and deductibles, and drug formularies, etc. In a scenario with direct payment, these insurance functions would be performed by the state (or a contracted entity). A standard benefit package with uniform payment rates would apply to all enrollees and providers, eliminating the considerable variability in health plan design that currently exists. By eliminating or consolidating these functions into a single entity, significant administrative savings could be achieved.

In a scenario using health plans or health systems as intermediaries, payer administrative costs would be less than in the status quo, although substantially greater than in a scenario with direct payments to providers. In a scenario using intermediaries, savings relative to the status quo would be expected because health plans or health systems would be administering a single benefit package (rather than separate packages for each payer), have a single contract with each provider (rather than contracts that vary by providers), have a single set of claims payment rules, not need to deal with marketing and negotiating with multiple payers, and, presumably, be more tightly limited in the surplus they would be allowed to generate.

Key Assumptions:

⁵⁷ Congressional Budget Office, [How CBO Analyzes Proposals for a Single-Payer Health Care System](#), December 10, 2020. Kahn JG, Kronick R, Kreger M, Gans DN. The cost of health insurance administration in California: estimates for insurers, physicians, and hospitals. *Health Affairs* 2005;24(6):1629-1639. Jiwani A, Himmelstein D, Woolhandler S, Kahn JG. Billing and insurance-related administrative costs in the United States' health care: synthesis of micro-costing evidence. *BMC Health Services Research* 2014;14:556-565. Hsiao WC, Kappel S, Gruber J. Act 128 Health System Reform Design: Achieving Affordable Universal Health Care in Vermont. February 17, 2011. Available at: [Act 128 Health System Reform Design Report](#).

⁵⁸ This is estimated based on Kaiser's \$84.5 billion in national operating revenues in 2019 multiplied by the estimated California share (67.7%) of Kaiser's national membership. Kaiser Permanente, [2019 Annual Report](#). Approximately 8.4 million Californians were enrolled in Kaiser in 2019 (CHCF) out of approximately 12.4 million Kaiser members nationally. California Health Care Foundation, [California Health Insurers, Enrollment](#), July 2020. Kaiser Permanente [Fast Facts](#).

1. In 2022, using data from the National Health Accounts, total administrative expenses for payers in California are estimated at 8.5% of health consumption expenditures excluding public health activities.
2. Under a direct payment system, payer administrative costs will be 3%, or a 65% reduction. This estimate is consistent with the CBO estimate of a 77% reduction, and substantially larger than the 40% savings estimated by Pollin et al. in their analysis of SB 562.⁵⁹ By comparison, payer administrative costs in Canada are estimated at 3.1% in 2018. For comparison, in 2018, payer administrative costs in Germany were 4.7%, Netherlands 3.8%, Switzerland 3.9%, and the UK, 1.9%.⁶⁰
3. In a scenario with health plans or health systems as intermediaries, we assume payer administrative expenses would be 6%, a reduction of 29% from the status quo. This estimate is based on the assumption that administrative expenses for the Unified Financing authority will be 1%, and that administrative expenses for health plans or health systems will be 5%, similar to the administrative expenses for large self-insured employers.⁶¹

Just transition for administrative workers

The reduction in administrative complexity under Unified Financing would result in elimination of jobs in the insurance industry and insurance related work in hospitals, physician offices, and other settings.

Notably, the loss of administrative jobs under Unified Financing may be partially or wholly offset by an increase in other health sector employment providing patient care given higher demand for health care services under Unified Financing. Further policy specifications and modeling would be needed to estimate the overall net employment effects of Unified Financing in California, however a national analysis by the Economic Policy Institute found that fundamental health reform like Medicare for All “is almost guaranteed to substantially expand employment in the health care sector overall, even taking reducing billing administration employment into account.”⁶²

Even if the net employment changes due to Unified Financing are positive, a “just transition” plan and investment is needed to ease the transition for displaced insurance/ administrative workers and avoid a negative impact to the overall economy from the loss of those jobs. Robert Pollin and colleagues at the University of Massachusetts Amherst Political Economy Research Institute (PERI) developed a framework for a just transition for affected insurance/ administrative workers in their national research on the Medicare for All Act of 2017.⁶³ The framework includes pension fund guarantees for all affected workers, a voluntary path to retirement for workers age

⁵⁹ Congressional Budget Office, [How CBO Analyzes Proposals for a Single-Payer Health Care System](#), December 10, 2020. Pollin R, Heintz J, Arno P, Wicks-Lim J. Economic Analysis of the Healthy California Single-Payer Health Care Proposal (SB-562). Amherst, MA: Political Economy Research Institute (PERI), May 2017.

⁶⁰ Organisation for Economic Co-operation and Development (OECD). OECD.Stat .Available at: https://stats.oecd.org/Index.aspx?DatasetCode=HEALTH_STAT.

⁶¹ Al Stewart, Acting Secretary of Labor, [Report to Congress: Annual Report on Self-Insured Group Health Plans](#), March 2021.

⁶² Josh Bivens (Economic Policy Institute), ‘Fundamental health reform like ‘Medicare for All’ would help the labor market,’ March 5, 2020.

⁶³ Robert Pollin, James Heintz, Peter Arno, Jeannette Wicks-Lim, and Michael Ash (University of Massachusetts Amherst Political Economy Research Institute), Economic Analysis of Medicare for All, November 2018.

60 and older that provides 100% wage replacement until their pension begins, and support for displaced workers via one year of wage replacement and job retraining and relocation support as needed.

Nationally, PERI researchers estimated that 746,600 insurance industry workers and 1.06 million administrative support workers in health care settings would face displacement under the federal Medicare for All proposal. If California's share of this workforce is roughly proportional to the state's share of population, this is equivalent to a total of approximately 219,000 administrative workers in California who may face displacement under the scenario in which direct payments are made to providers, or more than one percent of the total California workforce in 2017.⁶⁴

PERI researchers estimated that the just transition plan outlined would require \$123 billion in total support nationally, which would mostly be incurred in the first two years of Medicare for All implementation. The support would be split roughly equally between support for health insurance industry workers (\$65 billion) and administrative support workers in the health services industry (\$58 billion).

To extrapolate the costs for California under the scenario with direct payment to providers, this national estimate was adjusted for California's share of the U.S. population and inflated to 2022 dollars based on personal income growth projections from CMS. The investment is assumed to be spread over 10 years using a bond with an annual interest rate of 2.3%.⁶⁵ For the scenario in which health plans or health systems plan an intermediary role, it is assumed that half of the support would be needed because there would be fewer displaced workers in the insurance and health services industries given that not as much administrative simplification would occur in this scenario.

Based on these assumptions, the analysis assumes \$1.7 billion in just transition costs per year for the first 10 years of policy under the scenario with direct payment to providers and nearly \$0.9 billion per year under the scenario with a role for health plans or health systems as intermediaries.

Costs for reserves

This analysis assumes that the state would need to build financial and risk reserves as a proportion of the projected non-federal expenditures under each scenario. We assume that federal funds would arrive in a timely manner and are not at risk, and thus are not estimating a reserve to cover claims fluctuations on the money that would have been used to pay for Medicare and Medicaid benefits. We assume that if claims go up in unexpected ways in California, the same is likely to be happening in the rest of the nation, so that the federal fund payments would quickly catch up. Very short term borrowing might be needed, but the costs are small enough that they are not included here.

Pending further Commission discussion about how to obtain federal funding for Unified Financing, the expected federal contribution to Unified Financing is assumed to be equal to

⁶⁴ California's population made up 12.1% of the U.S. population in 2017, according to data from the U.S. Census. Total California employment was 18,246,800 in 2017. California Employment Development Department [Monthly Labor Force Data for California, Annual Average 2017 - Revised](#), March 29, 2021.

⁶⁵ Federal Reserve Economic Data, [10-Year Treasury Constant Maturity Rate](#), Percent, Annual, Not Seasonally Adjusted in 2010-2020

Medicare expenditures in the state⁶⁶, the estimated federal share (64.5%) of total Medi-Cal expenditures,⁶⁷ and all ACA projected premium tax credit expenditures for California.⁶⁸ CMS's State of Residence data provides estimates for Medicare, Medicaid, and Private Health Insurance expenditures for 2014 reflect Personal Health Care expenditures only and are therefore inflated based on the national ratio of expenditures on Government Administration and Net Cost of Health Insurance relative to Personal Health Care for each source. Expenditures are grown to 2022 grown based on historical and projected national trends for Medicare, Medicaid, and private insurance using CMS National Health Expenditure Accounts, with the exception that Medicaid expenditures are grown using Medi-Cal expenditure growth rates from the California Department of Finance for 2015 to 2020. Using this method, federal expenditures would comprise approximately 39.5% of total health expenditures in the 2022 baseline, with that percentage varying by scenario and year.

Risk Reserves

In their study for the State of Vermont, Wakely Consulting uses the Risk-Based Capital (RBC) method to estimate claims risk reserves.⁶⁹ The RBC standard measures the minimum amount of capital an insurer must hold to support their operation based on their size and level of risk.⁷⁰ We start with the Wakely's estimates, and adjust for a no-capitation and 100% capitation options, and for actuarial values of 100% and 89.5%. We then take 250% of the ACL to estimate our claims reserves.

This gives us generous estimates for risk reserves. There is a reasonable argument that the rules governing a public plan should not necessarily follow standards created for the private market. A public plan has power over rate setting. If hospitals are maintained on global budgets, medical risk related to hospitals would be mainly born by the providers. If a new high cost blockbuster drug is introduced, the state would have power over setting the price in ways that a private entity could not. California's much larger size than Vermont's also suggests the state would face lower risk of insolvency because high cost claims would be spread across a larger population.

Assumed risk reserves as a share of non-federally funded claims

UF option

Reserves

⁶⁶ We assume that current Medicare beneficiaries would no longer pay Part B or Part D premiums, because those premium payments are voluntary, and because there would be no benefit to paying those premiums. We assume that the federal government would subtract Part B and Part D premiums paid by Californians from gross federal Medicare expenditures in determining the amount paid for Unified Financing.

⁶⁷ California Department of Finance data from 2018 to 2021 is used to estimate the federal share of Medi-Cal expenditures.

⁶⁸ See "Baseline Expenditures by Source" section.

⁶⁹ Green Mountain Care: A Comprehensive Model for Building Vermont's Universal Health Care System Report Appendices Submitted by Governor Peter Shumlin to the Vermont State Legislature December 30, 2014, pp. 228-230.

<https://hcr.vermont.gov/sites/hcr/files/pdfs/GMC%20FINAL%20APPENDICES%20123014.pdf>

⁷⁰ The National Association of Insurance Commissioners notes that the Authorized Control Level (ACL) under the RBC standard is a minimum regulatory standard and "is not designed to use as a stand-alone tool." ACL is expressed as a percentage of annual claims. Health insurers are required to hold 200% of their ACL, but typically hold 250-300 percent.

Direct payment to providers, no cost sharing	11.7%
Direct payment to providers, with cost sharing	10.5%
Health plan or health system role, no cost sharing	5.9%
Health plan or health system role, with cost sharing	5.2%

Financial Reserves

The state will also need financial reserves to cover the risk of fluctuations in revenues from state tax sources over a two-year period. We assume a financial reserve of 10 percent of state health funding for the program. The size of the financial reserve will depend on the volatility of the revenue sources. To estimate the size of the financial reserves we estimate how funding sources based on wages, salaries and corporate profits would have changed in real terms in any running three-year period between 2000 and 2020, which covers two economic downturns, including the great recession and the COVID-19 crisis. Despite employment loss, aggregate earnings did not decline in 2020. Part of the reduction in revenue in a recession would also be offset in part by increases in federal Medicaid funds. In an extremely deep or prolonged recession, a 10 percent reserve might not be sufficient to fully cover cumulative revenue losses, but would provide enough cushion to allow the state to make other adjustments -- either a temporary increase in tax rates, or a reduction in the rate of growth of health spending.

Creating the reserves

We assume that \$20 billion is bonded over a 30 year period to establish the initial reserve fund, with annual payments of \$1.33 billion. Annual payment amounts are based on an analysis by the Legislative Analyst's Office of the repayment costs for a 30 year bond at 5%.⁷¹ We assume that the remainder of the reserve is built up out of annual revenues over a ten year period. There is a limit to the amount of bonds the state can issue at any given time. We assume that \$20 billion would provide sufficient reserves at inception.

The first year cost to fund reserves in a no-cost sharing, direct payment scenario would be \$5.2 billion: \$1.33 billion for bond payments and \$3.8 billion towards building the reserve fund. The first year cost of reserves in a no-cost sharing, model with intermediaries would be \$3.7 billion. If it were possible to issue bonds for a greater share of the reserve at inception, the costs could be lowered slightly. For example, if the entire target reserve amount for the for direct payment with no-cost sharing option was bonded at inception and invested to receive a return that matches GDP, the annual cost for bond repayments and setting aside reserves would be \$3.9 billion in 2022.

The calculations for the later years assume that the reserve funds are not utilized during this time period. If the fund goes below a certain level, e.g. 80% of the target amount for that year, the payments would need to be increased accordingly. If the reserve fund reaches a certain level above the target (120%), the fund could decide to reduce the annual payments.

⁷¹ Legislative Analyst's Office, [Bonds](#).

Expanding Long Term Supports and Services

We used the CBO's policy assumptions about expanding long term supports and services (LTSS) in the context of national single payer as the basis for our analysis.⁷² The CBO assumed a comprehensive expansion of LTSS benefits, as further detailed below, which is generally consistent with Commissioner discussion about the need for a LTSS expansion at the December 9, 2021 meeting.

The CBO analyzed an option that would make institutional care and home and community-based services (HCBS) universally available to anyone with one or more limitations to Activities of Daily Living or Instrumental Activities of Daily Living. In their analysis, HCBS services are defined as those offered by any state Medicaid program under current law including but not limited to personal care with the ability to self-direct services and employment supports. The CBO assumed no explicit limit on the quantity and costs of LTSS but that a single payer system would employ some cost containment strategies such as requiring a detailed plan of care for patients and electronic verification of visits.

CBO estimates a 5% increase in total health expenditures due to the expansion of LTSS in the context of single payer,⁷³ which is used to estimate the increase in expenditures in California under Unified Financing. A 5% increase in total health expenditures is equivalent to \$26 billion in increased spending in California in 2022. By comparison, total California LTSS spending (institutional and HCBS) by all payers under current policy is roughly estimated at approximately \$40 billion in 2022.⁷⁴ One large component of current LTSS spending in California is the \$17 billion in projected federal, state and local spending on In-Home Supportive Services in 2021-22.⁷⁵

The CBO assumed that this policy change would not result in any major changes in the number of people receiving institutional care based on their review of the literature and the survey data showing that people prefer to stay in their homes as they age, though they acknowledge that the number of users of institutional care might be slightly higher than under current policy due to the reduction in eligibility and financial barriers, or slightly lower because of the expanded access to HCBS. Per capita spending for institutional care is also expected to remain the same because no change in the scope of services or complexity of the average user is expected, and payment rates are assumed to be equal to the weighted average of current payment rates.

The most significant changes would be increases in the number of HCBS users and the cost per HCBS user. The number of HCBS users would increase because the share of population eligible for HCBS would increase because of broader eligibility standards and the share of the eligible population using HCBS would increase because a broader range of services would be available and out-of-pocket costs would be roughly the same (for those already eligible for Medi-

⁷² Congressional Budget Office, [How CBO Analyzes Proposals for a Single-Payer Health Care System](#), December 10, 2020.

⁷³ CBO's Exhibit 1-1 shows a \$333 billion difference in expenditures in 2030 between single payer Options 4 and 5 which are identical in design except that Option 5 includes expanded coverage of LTSS. This \$333 billion difference is then divided by \$6.631 trillion in total health expenditures in 2030 under current policy to yield an estimated 5% increase in total health expenditures due to the LTSS expansion.

⁷⁴ CBO's Exhibit 8-1 shows an estimated \$158 billion in national HCBS spending and \$144 billion in national institutional spending in 2020. Assuming 5.7% growth in 2021 and 5.9% growth in 2022 based on CMS projections for personal care, that would be \$338 billion in national LTSS spending in 2022. California's population share of that national spending would be approximately \$40 billion.

⁷⁵ California Department of Social Services, [2021 May Revision Executive Summary](#).

Cal HCBS) or much lower (for those not already eligible for Medi-Cal HCBS) than under current policy. Use of HCBS would increase in three ways: people who use any paid care under current policy would continue to use care but would use more care, half of current users of unpaid care would become users of paid care, and one-quarter of HCBS-eligible people who do not use paid or unpaid HCBS under current policy would become users of paid care. (Individuals newly using paid care may include some people who are currently eligible for LTSS but are not able to access services due to waiting lists.)

The cost per HCBS user would increase significantly because the set of services available to all eligible individuals would be more comprehensive, some current users would use more care due to reduced financial barriers and other barriers, and the HCBS payment rate under single payer is projected to be more similar to Medicare payment rates, making payments 8% higher under single payer than under current policy. CBO projects that the estimated payment increase would yield sufficient supply to meet the increased demand.

The national CBO estimate and our application of their assumptions to California are subject to significant uncertainty. For example, significant uncertainty exists about how much and how quickly care will continue to shift from institutional settings to home and community based settings and how the pandemic has changed families' preferences about those settings. Additionally, there is significant uncertainty about how use of LTSS would change under a broad expansion of eligibility and covered services along with a reduction in out-of-pocket costs. Furthermore, changes to the policy assumptions could significantly alter the projected expenditure change.

Further analysis would be needed to understand California-specific differences and adjust the national expenditure estimates accordingly. For example, factors that may lead to an HCBS expansion being more costly in California than in the U.S. on average include California having the second highest average life expectancy in the country⁷⁶ and California's seniors being expected to spend more time with a disability than seniors nationally, in part reflecting our more diverse senior population.⁷⁷ On the other hand, factors that may make an HCBS expansion less costly in California include the state already spending a higher share of Medi-Cal and state-funded LTSS expenditures on HCBS than the U.S. average⁷⁸ and waiting lists for HCBS being a barrier that is less common in California as in other states.⁷⁹

Additionally, it will be important for the state to ultimately project and plan for LTSS expenditures over a longer time horizon than 10 years. Californians ages 65 and older will make up a growing part of the population over the coming decades. The California Department of Finance projects that the share of the state's population ages 65 and older will grow from 16.8% in 2021 to 22.5% in 2040 and 26.4% in 2060.⁸⁰

⁷⁶ California Department of Aging, [Master Plan for Aging](#), January 2021.

⁷⁷ California Legislative Analyst's Office, [A Long-Term Outlook: Disability Among California's Seniors](#), November 2016.

⁷⁸ AARP Foundation, The Commonwealth Fund, The Scan Foundation, AARP, [Long-Term Services and Supports State Scorecard](#), accessed May 20, 2021.

⁷⁹ MaryBeth Musumeci, Molly O'Malley Watts, and Priya Chidambaram (Kaiser Family Foundation), [Key State Policy Choices About Medicaid Home and Community-Based Services](#), February 4, 2020.

⁸⁰ State of California Department of Finance, [Population Projections](#), accessed March 23, 2021.

Reducing Health Expenditure Growth

Under Unified Financing, a reduction in the rate of spending growth could be accomplished by reducing the rate of increase in prices, and/or by reducing low-valued care, fraud, and abuse. Annual expenditure growth under Unified Financing after year 1 is estimated for two scenarios: one using National Health Expenditure (NHE) growth rates projected by CMS minus 0.5% per year, and another using the rate of GDP growth projected by CMS. The GDP growth rate option is equivalent to approximately to the NHE growth rate minus 1.3%. The reduced growth rates are applied to all Personal Health Care and Investment spending. Government Public Health Activities expenditures are assumed to continue to grow at the rates projected by CMS under all scenarios. Administrative spending in each year is calculated as a percentage of Personal Health Care expenditures plus administrative costs, therefore the growth in administrative spending is proportional to the growth in Personal Health Care expenditures.

Adopting a Unified Financing system will not automatically reduce the rate of growth of health expenditures because the rate of growth will depend on a number of design decisions within a Unified Financing system, as well as the behavior of health care providers, patients, and the rate of development and deployment of new technologies. However, Unified Financing creates both additional tools to reduce spending growth as well as an added imperative to do so.

Estimated new revenues by potential source

A variety of broad-based revenue sources could be used to raise the state-based revenue needed to implement UF. We estimate the potential revenues that would be raised in 2022 per 1 percent tax, focusing on the five tax types below which involve a large, stable tax-base that could provide core revenues for a unified financing system. These sources could be supplemented with a range of other complimentary taxes that could help meet additional objectives on equity and incentivizing positive health outcomes.

Payroll Tax: Each 1% increase in payroll tax would raise about \$14 billion. Total wages and salaries is taken from the Quarterly Census of Employment and Wages, 2020, California, all workers, and updated to 2022 using LAO assumptions for growth in wages and salaries.⁸¹ We conservatively do not assume any wage pass through from eliminating employer sponsored insurance. If the tax is paid by employers and is equivalent in amount to what employers are currently spending on health care, we would expect no effect on aggregate wages.

Broad Tax: Each 1% broad tax would raise an estimated \$19 billion. The broad tax on labor and capital income includes compensation, corporate profits, unincorporated business income and interest income.

Compensation is made up of wages and non-legally required employee benefits. Wages and salaries are estimated as described above. Included benefits are calculated at 3% percent of wages and salaries.⁸² We conservatively do not assume any wage pass through from eliminating employer sponsored insurance as discussed above. Using BLS September 2021

⁸¹ California Legislative Analyst's Office, [2021-22 Fiscal Outlook Economic Assumptions](#), November 18, 2020.

⁸² Bureau of Labor Statistics, News Release, [Employer Costs for Employee Compensation](#)—September 2021.

Employer Costs for Employee Compensation for Civilian Workers, employer spending on insurance (excluding health insurance but including life insurance and long- and short-term disability insurance) and defined contribution retirement plans is equivalent to 3% of wages and salaries including regular pay along with paid leave and supplemental pay.

Corporate profits, unincorporated business income, and taxable interest income are taken from Franchise Tax Board data from 2020 adjusted to 2022 using CMS GDP growth estimates.

Gross Receipts Tax: Each 1% of gross receipts tax would raise an estimated \$47 billion. Using industry sales data from the United State Census Bureau,⁸³ we estimate the value of sales for California in 2017 and adjust to 2022 using CMS GDP growth estimates. Our estimates match those produced by the Legislative Analyst's Office for the Assembly Select Committee on Health Care Delivery Systems and Universal Coverage.⁸⁴

The economic census tables do not include the value of sales for utilities, information or finance and insurance. Assuming these industries would not be exempt from a gross receipts tax, and that all gross receipts are included, our estimate of \$47 billion from each 1% tax in 2022 is low. Many gross receipts tax proposals exclude the first \$2 million in gross receipts. We are not able to estimate the relative size of the missing revenue from certain industries versus the cost of excluding the first \$2 million in gross receipts. These calculations include the Health care industry. If the total cost of all taxes in the healthcare sector is greater than the sector would otherwise be spending on health insurance for employees, that would need to be factored into the costs of a unified healthcare system. Excluding Health care and Social Assistance would reduce the projected revenue from a gross receipts tax by \$3.8 billion.

Sales Tax on Selected Services: Each 1% sales tax on selected services would raise an estimated \$9 billion.⁸⁵ Using industry sales data from the United State Census Bureau,⁸⁶ we estimate the value of sales in service industries for California in 2017 and adjust to 2022 using CMS GDP growth estimates. The estimate includes NAICS Codes: 53 Real Estate and rental and leasing, 54 Professional, scientific, and technical services, 55 Management of companies and enterprises, 56 Administrative support and waste management and remediation services, 71 Arts' entertainment and recreation, and 81 Other services (except public administration). We do not include construction, education, health or utilities, accommodation and food services, or services not subject to federal income tax.

Taxable Personal Income: Each 1% increase on taxable personal income would raise an estimated \$18 billion.⁸⁷ Data from Franchise Tax Board 2020 Personal Income Tax Report, updated to 2022 using CMS GDP growth estimates.

⁸³ United State Census Bureau, [EC1700BASIC, All Sectors: Summary Statistics for U.S., States, and Selected Geographies](#), 2017,

⁸⁴ Legislative Analyst's Office, [Financing Considerations for Potential State Healthcare Policy Changes, Presented to Assembly Select Committee on Health Care Delivery Systems and Universal Coverage](#), February 5, 2018.

⁸⁵ This estimate is updated from the November 17, 2021 slides to exclude the accommodation and food services industry given that most California localities already have transient occupancy taxes applied to hotel stays and restaurant sales are generally already taxed.

⁸⁶ United State Census Bureau, 2017.

⁸⁷ This estimate is updated from the November 17, 2021 slides based on updated Franchise Tax Bureau data.