

## Appendix C-1: The Gruber Microsimulation Model

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Microsimulation is a method of analysis that uses a computer program to model (“simulate”) the effects of policy changes on individual (“micro”) units such as people, households and businesses. The approach used here is the type of “microsimulation” modeling used by the Treasury Department, CBO, and other government entities. This approach draws on the best evidence available in the health economics literature to model how individuals will respond to the changes in the insurance environment induced by changes in government policy.

The Gruber Microsimulation Model (GMSIM) computes the effects of health insurance policies on the distribution of health care spending and private and public sector health care costs. This model has been used over the past 15 years by a wide variety of state and federal policy makers to analyze the impacts of health insurance reforms. This model was first developed in 1999 for use in estimating the impact of tax credits on health insurance coverage, with funding from the Kaiser Family Foundation. Over the subsequent 15 years, the model’s capability has been expanded to consider the full variety of possible health interventions, including public insurance expansions, employer or individual mandates, purchasing pools for insurance, single payer systems, and more.

GMSIM was the basis for the empirical modeling in the well-known February 2011 report by Professor William Hsaio. The 2011 report attempted to provide a comprehensive overview of the factors involved in transitioning to a unified and universal health care system. Central to that report was a careful modeling of the Vermont health care economy, and how it would be affected by that transition. The 2011 report is now somewhat out of date; in particular, recent survey data of Vermont households on their insurance status is now available to update the model. But the basic structure provides an excellent starting point for modeling the incidence of current health care spending.

### Microsimulation Model Construction

#### Structure of GMSIM

The GMSIM is a complex model that has grown over 15 years to address a wide variety of health policy questions. In this section, we provide a brief overview of the model. The assumptions included in the modeled are detailed in Appendix C-2.

The GMSIM builds upon micro-data on individuals, including data available for Vermont residents in the Vermont Household Health Insurance Survey (VHHIS) and in national datasets such as the Current Population Survey (CPS).

This data on individuals is then carefully supplemented by data on employers. GMSIM builds “synthetic firms,” assigning each individual worker in the dataset a set of co-workers selected to represent the likely true set of co-workers in that firm. The model uses data from the Vermont Department of Labor and the Vermont Department of Taxes to show, for workers of any given earnings level, the earnings distribution of their co-workers. Using these data, other sample individuals are randomly selected in order to statistically replicate the earnings distribution for that worker’s earnings level. These workers then become the co-workers in a worker’s synthetic firm.

## Assigning Incidence

A starting point for any analysis of financing reform is a rich understanding of the incidence of existing health care spending. “Incidence” refers to entities that are ultimately responsible for certain costs. Only by first understanding who bears the burden of health care costs in Vermont today can we paint a rich picture of how financing alters that burden.

Addressing questions such as the incidence of health care spending requires assigning the incidence of different types of health care spending to different entities. In this section we discuss each element of health care spending and to whom it is assigned for incidence purposes, drawing on economic theory and evidence for making such assignments.

**Medicaid Expenditures:** The incidence of Medicaid expenditures is allocated between the federal government and the state government, using future projections of the Vermont Federal Matching Assistance Percentages (FMAPs) for the base Medicaid population, the ACA expansion population, and the CHIP program. We applied these percentages to Medicaid expenditure data provided by the Vermont Agency of Human Services.

**Other Government Insurance:** For those covered by other government insurance (primarily military coverage) the incidence is fully on the Federal government.


**Family Premiums and Out of Pocket Medical Spending:** The incidence of family spending on health insurance and medical spending is directly on the family, with one important exception: federal tax breaks to insurance spending. The most significant of these federal tax breaks are the deduction from federal income taxation for health insurance premiums for the self-employed and the deduction of employee premiums from state and federal taxable income for the vast majority of employees. We use aggregated data provided by the Vermont Tax Department to estimate each of these items for Vermont residents in order to assign the relative incidence between the family and the state and federal government.

**Private Employer Health Insurance Premiums:** Employer-sponsored health insurance premiums are the single largest element of health care spending in the state. There is a large literature in economics showing that the incidence of employer premium payments is on employee wages.

We begin with the typical economics assumption that health insurance premiums were fully shifted to workers’ wages in a lump sum (constant dollar) fashion across all employees. We then augment that modeling with a minimum wage constraint – wages cannot be reduced below the minimum wage, so any extra costs induced by this constraint are borne by the employer. We assume that wages are “sticky,” that is, that employers do not redirect costs or savings from health care coverage immediately to wages, but rather redirect these funds over several years.

**State Health Care Spending:** The state of Vermont and its localities spend a large share of their budgets on health care, ranging from employee health insurance spending, to the state share of Medicaid spending, to other state public health programs. For state and local health insurance spending, we assume lower incidence on wages relative to private employers.

The share of state taxes that are collected on businesses are assigned to employers as part of their incidence.



The various elements of incidence described above can have multiple impacts on any family, through their own health care spending, health insurance premiums, and state taxes. We integrate of all these changes into one total incidence measure for each family.

## Modeling Green Mountain Care

The GMSIM takes as its starting point the situation in Vermont post-ACA. The model incorporates the latest available information on the impacts of the ACA in Vermont in setting the baseline for any analysis. This information includes the most recent available data on exchange enrollment across plans; plan prices and characteristics; enrollment in Medicaid; and other insurance coverage information. The GMSIM fully incorporates all aspects of the ACA.

We then model the transition to Green Mountain Care in 2017. We model the “steady state” situation in Vermont after full transition, and then consider various scenarios for transition paths to that steady state.

Modeling the impact of GMC involves several steps. First, individuals are enrolled in GMC as a default. The impacts of this default enrollment vary by type of individual:

- Uninsured individuals are directly enrolled into GMC.
- Those who currently purchase individual insurance are directly enrolled into GMC.
- Those who are on public insurance will also be directly enrolled. However, for those low income individuals who have benefits packages more generous than GMC, we also model the “wrap-around” benefits to which they are entitled.


The most difficult case is those who have employer-sponsored insurance, since employers can choose to continue to offer ESI. It also is important to differentiate multi-state employers who may be slower to change their benefits offering in response to GMC. As well, existing employers and employees will move to GMC as a function of the generosity of the program relative to their employer sponsored insurance. We use data provided by Wakely Consulting Group to measure the share of large firm employees who are employed in multi-state firms.

We then apply assumptions regarding the percentage of individuals who will remain on ESI under certain conditions. Next, we apply assumptions as to which employers will purchase supplemental insurance above GMC for their employees, and to what actuarial value. Finally, we apply assumptions as to which individuals will purchase supplemental insurance above GMC, and to what actuarial value. These assumptions are detailed in Appendix C-2.

## Incorporating Actuarial Analysis

Moving to Green Mountain Care is a major reform to the insurance system which goes well beyond the types of reforms that have been studied in the past. As such, it is critical to have a sophisticated insurance pricing model which accounts for the impact of population flows and insurance design on insurance markets. The microsimulation team worked iteratively with actuaries from Wakely Consulting Group to consider the effect of insurance market change on population movements (the focus of GMSIM) and pricing (the focus of actuarial analysis).

Incorporating actuarial analysis is critical for understanding several aspects of the GMC reform.



The first is changes in health care utilization due to the changes in the nature of the health insurance package. Next, the actuarial analysis models the ultimate cost of care within the GMC pool based on the health mix and utilization decisions of those who enroll in GMC.

In particular, the integration between actuarial and economic modeling worked as follows:

- Initial insurance market prices and conditions were integrated into the model as described above
- Based on these initial conditions, as well as the policy change and form of financing, GMSIM was used to model population and income flows
- The resulting relative morbidity of populations in GMC, relative to the pre-GMC market, was then passed to Wakely.
- These morbidity changes were then incorporated into an actuarial model to capture the impact on pricing. This accounts for the potential changes in GMC population pools arising from the transition to GMC.
- This information is passed back to GMSIM by the actuary

GMSIM incorporates this information in the form of new prices in GMC populations.

## Data Sources


Our modeling of the incidence of health care spending in Vermont draws upon a wide variety of rich data sources that are available for the state.

### The 2012 Vermont Household Health Insurance Survey (VHHIS)

In 2012, the state of Vermont undertook a detailed collection of data on households and their insurance coverage through the VHHIS. This survey gathered data from more than 4,600 Vermont households, with data on almost 11,000 state residents. This is a very large sample for a state of this size; in contrast, the three year pooled sample from the Current Population Survey that was used in the Hsaio report was only about two-thirds as large. The VHHIS data collection was cutting edge, including collection both from landlines and cell phone only households. And there was an oversample of the uninsured which allows for more comprehensive modeling of the behavior of this group.

The data include a rich battery of information for each household member, including but not limited to:

- Type of insurance coverage
- Source of insurance coverage
- Duration of insurance coverage/uninsured
- Medical expenditures
- Medical utilization and location of care
- Health Insurance premiums

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- Barriers to health care receipt
  - Health status
  - Demographics (age, gender, education, etc.)
  - Employment
  - Job characteristics, including firm size and provision of health insurance
  - Family income

As described above, these data provide the ideal basis for the type of microsimulation modeling that is required for a rich incidence analysis in Vermont.

### Augmenting the VHHIS


While the VHHIS is the most comprehensive data source available for this analysis, it has three limitations. First, it is two years out of date. Second, there is well known under/misreporting of key measures in survey data, such as coverage by public insurance or medical expenditures. Such measurement problems could lead to important misstatements of the incidence of health care spending and the subsequent effects of reform. Finally, a number of important expenditure items are not collected by the VHHIS but are central to understanding the incidence of health care spending in Vermont.

We therefore carefully augment the VHHIS in a number of ways to produce the best possible estimates:

**Medicaid coverage.** Underreporting of public insurance coverage is a well-known problem in survey data. We therefore recalibrate to state and federal reports of enrollment by type of enrollee (e.g. child, disabled & blind, elderly, etc).

**Public insurance spending.** The VHHIS has no data on the insured spending of those who are enrolled in public insurance. We use data from state and federal sources to impute per capita spending by type of enrollee. Specifically, we used Medicaid expenditure data provided by the Vermont Agency of Human Services (AHS) and Department of Vermont Health Access (DVHA). These expenditures include both DVHA Medicaid expenditures as well as expenditures for mental health services and long term care services and supports provided through other departments within AHS. Estimates of managed care investments were also included in public insurance spending.

**Employer-sponsored insurance premiums.** The survey includes data on the employee portion of employer-sponsored insurance premiums, but not on the employer portion. Three Vermont insurers, Blue Cross Blue Shield of Vermont, Cigna and MVP, provided data on enrollment and premiums by firm size (both total premiums and the employer/employee shares) for their Vermont book of business.



**Individual market insurance premiums.** Blue Cross Blue Shield of Vermont, Cigna and MVP provided data on enrollment and premiums for their individual policies.

**Income.** The VHHIS is not designed to focus on income collection in the same way as Census data sets such as the Current Population Survey or the American Community Survey. We therefore recalibrate the income distribution in the VHHIS to match the distribution from these more precise Census data sets, as well as income data provided by the Vermont Department of Taxes.

## Appendix C-2: Microsimulation Assumptions

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This Appendix describes the assumptions provided by the State of Vermont to be used for the microsimulation analysis. It also describes the type of output provided to the State as an output from the model. It is important to remember that the numbers presented throughout this report are **estimates** despite the precise dollar amounts. Readers should avoid drawing strong conclusions from small differences, which result due to rounding.

### Populations

- A. Population counts: Population counts by type of insurance for the 94% AV Best Policies run can be found in Appendix A-1.
1. *Non-group*: those holding individual insurance policies (no longer exists under GMC)
  2. *Medicaid primary*: those who are Medicaid eligible and have no other insurance (incorporated fully into GMC)
  3. *Employer sponsored insurance*: this is divided into private, state, local and municipal employees
  4. *Federal government insurance*: Federal Employee Health Benefits
  5. *Uninsured*
  6. *Medicare*: overall Medicare enrollment, as well as supplementation by individuals (medi-gap), by Medicaid (duals), and by employers
  7. *Military insurance*
  8. *GMC enrollment*: overall GMC enrollment, and separately present those who are receiving employer supplementation to GMC and those who are purchasing GMC supplements on their own
  9. *Commuters in*: We assume that residents of other states who work in Vermont for a Vermont firm are able to enroll in GMC. These non-residents would pay the public premium in the same manner and amount as a Vermont resident with the same income and family size.
- B. Key assumptions relating to these population counts include:
1. We assume the number of uninsured is zero under GMC due to the operational planning by the State.
  2. We assume all employees of small firms (with fewer than 100 employees) drop ESI and go onto GMC, under the state's Affordable Care Act Section 1332 waiver.
  3. We assume a three year phase down of ESI for large firms. We break down large group ESI down into four groups – those in national firms and those not in national firms, and then within those we distinguish between those who have an ESI AV higher than they are offered on GMC and those that have a lower ESI AV. Our assumptions for the percentage of employees of large firms who remain on ESI are laid out in the following table:

Large Group ESI Assumptions	National firms	Vermont only firms
<b>Firm offers ESI with AV Greater than GMC's AV</b>	Year 1: 60% remain on ESI Year 2: 40% remain on ESI Year 3 & thereafter: 12.5% remain on ESI	Year 1: 25% remain on ESI Year 2: 12.5% remain on ESI Year 3 & thereafter: 0% remain on ESI
<b>Firm offers ESI with AV Lower than GMC's AV</b>	Year 1: 30% remain on ESI Year 2: 15% remain on ESI Year 3 & thereafter: 0% remain on ESI	0% remain on ESI in any year

4. We assume that all employees of state, local, and municipal employers drop ESI in the first year and go onto GMC.
5. For federal employees, we assume that virtually all federal employees move on to GMC rather than pay for both ESI and GMC. We assume no impact on military.
6. We assume no impact on Medicare.

C. Data sources for populations include the Vermont Household Health Insurance Survey (VHHIS), enrollment in public insurance programs provided by the Vermont Agency of Human Services and Department of Vermont Health Access, and data reported by Vermont health insurers for this project.

### Private Insurance Coverage and Spending


Spending is in millions, while enrollment is in thousands of persons.

A. Key assumptions relating to private coverage and spending include:

1. *Trend*: We assume private insurance spending increases based on the trends projected in Table 17 of the National Health Expenditure accounts.<sup>1</sup>
2. *Non-group* premium spending is spending on individual insurance without GMC
3. *Individual supplementation of GMC*: We measure spending on individual supplementation of GMC by allowing individuals to supplement in either of two cases:

<sup>1</sup> See Table 17 of the National Health Expenditure Data, found at <http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsProjected.html>



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- a. If the individual's ex-ante AV is above their GMC AV, and their ex-ante premium is above their individual contribution to GMC, then they buy-up to their ex-ante AV, and
  - b. If the individual's ex-ante AV is above their GMC AV, but their ex-ante premium is below their individual contribution to GMC, then they buy-up 50% of the difference between their ex-ante AV and GMC AV.
4. *Individual supplementation of Medicare:* We assume no change due to GMC.
5. *Private employer spending:* We show base coverage for active workers (those remaining on ESI), as well as supplementation of active workers who move to GMC. We also show supplemental spending for retirees.
- a. *Supplemental coverage:* To model private employer supplementation of GMC, we consider the firm's spending on the employees' ex-ante premium before GMC, and the ex-ante AV of the plan the employer provided before GMC. Our assumptions are summarized as follows:
    - (1) If the firm spent *more* on the employee's ex-ante premium than GMC AND the ex-ante AV of the plan the employer provided is higher than the employee is receiving on GMC, then the employer supplements the employee up to the ex-ante AV, with similar cost sharing arrangements (e.g. 80/20 cost sharing).
    - (2) If the firm spent *less* on the employee's ex-ante premium than before GMC, but the ex-ante AV of the plan the employer provided is higher than the employee is receiving on GMC, then the employer supplements up to 50% of the AV difference.
  - b. *Employer savings re-directed to employee wages:* To the extent that an employer's spending on health insurance without GMC exceeds the employer's spending under GMC on the GMC payroll tax, plus any supplemental coverage for its employees to maintain previous coverage levels, we assume that the employer will re-direct some of its savings to employee wages.
    - 1. *Total amount shifted to wages:* We assume that private employers redirect 60% of savings to wages the first year, 80% the second year, and 100% each year after that.
    - 2. *Total remaining un-shifted:* This represents extra costs to wages that employers are unable to shift to due minimum and nominal wage restrictions.
    - 3. *Total withheld:* This represents savings to wages that firms choose not to shift (this is a wage stickiness assumption). We assume that employers re-direct any remaining savings to uses other than wages, for example, investing in capital equipment, paying down debt, or new hiring.
6. *Federal Employee Spending:* We assume no change in insurance coverage for federal employees. We assume no federal supplementation.

7. *Military Spending*: We assume no change in military health insurance coverage. We assume no supplementation.
8. *State/local/municipal employees*:
  - a. *Coverage for active workers*: We assume all public employees move to GMC
  - b. *Supplemental coverage*: This category includes active employees and retirees; samples are too small to split them out. We make the same assumptions regarding public employer supplementation of GMC as we made for private employer supplementation in paragraph 5.a.
  - c. *Employer savings re-directed to employee wages*: We assume that state, local and municipal employers savings after paying the GMC payroll tax and any supplemental coverage as follows. State, local and municipal employers redirect 50% of savings to wages in the first year, 60% in the second year, 80% in the third year, 90% in the fourth year, and 100% in all remaining years.

B. Data Sources: Private coverage and spending projections were based on data reported by Vermont health insurers for this project.

## GMC Enrollment & Spending

GMC spending per member per month by category of enrollee was calculated by actuaries at Wakely Consulting Group. (See methodology in Appendix D.) This includes:

1. GMC spending, and enrollment on GMC, for each type of employer
2. GMC spending for Medicaid primary
3. We are assuming no GMC effect on Medicare
4. GMC spending for individuals not in the labor force

GMC enrollment and spending was modeled based on the behavior of synthetic firms and individuals created for this model.

Data sources for GMC enrollment and spending include data reported by Vermont health insurers for this project, the Vermont Household Health Insurance Survey (VHHIS), the Vermont Health Care Uniform Reporting and Evaluation System (VHCURES), data provided by the Vermont Department of Labor, data provided by the Vermont Tax Department, and public program enrollment and spending reports.

## State and Local Budget Implications

We looked at state and local budget implications by breaking down GMC spending across categories and adding in state spending on Medicaid & GMC supplementation of Medicare.

This shows revenues to the state, under both ACA & GMC scenarios, from traditional taxes, as well as the new GMC payroll tax, the GMC individual contributions, and the dollar transfer from the federal government to cover Medicaid costs and 1332 waiver pass-through funding.

A. Key assumptions

1. *Wage effects on taxes:* As noted above, we assume that employers that experience savings under GMC will re-direct some savings to employee wages. Employees who receive higher wages will pay a portion of those wages in higher state income tax. We assume that these employees will spend some of their higher wages on goods and services, resulting in small increases to revenues from the state’s sales tax, meals tax, gas tax, etc.
2. *State spending:*
  - a. *Provider payment rates:* GMC and Medicaid spending assumes GMC pays standard payment rates to health care providers for all GMC enrollees. These standard provider payment rates are a blend of commercial and Medicaid rates.
  - b. *Medicaid fixed costs:* Medicaid spending assumes some spending will not vary with enrollment, utilization and GMC payment rates (e.g. graduate medical education costs, investment in Managed Care Organizations, Long-Term Care costs).
3. *State Revenue:*
  - a. *GMC payroll tax:* The employer payroll tax would be levied at a rate of 11.5% on all Vermont businesses on their qualifying Vermont payroll. Qualifying payroll is all payroll except wages for any individual employee in excess of \$200,000 with that amount adjusted annually for inflation.
  - b. *GMC individual contributions:* we use a percent of income contribution in the same format as the ACA. 0% of income up to 138% FPL, 2.5% of income from 138-150% FPL, 2.5% - 9.5% of income from 150-400% FPL, and 9.5% of income at 400% + FPL, capped at \$27,500.
  - c. *Federal funding for Medicaid:* Federal Financial Participation (FFP) on Medicaid expenditures assumes that Vermont’s base and CHIP Federal Matching Assistance Percentages (FMAPs) continue to decrease by 2% per year until the base FMAP reaches the federal minimum of 50.00% in 2020. The FMAP for the federal expansion population (childless adults <138% FPL) is calculated according to the ACA formula. The FMAP projections are displayed in the following table.

<b>Projections of the Federal Matching Assistance Percentage (FMAP) for Vermont Medicaid</b>			
<b>FMAP by Calendar Year</b>	<b>SCHIP: Children 237% - 312% FPL</b>	<b>Expansion population: Childless Adults &lt;138% FPL</b>	<b>Base FMAP: All other Medicaid-eligible populations, including Dual eligibles</b>
<b>2014</b>	69.93%	78.52%	57.04%
<b>2015</b>	74.95%	82.47%	56.18%
<b>2016</b>	90.18%	86.09%	53.64%

### Projections of the Federal Matching Assistance Percentage (FMAP) for Vermont Medicaid

<b>2017</b>	89.45%	86.52%	52.58%
<b>2018</b>	88.73%	89.76%	51.55%
<b>2019</b>	88.14%	93.00%	50.59%
<b>2020+</b>	88.00%	90.00%	50.00%

- d. *Federal ACA Pass-Through Funding*: uses conservative assumptions and assumes that the federal government will forward to Vermont the funds that it would otherwise provide to individuals in Advance Premium Tax Credits (APTCs) and Cost Sharing Reductions (CSRs) under the ACA, less funds it would collect from the Cadillac Tax, individual mandate, and equity assessment (large employer penalty). Federal ACA pass-through funding decreases from 2018 forward because it is offset by federal Cadillac tax revenue. The state uses a slightly less conservative assumption in its balance sheet and does not reduce the pass-through funding by the Cadillac Tax, individual mandate, and equity assessment (large employer penalty). The calculation methodology that will be used by the federal government for pass-through funding has not yet been published by the federal government and thus is uncertain.
- e. *Provider taxes*: We assume that under GMC the existing provider taxes will be repealed, including the taxes on nursing home beds and acute hospital, psychiatric hospital, ICF/MR, home health and outpatient pharmacy revenues.
- f. *Other state revenue sources*: We assume the employer assessment will be repealed and that revenue from the claims tax and premium tax will be substantially reduced under GMC.

### Federal Budget Implications

Federal spending includes the Federal Medicaid payments to Vermont, as well as spending on ACA individual and firm tax credits.

#### Key assumptions:

1. *Federal spending*:
  - a. *Federal transfer to Vermont for Medicaid primary*: Federal Financial Participation (FFP) for Medicaid Primary increases under GMC because total state Medicaid expenditures increase.
  - b. *Federal ACA Tax Credit Spending* is the same without GMC and with GMC. We assume that the federal government will pass-through funding for APTCs and CSRs on behalf of individuals who, without GMC, would have received these subsidies through the Exchange in the relevant year between 2017-2021. Under the ACA, the federal government pays these funds to individuals in the form of tax credits. Under GMC, the federal government pays the funds to the state and the state directs the funds to pay for GMC.

## 2. *Federal revenue:*

- a. *ACA revenues* (Cadillac tax, mandate & equity assessment) are the same with and without GMC. While Vermont firms and individuals would not be paying these taxes and assessment after the State receives an ACA waiver of these requirements, it is important to include the calculation in the event the federal government determines these projections must be subtracted in the pass-through calculation.
- b. *Federal income tax revenue:* Federal income tax revenue is expected to *increase* as a result of higher wages and not paying health care premiums pre-tax. Federal income tax revenue is expected to *decrease* as a result of deducting the GMC tax on Schedule A. The net result of these three effects is a small *decrease* in federal income tax revenue.
- c. *Payroll tax revenue* is expected to increase as a result of higher wages.

## Family Spending

Spending at the family level is in actual dollars (rounded to nearest \$10) and includes both earned and unearned income.

We also looked at family spending, *on average* across all families in the state. A family that spends \$0 on a particular category, for example a family that pays \$0 in property tax, is included as a \$0 in the average.

Family spending includes:

1. *Out of pocket medical expenditures:* this line does not include premium contributions
2. *Non-group:* Individual market premium spending
3. *ESI premium spending:* Employee contribution to employer sponsored insurance premium
4. *ESI supplementation to GMC:* Employee contribution to employer sponsored supplemental insurance. We assume cost-sharing between employer and employee for supplemental insurance is similar to cost-sharing for ESI premiums (e.g. 80/20).
5. *Individual contributions for GMC*
6. *Individual supplementation of GMC*
7. *Tax payments:* Federal payroll tax includes only the individual portion of payroll taxes, not the employer portion.

## Appendix D-1: Actuarial Cost Analysis and Assumptions

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This Appendix describes the assumptions and analyses provided by Wakely Consulting Group (Wakely). Wakely's key analyses include 2017 cost projections, plan designs, and additional benefit modeling. The cost projections and analyses used information from multiple sources, including but not limited to health plans, micro-simulation results and the State of Vermont. For complementary information on data sources and assumptions, see Appendix C-2 on micro-simulation assumptions.

### 2017 Cost Projections

- A. Data Sources: Many different sources of data were considered as the basis for the cost projections. The Expenditure Analysis and VHCUREs data were used as reasonability checks for the data but were not otherwise used. The data used was total cost of care (or allowed claims), including member cost sharing.
1. *Commercial*: To project the 2017 commercial costs, Wakely relied on data provided by the health plans that included 2013 premium, allowed and paid claim costs for each of the individual, small and large group markets. This data represented a large portion of the commercial market but did not include all of the large group market. Based on reasonability checks with other data sources, the Per Member Per Month (PMPM) costs appeared reasonable to use for the entire large group market.
  2. *Medicaid*: Given the significant changes in Medicaid due to the Affordable Care Act (ACA), it was preferable to use 2014 data. The State of Vermont provided all Medicaid costs for the 2015 State Fiscal Year, split but primary, secondary, and other/fixed costs (which included items such as GME, DSH, long term supports and services and administrative costs).
- B. Key assumptions relating to the projection of costs to 2017 include:
1. *Benefit changes (Commercial only)*: Under GMC, pediatric dental and vision are required to be covered benefits. Since the starting data for commercial was pre-ACA, these costs would not yet be included in the base data. An adjustment for these benefits was estimated using publicly available rate filings in Vermont, prior benefit analyses specific to Vermont, and information provided from the micro-simulation on the percent of covered lives who would receive these benefits.
  2. *Trend*: As discussed in other sections of the report, trends were developed for both the commercial and Medicaid markets. The first set of trends was to bring the base data to 2017 without GMC. These trends were developed in conjunction with Rand. The following information was used to estimate the trends (the list is not all inclusive):
    - Publicly available rate filings in Vermont
    - Emerging commercial experience in VHCUREs
    - Green Mountain Care Board hospital budgets

- Any expected SIM savings, if applicable
- Medicaid historical trends, based on data supplied by the State of Vermont
- CMS/NHE national trends

The following table shows the final allowed PMPM claim cost trends by year that were mutually agreed upon by Wakely and Rand. Given the base data was 2013 for commercial and state fiscal year 2015 for Medicaid, some of the earlier trend years were not ultimately used. Based on guidance from the State, some Medicaid “Other” costs were not trended (for example, GME payments are a fixed amount per year). Additionally, LTSS costs were trended at an annual rate of 3 percent based on information provided by the State.

Year of Trend	Medicaid	Commercial
2012-2013	3.8%	6.5%
2013-2014	4.9%	6.5%
2014-2015	1.1%	6.2%
2015-2016	2.9%	6.1%
2016-2017	3.9%	7.7%

3. *Morbidity (Commercial only):* Under GMC the covered population will be different compared to the base data. The health status difference of the population, or the morbidity change, was an output from the micro-simulation and varied based on the scenario and number of people estimated to be covered under GMC. For commercial, the two key population differences under GMC were employees who will not have coverage under GMC but are in the base data and the uninsured who will be eligible for GMC but are not in the base data. The impact of the population differences results in a significant decrease to PMPM costs, driven by the assumption that the uninsured are significantly healthier than the current population. For the commercial 94 percent actuarial value plan, including commuters and federal employees, the morbidity adjustment was estimated to be -6.4 percent based on the micro-simulation results. For Medicaid it was assumed that the uninsured who are eligible for Medicaid enrolled as part of the ACA in 2014. Thus, no additional morbidity adjustment was made for Medicaid.
  
4. *Provider Payments:* Under GMC, the state provided the assumption that provider payment rates would be based on the current Medicaid and commercial reimbursement rate, combined to alleviate any cost shift due to today’s Medicaid rates, and then trended forward to the applicable year. These payments are expected to be neutral in total due to the elimination of the cost shift, but the changes have implications on the separate commercial and Medicaid markets. The University of Massachusetts provided provider payment rates for each market by inpatient, outpatient and professional, split by providers that will be impacted by GMC and those that will not. In general, it was

assumed any provider in Vermont as well as select providers in neighboring states, would be impacted by GMC provider payment changes. Wakely also estimated the portion of commercial and Medicaid costs that would be impacted. Many costs were excluded, including but not limited to, prescription drugs, dental, and long term services and supports (Medicaid). It was also assumed that Medicare secondary covered costs under Medicaid would not be impacted. Based on the current payment rates, the percent of costs impacted, and projected membership in each market, an estimate was made to the impact of both markets on having the same, but overall neutral, provider payment rates. This results in a large increase to the overall Medicaid costs and a notable decrease to the overall commercial costs once combined within GMC.

5. *Induced Demand (Commercial only)*: Based on the current data from the health plans as well as VHCUREs, the average actuarial value (or percent of costs that are paid for through health care coverage) is around 86%. If more generous coverage is offered, it is expected that the utilization of services will increase, all else equal. Similarly, if less generous coverage is provided, utilization would be expected to decrease, all else equal. As part of the ACA, HHS released proposed induced utilization factors<sup>1</sup>. These factors were used to estimate the change in utilization based on the various actuarial values, interpolating where necessary. Since one GMC scenario is an actuarial value of 100%, an induced utilization assumption was developed for this scenario.
  6. *Actuarial Value (Commercial only)*: The actuarial value of a plan is based on the expected average claim costs covered under GMC. Various plan designs were considered with the target actuarial value used to reduce the allowed claims. For plan designs with less than a 94 percent actuarial value, a weighted average of actuarial values was completed to account for the population eligible for 94 and 87 percent cost sharing subsidies, as applicable. The distribution of the population eligible for subsidies, based on FPL, was an output of the micro-simulation and varied by scenario.
  7. *Payer Administrative Expenses*: Administrative expenses for the commercial market were assumed to be 7% under GMC. This is less than the current non-benefit expense loads in health plan premiums, resulting in some savings under GMC. For Medicaid, the current administrative costs were assumed to continue under GMC.
- C. Methodology: To arrive at the 2017 cost projections, the base data was used in conjunction with the above assumptions, all of which are multiplicative except administrative expenses. The result was a “premium equivalent” for both commercial and Medicaid under GMC. These premium equivalents were incorporated into the micro-simulation. If the output using the premium equivalents changed the above assumptions (e.g. morbidity), the process was re-iterated to achieve a steady state.

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<sup>1</sup> <https://www.federalregister.gov/articles/2013/03/11/2013-04902/patient-protection-and-affordable-care-act-hhs-notice-of-benefit-and-payment-parameters-for-2014#h-42>



D. Results: The following tables show the premium equivalents developed for both commercial and Medicaid using the above data, assumptions and methodology. The “Other Costs” are shown in total dollars since these costs are mostly unaffected by enrollment changes. The other values are PMPM amounts.

Commercial	
<b>2013 Allowed PMPM</b>	\$419.07
Benefit Change Factor	1.012
Trend Factor (4 years of Trend)	1.292
Morbidity	0.936
Provider Payment Change	0.880
Induced Demand	1.056
<b>2017 GMC Allowed PMPM</b>	\$476.60
Actuarial Value	0.935
<b>2017 GMC Paid PMPM</b>	\$445.62
Administrative Load	7%
<b>2017 GMC Premium Equivalent</b>	\$479.16

	Medicaid		
	Primary	Secondary	Other Costs
<b>SFY15 Allowed PMPM</b>	\$466.99	\$545.13	\$648,418,583
<b>Benefit Change Factor</b>	1.000	1.000	1.000
<b>Trend Factor (2.5 years of Trend)</b>	1.075	1.075	1.049
<b>Morbidity</b>	1.000	1.000	1.000
<b>Provider Payment Change</b>	1.338	1.000	1.000
<b>Induced Demand</b>	1.000	1.000	1.000
<b>2017 GMC Allowed PMPM</b>	\$671.76	\$586.01	\$679,979,377
<b>Actuarial Value</b>	1.000	1.000	1.000
<b>2017 GMC Paid PMPM</b>	\$671.76	\$586.01	\$679,979,377
<b>Administrative Load</b>	Included in Other Costs		
<b>2017 GMC Premium Equivalent</b>	\$671.76	\$586.01	\$679,979,377

## Plan Designs

As part of GMC, several plan design options were considered at various actuarial value levels. These plan designs are described and provided in Appendix B and incorporate three actuarial value levels: 80, 87, and 94 percent. The development of these plan designs was based on the following process.

### A. Gather input:

1. *Current Plan Designs* for key plans, such as state employee plan, VEHI plans, and Catamount Health were provided as the starting point for plans at the 94 and 87 percent actuarial value levels.
2. *Input* from the State of Vermont, consultants and other key stakeholders were provided that shaped some of the plan design options. This input was iterative as Wakely developed and refined various plan options.

### B. Development of plan designs:

1. *The Truven Health Benefit Modeler*, developed in conjunction with Wakely, was used to develop the plan designs that would meet the target actuarial value levels. Underlying the modeler is detailed claim and enrollment data for over 42 million commercially-insured lives. Since allowed costs can have a significant impact on the actuarial value of a plan, the model was first normalized to the estimated 2017 allowed costs, which varied depending on the targeted actuarial value of the plan, largely due to induced demand but also because of differences such as morbidity. Once the model was normalized for the estimated 2017 allowed costs, the cost sharing was adjusted until the targeted actuarial value was achieved. While the model has many cost sharing inputs for various service categories, only a subset have a significant impact on the resulting actuarial value.
2. *The Federal Actuarial Value Calculator (AVC)* was used as a check of the Truven Health Benefit Modeler. This was only a high level reasonability check and the Federal AVC is expected to be less precise for several reasons. First the model is not normalized to 2017 GMC estimated allowed costs. Second, the model has less inputs which results in less precision. Lastly, the primary goal of the Federal AVC is to bucket similarly generous plans rather than be an accurate pricing tool. However, since it is critical that the plan design be reasonably accurate and pricing models will all produce different results, the Federal AVC was used to ensure the reasonability of the plan design results. In order to produce the most relevant comparison, the Draft 2016 AVC was used. Additionally, the metal level chosen in the AVC was based on the allowed costs in the Federal AVC continuance table compared to the GMC plan rather than matching the metal tier to the approximate actuarial value of the GMC plan.

3. *The 80 percent high deductible health plan* required additional modeling. This plan design has two separate deductibles, one that applies to inpatient services and another that applies to all other categories of services (the deductibles do not apply to preventive services). Neither the Truven Health Benefit Modeler nor the Federal AVC can accommodate this plan design. To approximate the actuarial value and resulting cost sharing levels for this plan, Wakely developed a combined deductible that would be similar in actuarial value to the two separate deductibles. However, this is a less precise method and the cost sharing for this plan should be considered illustrative only. If this plan is considered in the future, Wakely recommends using separate inpatient and “all other” continuance tables to model this plan design. Another alternative would be to use a claim re-adjudication process on the VHCUREs commercial data to more accurately reflect the actuarial value of this plan design. In both cases, the underlying data would need to be adjusted to reflect the expected GMC population and expected costs.

In addition to the cost sharing, the 80 percent high deductible plans also included an account feature for the subsidy eligible population. The subsidies were more generous than the current federal ACA cost sharing subsidies with additional, higher FPLs receiving some subsidies. Wakely used the Federal AVC to estimate the impact of these accounts. No rollover of accounts was assumed although the State may consider partial rollovers in the future, particularly to encourage certain behaviors, such as receiving annual preventive care. A few federal AVC results for the accounts were not intuitive. If this plan is considered in the future, the impact of these accounts should be re-evaluated using the same proposed methods to evaluate the actuarial value and cost sharing of the plans (separate continuance tables or claim re-adjudication).

4. *Results* are based on the various scenarios and assumptions used to produce the allowed cost estimates. To the extent any of these assumptions are updated or allowed costs are refined, the plan designs would need to be updated as well. Additionally and as noted, neither the Truven Benefit Modeler nor the Federal AVC could accommodate the cost sharing structure for some of the plans (particularly select 80 percent plans). These plan designs would require further refinement and scrutiny should there be future interest in these plan options.

## Additional Benefit Modeling

As required under Act 48, the estimated cost of covering hearing, adult dental, adult vision and long term care were calculated. The following is a high level summary of the assumptions that went into each of these cost estimates. The cost estimates are shown in Appendix B-1. Wakely also estimated the impact of Medicare secondary coverage where the commercial MOOP was applied to the Medicare fee for service benefits.

- A. Hearing: Vermont’s current Essential Health Benefits (EHB) do not cover annual hearing exams or hearing aids so would not automatically be covered services under GMC. Medicaid currently covers this benefit.

1. *Data*: VHCUREs data was used as a basis for the cost projections. It was assumed that if an individual had a hearing aid covered that their entire employer group

had hearing coverage. Using this methodology, data for only those assumed to cover hearing benefits were used as the base data. Both utilization and cost per service or device were calculated for these members.

2. *Assumptions:*

- i. Trend: The trends used for medical costs (and listed in the above table) from 2012 to 2017 were also used for hearing.
- ii. Benefits and Cost Sharing: The benefits were set to closely align with the Medicaid benefits. One annual exam per year is covered with a \$20 copay and hearing aids were covered with no member cost sharing every three years. If the State of Vermont decides in the future to pursue a deductible plan, the cost sharing should be reviewed to ensure it is appropriate considering the medical coverage.
- iii. Administrative Expenses: An assumption of 7% was used which is likely reasonable since this benefit would be incorporated into the medical coverage.
- iv. Enrollment: The scenario used in the cost estimation excluded commuters and federal employees as well as wrap coverage for employees who remain on employer sponsored coverage. If the hearing benefit is considered in the future the cost estimates should be updated to reflect the current enrollment estimates.

B. Adult Vision: Vermont's current Essential Health Benefits do not cover annual vision exams or hardware except for pediatric coverage and would therefore not be automatically covered for adults under GMC. Medicaid currently covers an exam but does not cover hardware.

1. *Data*: VHCUREs data was used as a basis for the cost projections. It was assumed that if an individual had vision hardware covered that their entire employer group had vision coverage. Using this methodology, data for only those assumed to cover vision benefits were used as the base data. Both utilization and cost per service were calculated for these members although the utilization results did not appear reasonable. The Federal vision premiums were also used to check for reasonability of the resulting cost estimates.

2. *Assumptions:*


- i. Trend: The trends used were 3 percent annual. This considers that vision typically trends lower and also that the benefit maximum would limit the impact of trend unless adjusted for inflation.
- ii. Benefits and Cost Sharing: The benefits were set to closely align with the Federal vision benefits, since these benefits are the basis for the pediatric vision benefits under Vermont's EHB. One annual exam and hardware per year are covered (frames and contacts have annual benefits maximums although the pediatric benefit does not). Since Medicaid already covers

an exam, only the cost of hardware is included as an additional cost under GMC.

- iii. Administrative Expenses: An assumption of 7% was used to match the commercial medical assumption but this is likely aggressive since this benefit historically has administrative costs that are a higher percent of overall costs.
- iv. Enrollment: The scenario used in the cost estimation excluded commuters and federal employees as well as wrap coverage for employees who remain on employer sponsored coverage. If the adult vision benefit is considered in the future the cost estimates should be updated to reflect the current enrollment estimates.
- v. Percent of Adults: The percent of GMC enrollees that this benefit would apply based on age was an output of the micro-simulation. Adults are expected to be approximately 84% of the commercial population and 58% of the Medicaid population.

C. Adult Dental: Vermont's current Essential Health Benefits do not cover dental except for pediatric coverage and would therefore not be automatically covered for adults under GMC. Medicaid currently covers dental up to an annual maximum of \$510.

1. *Data*: The primary source of dental data was 2010-2012 Vermont specific data from Truven's MarketScan Dental Data, including data only for those aged 19 and older. Given most current dental benefits include annual benefit maximums, dental data is typically missing claims once the member reaches the maximum. As a result, dental data needs to be used with caution. As a result, we also used several other sources of data or premiums to check for reasonability. These include the State employee dental premiums, Delta Dental rate filings and Delta Dental adult only Vermont Health Connect premiums.
2. *Assumptions*:
  - i. Trend: The trends used were 6% annual. Dental trends have been lower recently but given the longer trending period, a more conservative trend assumption was used.
  - ii. Benefits and Cost Sharing: Cost estimates were calculated for three different benefit and cost sharing scenarios. These are shown in Appendix B-1.
  - iii. An adjustment was made to estimate the impact of missing claims due to current plans having an annual benefit maximum. This adjustment was made primarily to Restorative and Major services since these services are most likely to be impacted by the benefit maximum.
  - iv. Administrative Expenses: An assumption of 7% was used to match the commercial medical assumption but this is likely aggressive since this benefit historically has administrative costs that are a higher percent of overall costs.

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- v. **Enrollment:** The scenario used in the cost estimation excluded commuters and federal employees as well as wrap coverage for employees who remain on employer sponsored coverage. If the adult dental benefit is considered in the future the cost estimates should be updated to reflect the current enrollment estimates.
  - vi. **Percent of Adults:** The percent of GMC enrollees that this benefit would apply based on age was an output of the micro-simulation. Adults are expected to be approximately 84% of the commercial population and 58% of the Medicaid population.
3. **Results:** Based on our analysis and the various data points reviewed, if adult dental is considered under GMC, refining these estimates and underlying data is critical to more accurately estimating the cost of adult dental. There is also likely to be increased utilization in the early years of coverage as those without prior coverage have pent up demand.
- D. **Long Term Services and Supports:** Currently, Long Term Services and Supports (LTSS) is provided to the Vermont Medicaid population. A cost estimate was developed assuming full LTSS coverage would be extended to the non-Medicaid population in 2017.
1. **Data:** The cost estimate was based on the 2012 Vermont Health Care Expenditure data. The 2012 non-Medicaid and non-Medicare covered costs associated with home health and nursing home care were used as a starting point for the projection.
  2. **Assumptions:**
    - i. **Trend:** Costs were trended from 2012 to 2017 based on the historical LTSS 2009-2012 trend, adjusted for enrollment increases, from the Expenditure Analysis. An additional trend adjustment was made to account for the aging population in Vermont. The total average trend used varied from 4.0 to 5.0 percent annually.
    - ii. **Induced Demand:** Based on several LTSS studies, a significant amount of LTSS is either provided by unpaid caregivers or the need goes unmet. Cost estimates for the unpaid cost ranges vary significantly. The studies we reviewed included the following:
      - A November 2010 study produced by UMass Medical School's Center for Health Law and Economics and Office of Long-Term Support Studies on behalf of the Massachusetts Long-Term Care Financing Advisory Committee. This study indicated that \$8.6 billion was paid for LTSS costs in Massachusetts and that an additional \$9.6 billion in cost was either unpaid or came from needs that went unmet. Applying this additional cost to the

relative non-Medicaid and non-Medicare costs results in an induced utilization factor of about 5.0.<sup>2</sup>

- An AARP study titled “Valuing the Invaluable: 2011 Update” estimated that in 2009, \$203 billion was paid for LTSS costs nationally and an additional \$405 billion was provided by unpaid care givers. Applying this additional cost to the relative non-Medicaid and non-Medicare costs results in an induced utilization factor of about 8.0.<sup>3</sup>

- An additional AARP study from September 2011 indicated that in 2004, 72% of older people living in the community received assistance exclusively from unpaid caregivers. This study further supports the above indication that the cost of unpaid care-giving is about two to three times the amount of total paid caregiving.<sup>4</sup>

- iii. Cost Sharing: The analysis assumes there would be no cost sharing by the member. Costs would be significantly reduced if there were cost sharing. Additionally, implementing a waiting period of 30 to 90 days could reduce the total cost estimate by 10% to 20%.

E. Medicare Secondary Coverage: Medicare remains primary after implementation of GMC. GMC could provide secondary coverage for those with Medicare as their primary insurance. When considering the 80% AV plan, which included an income sensitive out of pocket maximum, an analysis was done of applying these maximums as secondary coverage for those on Medicare. The results of this analysis are in Appendix B-10.

1. *Data:* CMS 2012 Limited Data Set (LDS) was used as the base data for the analysis. Vermont specific data, including both dual and non-dual members, was used. Allowed PMPMs and continuance tables were developed using this data. Only Part A and B data was included. Part D (prescription drug) was not included as part of the analysis since secondary coverage with the drug benefit would be complicated.

2. *Assumptions:*

- i. Trend: The allowed costs were trended at an average of 2.9 percent annually from 2012 to 2017 based on projected Medicare fee for service costs.
- ii. Cost Sharing: The secondary coverage would apply only to Medicare fee for service (FFS) members since the Medicare Advantage population already incorporates a MOOP. The FFS cost sharing was applied to the


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<sup>2</sup> <http://www.mass.gov/eohhs/docs/eohhs/ltc/ma-ltcf-full.pdf>

<sup>3</sup> <http://assets.aarp.org/rgcenter/ppi/ltc/i51-caregiving.pdf>

<sup>4</sup>

[http://www.longtermscorecard.org/~media/Microsite/Files/Reinhard\\_raising\\_expectations\\_LTSS\\_scorecard\\_REP\\_ORF\\_WEB\\_v5.pdf](http://www.longtermscorecard.org/~media/Microsite/Files/Reinhard_raising_expectations_LTSS_scorecard_REP_ORF_WEB_v5.pdf)



2017 estimated data, with a resulting 85 percent actuarial value for Parts A and B (the actuarial value varies by duals and non-duals).

3. *Results:* The impact to the actuarial value was estimated for each of the plan designs considered for the current commercial market under GMC. Wakely's Medicare bid model was used with the data and assumptions above for each MOOP amount. Given the higher expected costs of Medicare beneficiaries, the resulting actuarial value increases significantly for the lower MOOP levels. There is a more modest increase in actuarial value for MOOPs that align with the maximum allowable under the ACA for the commercial market.

### Reliances and Caveats

1. Wakely relied on data and projections that were provided by the health plans, the State, Rand and Jonathan Gruber. We performed reasonability checks, but did not audit the data we received. If the underlying data or information is inaccurate or incomplete, the results of our analysis may need to be modified accordingly.
2. It is impossible to project costs several years into the future with accuracy, and it is particularly difficult to project the effects of untested reforms. We made assumptions and estimates in order to develop these projections. To the extent that actual results differ from these assumptions, our results could be materially affected.
3. This document is intended for use by the State of Vermont for discussion purposes only. The report may not be appropriate for other purposes. Wakely does not intend to benefit and assumes no duty or liability to other parties who receive this work. The report should only be reviewed in its entirety and then only by qualified individuals.



Michael Costa  
Deputy Director of Health Care Reform - Finance  
Agency of Administration  
State of Vermont

December 26, 2014

**Subject: Risk Mitigation for Green Mountain Care**

Dear Michael,

Wakely was retained by the State of Vermont (State) to develop considerations in two specific approaches towards risk mitigation for Green Mountain Care (GMC): reinsurance with specific stop loss and reserve for adverse deviation of claim costs. We do not recommend the State purchase stop loss reinsurance given the anticipated size of GMC. We also estimated that an insurance company with the size and risk characteristics similar to those of GMC would need to hold between 4.4% and 13.0% of annual claims.

**Specific Stop Loss to Mitigate High Cost Claimants**

Specific stop loss insurance is typically purchased from reinsurers and protects a self-funded employer group or insurer from the financial impact of high cost individuals. It does not provide much protection against overall adverse experience. The cost of specific stop loss insurance is typically high relative to the coverage afforded. On average, reinsurers expect to pay out about 60% of the premiums they collect for the coverage meaning the cost of the coverage is approximately 40% of the premiums. Self-funded employers with a couple of hundred to thousands of covered employees typically purchase reinsurance to protect against catastrophic costs for a single individual or multiple high cost claimants in a given year – outside of what would be expected based on historic experience. For these employers, a single million dollar claim could represent a large proportion of their overall medical expenditures and cash reserves. For Green Mountain Care, with roughly \$3.6 billion in estimated annual claim costs (excludes long term support and services and other Medicaid fixed costs), individual large claims are very unlikely to materially affect overall expenditures. In addition, such a large block of business is very stable and past experience is credible for predicting future large claims incidence. The most significant risk to the financial health of a large cohort like the proposed Vermont system include inappropriate provider contracts, mispricing, pandemic type events and fraud. While the impact of some of these may be partially mitigated by the presence of stop loss insurance, it is an inefficient and expensive way of addressing these risks.

**Capital to Support GMC Program**

GMC is considering retaining capital for purposes of addressing potential adverse deviations in medical expenditures and tax revenue underlying a potential change to a state run healthcare program. One approach to considering appropriate capital levels to address such adverse deviations is the NAIC's Risk-Based Capital (RBC) formula.

From [http://www.naic.org/cipr\\_topics/topic\\_risk\\_based\\_capital.htm](http://www.naic.org/cipr_topics/topic_risk_based_capital.htm):

*Risk-Based Capital (RBC) is a method of measuring the minimum amount of capital appropriate for a reporting entity to support its overall business operations in consideration of its size and risk profile. RBC limits the amount of risk a company can take. It requires a company with a higher amount of risk to hold a higher amount of capital. Capital provides a cushion to a company against insolvency. RBC is intended to be a minimum regulatory capital standard called the Authorized Control Level (ACL) and not necessarily the full amount of capital that an insurer would want to hold to meet its safety and competitive objectives. In addition, RBC is not designed to be used as*

*a stand-alone tool in determining financial solvency of an insurance company; rather it is one of the tools that give regulators legal authority to take control of an insurance company if reserves fall below the ACL.*

Insurance companies must hold at least 200% of the ACL to avoid any actions and typically hold 250% to 350%. Therefore, an insurance company with the size and characteristics of the Vermont system would have to hold somewhere between 4.4% and 13% of annual claims to meet typical insurance company RBC targets under the assumptions modeled.

**We would recommend that a full Enterprise Risk Management (ERM) analysis be performed as key options for funding, provider payment, benefits and administration are selected and refined. This type of analysis may consider RBC fundamentals rather than applying the NAIC's formula from the RBC Calculator.**

Wakely used the NAIC's 2014 RBC model and entered key values into the model. The inputs included "premium equivalents" and claims for enrollees currently in commercial and Medicaid lines. Medicare members were not considered in this analysis. The claims and premiums were developed in a separate analysis and any assumptions/limitations described in that analysis apply but may not be described here.

We assumed that GMC would offer coverage at the 94% actuarial value to all members. The scenario incorporates the higher enrollment estimate, including but not limited to coverage for commuters and federal employees.

We did not consider that many government programs operate on a "pay as you go" basis. This means that liabilities are not considered when determining if there is sufficient cash to cover operations. We assume funding would take place in advance of claims being incurred each month and that payments to providers would follow typical insurance company payment patterns, meaning there would be approximately one to three months' worth of incurred claims in cash available over and above any capital retained to address adverse experience. Our RBC modeling estimates RBC levels required over and above this cash, on the assumption that this cash could not or should not be used to address adverse deviations.

We assumed some portion of the claims are capitated to reflect the fact that the Green Mountain Care Board sets hospital budgets and that Vermont is moving away from fee for service toward capitation. For RBC calculations, hospital budgets may effectively be modeled as capitations. Under a scenario of all providers being paid under capitated arrangements, we estimate the ACL of the program at approximately 2.2% of annual incurred claims (approximately \$81M assuming \$3.6B in annual incurred claims). Under a scenario of 30% of provider payments being capitated and 70% being contractual arrangements or fee for service, we estimate the Authorized Control Level at approximately 3.8% of annual incurred claims (approximately \$136M).

The RBC formula was not developed to specifically inform state capital levels under a system such as that being considered in Vermont. However, it does provide one useful, industry-accepted construct for considering capital levels to support insurance operations.

The RBC formula was not set up to handle certain unique characteristics of potential state run health programs, including the following proposed, high level mechanisms:

1. Premiums are actually comprised of tax revenue and amounts paid by covered state residents.
2. Provider reimbursement rates in Vermont are partially set using state budgeting mechanisms.
3. Provider reimbursement rates can be adjusted prospectively if tax revenues are insufficient.

Many details were not available nor could be reflected in the model, including but not limited to covered and excluded populations, taxing mechanisms and timing, the political environment, economic environment, required administrative functions and costs, specific provider contracting levels and mechanisms, and medical management programs.

A state run healthcare insurance system, with unilateral taxing and provider contracting authority is a very different entity than the typical health insurance company. Therefore, the modeling discussed above should be considered only as one viewpoint related to this question, rather than the only viewpoint. In addition, emerging details up for debate may materially affect estimates produced as part of this modeling.

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## Caveats

Wakely relied on data and projections that were developed jointly by Wakely, the State, and Jonathan Gruber. We performed reasonability checks, but did not audit the data we received from non-Wakely entities. If the underlying data or information is inaccurate or incomplete, the results of our analysis may need to be modified accordingly.

It is impossible to project costs and capital needs several years into the future with accuracy, and it is particularly difficult to project the effects of untested reforms. We made assumptions and estimates in order to develop these projections. To the extent that actual results differ from these assumptions, our results could be materially affected.

This document is intended for use by the State of Vermont for discussion purposes only. The report may not be appropriate for other purposes. Wakely does not intend to benefit and assumes no duty or liability to other parties who receive this work. The report should only be reviewed in its entirety and then only by qualified individuals.

Guidelines issued by the American Academy of Actuaries require actuaries to include their professional qualifications in all actuarial communications. I am a member of the American Academy of Actuaries, and meet the qualification standards for performing the analyses in this report.



Julie Peper, FSA, MAAA  
Director and Senior Consulting Actuary  
Wakely Consulting Group

  
Electronic Signature

Karan Rustagi, ASA, MAAA  
Consulting Actuary  
Wakely Consulting Group



## Appendix E-1: All-Payer Health Care Payment System Background

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The purpose of this concept paper is to describe the general approach Vermont is proposing for all-payer health care payment reform. This paper can serve as a starting point for discussion among internal and external stakeholders, including the federal Centers for Medicare and Medicaid Services (CMS), about the proposed approach.

Vermont is developing a payment reform strategy that is consistent with federal policy and builds on the public/private partnership that has been established in the state. Our proposed approach allows for appropriate provider autonomy and consumer protection under the umbrella of a transparent, effective regulatory system.

Vermont has undertaken a multi-year effort to implement universal, comprehensive health care coverage for all of the state's residents that is equitably financed and made affordable well into the future. The state plans to seek a federal all-payer waiver that would permit Medicare and Medicaid participation in payment and delivery system reforms that are central to the plan. These reforms build on the innovative models supported by CMS and on the progress made within Vermont to implement those models. Specific Vermont achievements in payment and delivery system reform, made with CMS support, include:

- Vermont has used its long-standing section 1115 waivers (the Global Commitment and Choices for Care) to fund Medicaid managed care investments and to shift services away from institutional care to community-based services;
- More than 80 percent of Vermonters are served by an Advanced Primary Care Medical Home that is part of the MACPAC all-payer demonstration;
- The vast majority of Vermont providers, including all of our hospitals and New Hampshire-based Dartmouth Hitchcock Medical Center (DHMC, a major provider of health care to Vermonters) are in one of three Vermont ACOs participating in the Medicare Shared Savings Program;
- DHMC also is in the Pioneer ACO program for New Hampshire;
- The majority of Vermont's federally-qualified health centers have formed a primary care-based ACO;
- Vermont received a State Innovation Model (SIM) grant, which has supported expansion of the shared savings program to Medicaid and commercial insurers. Three of our ACOs are participating in the commercial ACO program, while two are participating in the Medicaid program;
- The SIM grant also is supporting development of all-payer bundled payments and full build-out of Vermont's health information exchange infrastructure.

Building on this active participation in CMS initiatives, and CMS support of Vermont's innovation efforts, Vermont is proposing a statewide, all-payer system of provider payment. Governor Shumlin has proposed covering the bulk of Vermonters through one payer under a system of public financing. We believe this proposal could work



equally well with that model or with our existing, limited multi-payer private insurance market (two carriers do business in Vermont's merged individual and small group market and only three sell in the large group market).


Vermont's proposal has two strengths, in addition to the strong foundation described above:

1. An explicit commitment from the Governor, backed by Vermont law passed in 2011, to constrain health care cost growth to a level that is affordable, relative to the state's overall economic growth, and to move away from volume-based provider payment;
2. A mature regulatory system under the authority of the Green Mountain Care Board (GMCB). The GMCB was created in 2011 as an independent, full-time, professional board that reviews and approves health insurer rates, annual hospital budgets and major capital expenditures by health care providers.
  - The GMCB also is the overseer of payments to ACOs and other key aspects of the commercial and Medicaid shared savings programs, including calculation of shared savings, risk adjustment, risk corridors and quality measurement.
  - The GMCB has broad (as yet unused) statutory authority to implement broader provider rate-setting, beyond the hospital sector.
  - The GMCB set a limit of 3 percent growth in hospital budgets for current year. Actual budgets approved by the board are slated to grow at 2.7 percent, year-over-year. These budgets include not only expenditures for hospital services, but also the majority of physician payments, as a high and growing percentage of physicians in the state are employed by hospitals.
  - In setting the limit on hospital budget growth, the board looked to indicators of economic growth in the state and made clear that their goal was to link health care cost growth and economic growth over the long term.

Building on these strengths, Vermont proposes a system of health care provider payment oversight with three central elements:

1. Continued regulatory oversight of the parameters of ACO/payer relationships, including payment levels, rates of increase in payment year-to-year and quality measurement;
2. Oversight of insurer payments to non-ACO providers, and a requirement for a fair, transparent and standardized fee schedule for those providers;
3. Continued oversight of health insurance premiums and premium growth.

The state is currently assessing the interface between these regulatory schemes and regulation of hospital budgets (which has existed since the 1980s), and the extent to which the hospital budget review process is necessary, and/or whether it should be redesigned, under a fully-developed system of broader provider payment regulation.



With these three elements in place (at a minimum), Vermont would propose that we commit to:

- Control of the rate of growth in total health care costs at a rate that is consistent with growth in the economy;
- Deliberate movement further away from fee-for-service provider payment by transitioning ACO payments from shared savings to a model involving two sided risk and increased provider accountability for total costs and quality;
- Obtaining a commitment from all commercial payers in the individual and small group market, plus Medicaid, to participate in the models of payment to both ACOs and non-ACO providers;
- Adoption by the GMCB of parameters for all-payer payments to ACOs;
- Adoption by the GMCB of rules for all-payer payments to providers outside of ACOs;
- Continued payments by Medicaid and commercial payers to Blueprint Advanced Primary Care Medical Homes and Community Health Teams.

We would be asking CMS for:

- Approval for Medicare participation in the Vermont provider payment model – for both ACO payments and non-ACO payments;
- Necessary approval from CMS for Medicaid participation in this model;
- Continued participation in payments to Advanced Primary Care Medical Homes and Community Health Teams.

Medicare participation in this model is critical, as will make our policies universal, consistent and substantially more efficient and effective. This approach has the potential to reduce administrative costs for payers, providers and government and maximize positive delivery system change through consistent payment rules and monitoring. The end result will be lower costs for all payers.

Further details of the ACO and non-ACO provider payment models will be developed by GMCB board members, staff and contractors over the next 12 months, with input from the Governor's Office, key stakeholders, the Agency of Human Services and the Department of Vermont Health Access. Elements of the proposal that require further development include:

- The specific methodology for the ACO payment system;
- The specific methodology for the non-ACO payment system;
- Whether and how to incorporate in payment models services beyond the normal scope of ACOs, including long term services and supports;
- The extent to which per capita payments or payment levels for specific services from payers to providers will vary across payers;
- The extent to which, across all payers, per capita payments or payment levels for specific services will vary by provider;
- The specific levels of the limits to be applied to health care cost growth;
- The specific methodology for attributing Vermont’s population to providers;
- Membership rules and roles for participating providers;
- Appropriate consumer protections in a statewide, all-payer system of health care cost and quality regulation.

Vermont is a relatively low-cost state for the Medicare program, but per-capita Medicare growth rates exceeded the national average in recent years (see data below). We believe this program would offer CMS a compelling example of how a low-cost, rural state, through a deliberate commitment to low rates of cost growth, could reduce expected Medicare expenditures, reduce pressure on Medicaid and private premiums and improve outcomes for all residents of the state.

VT total (all payers) per capita health care costs, 2009	\$7,635 (above national average)
VT total rate of growth 1991–2009	6.7% (above national average)
National per capita all payers, 2009	\$6,815
National all-payer trend, 1991–2009	5.3%
VT Medicare per capita	\$8,719 (below national average)
VT Medicare rate of growth 1991–2009	6.8% (above national average)
National Medicare per capita, 2009	\$10,365
National Medicare rate of growth, 1991–2009	6.3%

## Appendix E-2: Affordable Care Act Waiver Background

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Before Vermont can fully implement Green Mountain Care, it needs the federal government to waive certain parts of the Affordable Care Act. The Affordable Care Act is a federal law that requires states to have Health Benefit Exchanges offering health insurance plans<sup>1</sup> and administering federal subsidies to individuals to make the plans more affordable.<sup>2</sup> Individuals pay a penalty if they do not have health care coverage.<sup>3</sup> Large employers pay a penalty if they do not offer affordable and adequate health care coverage.<sup>4</sup> Starting in 2017, the federal government can waive a state's obligation to any or all of the above provisions and allow the state to implement its own innovative health care coverage programs as long as its program maintains the following parameters:

- Coverage of the same amount or more people than under the ACA<sup>5</sup>
  - Green Mountain Care will cover more people than the ACA because it will cover all Vermont residents.
- Coverage that is as comprehensive or more comprehensive than coverage under the ACA<sup>6</sup>
  - Green Mountain Care will offer the same covered services as ACA plans.
- Coverage that is as affordable or more affordable than coverage under the ACA<sup>7</sup>
  - At a minimum, Green Mountain Care will apply the ACA's premium tax credit and cost-sharing reduction sliding scale to a gold-level plan.
- A health care system that is deficit neutral for the federal government<sup>8</sup>
  - Green Mountain Care will maintain reciprocal deficit neutrality for the federal government and the State of Vermont.

### **To reach universal coverage, Vermont would request waivers of the Health Benefits Exchange, the individual mandate, and the large employer penalty through Section 1332 of the Affordable Care Act.**

The ACA expanded health care coverage, but was never designed to provide universal coverage. Green Mountain Care will achieve universal coverage by having residency as its only eligibility requirement and eliminating barriers such as premium due dates and enrollment deadlines. In order to achieve this, Vermont would request a waiver from the Affordable Care Act's requirements around:

- Health Benefits Exchange
- Individual mandate
- Large employer penalty

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<sup>1</sup> ACA, Subtitle D, Parts I & II.

<sup>2</sup> I.R.C. § 36B.

<sup>3</sup> I.R.C. § 5000A.

<sup>4</sup> I.R.C. § 4980.

<sup>5</sup> ACA, Section 1332(b)(1)(C); 42 U.S.C. 18052(b)(1)(C).

<sup>6</sup> ACA, Section 1332(b)(1)(A); 42 U.S.C. 18052(b)(1)(A).

<sup>7</sup> ACA, Section 1332(b)(1)(B); 42 U.S.C. 18052(b)(1)(B).

<sup>8</sup> ACA, Section 1332(b)(1)(D); 42 U.S.C. 18052(b)(1)(D).



### *Waiver of Health Benefits Exchange*

The Affordable Care Act requires each state to have at least one Health Benefit Exchange through which individuals and small businesses can purchase qualified health plans from insurance companies or can access public coverage through Medicaid. Vermont, in compliance with the Affordable Care Act, started operating its Health Benefits Exchange, called Vermont Health Connect, on October 1, 2014. Vermont, like all other state-based exchanges, has had operational challenges in its start-up phase, but continues to work towards full and better operations for both individuals and small businesses.

Although Vermont's Health Benefit Exchange, once fully operational, will afford greater access to health care coverage and financial help to make coverage more affordable, it does not prevent loss of coverage. In a 2012 statewide survey, Vermonters most commonly cited the following reasons for losing coverage: affordability, job loss, waiting periods for coverage, eligibility issues, and problems with paperwork or late payments.<sup>9</sup> Many of these barriers continue to exist for Vermonters despite implementation of a Health Benefits Exchange. In order to provide coverage to all Vermonters, Vermont must move away from a complicated system of insurance-based health care and public coverage to a system based solely on residency. Accordingly, Vermont would ask CCIIO to waive the Affordable Care Act's requirement to have a state or federal Health Benefit Exchange.<sup>10</sup>

### *Waiver of Large Employer Penalty*

The Affordable Care Act furthers the traditional employer-sponsored health insurance model by instituting a penalty on large employers who do not offer health care coverage or who offer health care coverage that is unaffordable or inadequate. In Vermont, the traditional employer-based health insurance model has not led to universal coverage, with job loss being the most cited reason for loss of coverage.<sup>11</sup> Although health insurance is available under the Health Benefit Exchange, individuals may experience gaps in coverage due to a misalignment of the qualified health plan start date or failure to sign up within the special enrollment period. As a result, the current employer-based health insurance model will not lead to universal coverage in Vermont.

By basing eligibility for Green Mountain Care solely on residency rather than the complicated mix of eligibility criteria based on income and employment, Vermont would ensure that its entire population receives continuous coverage. Because all Vermont residents would have Green Mountain Care, an employer penalty will be superfluous. Accordingly, Vermont would request that the Affordable Care Act's large employer penalty be waived.

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<sup>9</sup> Vermont Department of Financial Regulation Insurance Division, 2012 Vermont Household Health Insurance Survey, Pg. 77, [http://www.dfr.vermont.gov/sites/default/files/VHHIS\\_2012\\_Final\\_Report.pdf](http://www.dfr.vermont.gov/sites/default/files/VHHIS_2012_Final_Report.pdf).

<sup>10</sup> Parts I & II of subtitle D in Title I of the Affordable Care Act.

<sup>11</sup> Vermont Department of Financial Regulation Insurance Division, 2012 Vermont Household Health Insurance Survey, Pg. 77, [http://www.dfr.vermont.gov/sites/default/files/VHHIS\\_2012\\_Final\\_Report.pdf](http://www.dfr.vermont.gov/sites/default/files/VHHIS_2012_Final_Report.pdf).

### *Waiver of Individual Mandate*

As with the large employer penalty provision, Vermont would also request that the individual mandate be waived. All residents of Vermont would have Green Mountain Care, so all residents of Vermont will meet the Affordable Care Act's requirement of minimum essential coverage, making the individual penalty unnecessary.

The Health Benefits Exchange, large employer penalty, and individual mandate requirements under the Affordable Care Act bind individuals and small businesses to insurance-based coverage. Waiving these provisions would provide Vermont with the flexibility to achieve universal health care coverage through providing Green Mountain Care to all residents.

### **To achieve comprehensive coverage, Vermont would request a waiver of the qualified health insurance plan.**

Vermont would ask CCIIO to waive the Affordable Care Act's requirements for qualified health benefits plans. The Affordable Care Act requires that qualified health insurance plans be offered at the bronze, silver, gold, and platinum levels.<sup>12</sup> This leaves some individuals at the silver or bronze level with higher out of pocket costs. Green Mountain Care would provide individuals with one plan that compares to a gold level or better, ensuring greater coverage for all Vermonters than is provided today.

In addition to better out of pocket coverage, Green Mountain Care would provide the same or more covered services than what is offered today. Green Mountain Care would have all of the Essential Health Benefits under the Affordable Care Act.<sup>13</sup> Additionally, Act 48 requires Vermont to design Green Mountain Care to address chronic care in the most effective way possible. Other benefits such as adult dental or adult vision must also be considered in designing Green Mountain Care's benefit plan. Vermonters who qualify for Medicaid coverage will continue to receive coverage through Green Mountain Care, including Medicaid benefits. Vermont would seek to integrate its current Section 1115 Global Commitment to Health waiver with the new permissions through Section 1332 of the ACA to ensure that Green Mountain Care operates as a seamless, single system.

Waiving the Affordable Care Act's requirements around qualified health insurance plans would allow Green Mountain Care to provide the same or more covered services as well as greater coverage of out of pocket costs than many current qualified health insurance plans.

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<sup>12</sup> Sec. 1332(c) of the Affordable Care Act.

<sup>13</sup> Sec. 1332(b) of the Affordable Care Act. Vermont's Essential Health Benefits are listed at <https://www.cms.gov/CCIIO/Resources/Data-Resources/Downloads/vermont-ehb-benchmark-plan.pdf>.

## **To achieve greater affordability, Vermont would request a waiver of the premium tax credit and cost sharing reductions.**

In order to increase access to private insurance plans, the Affordable Care Act provides premium tax credits and cost-sharing reductions to eligible individuals.<sup>14</sup> The cost sharing reductions and the advance payment of the premium tax credits are paid directly to the insurers. The premium tax credits and the cost sharing reductions are not available to individuals with other sources of affordable, adequate coverage, such as employer-sponsored insurance or Medicare.

Before the Affordable Care Act was passed, Vermont had affordable health care programs for individuals up to 300% FPL. These programs had premiums and coverage that were more affordable to many Vermonters than subsidized insurance under the ACA. Vermont is trying to maintain the affordability standard it had before the ACA,<sup>15</sup> but despite these efforts, one of the most-cited barriers to individuals maintaining health care coverage is cost.<sup>16</sup> Green Mountain Care would eliminate cost as a barrier by breaking the direct link between monthly payment and health care coverage. The coverage under Green Mountain Care would be publicly financed in an income-sensitized manner that maintains or improves upon Vermont's current subsidized structure for plans at an 80% actuarial value (AV) or greater, which equates to a gold level plan, ensuring that all Vermonters contribute in a way that maintains or surpasses the ACA's affordability standards.

To achieve public financing of Green Mountain Care, Vermont would request that CCIIO waive the Affordable Care Act's premium tax credit and cost sharing reductions as they are currently administered. Instead of going to health insurance companies, these funds will go directly to the state for purposes of equitably financing and administering Green Mountain Care.

### **ACA Waiver Federal Funding Calculation**

Under the ACA waiver, Vermont may receive the premium tax credit, cost sharing reductions, and small business tax credit payments that would have been paid had the ACA's requirement to have an Exchange selling health insurance not been waived.<sup>17</sup>

### **Premium Tax Credits and Cost Sharing Reductions**

Currently, the federal government provides advanced payment of the premium tax credit and cost sharing reduction payments directly to insurers on behalf of eligible individuals. Under the ACA waiver, Vermont would waive this requirement because residents would move from paying premiums for insurance plans through Vermont Health Connect to having publicly-

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<sup>14</sup> Parts I of subtitle E in Title I of the Affordable Care Act; Section 36B of the Internal Revenue Code of 1986.

<sup>15</sup> Vermont currently reduces premiums through subsidies that reduce the federal advanced premium tax credit's applicable percentage by 1.5% for Vermonters up to 300% FPL and subsidizes cost sharing reductions from 73% AV to 77% AV for Vermonters from 200-250% FPL and from 70% to 73% AV for Vermonters from 250-300% FPL.

<sup>16</sup> Vermont Department of Financial Regulation Insurance Division, 2012 Vermont Household Health Insurance Survey, Pg. 77, [http://www.dfr.vermont.gov/sites/default/files/VHHIS\\_2012\\_Final\\_Report.pdf](http://www.dfr.vermont.gov/sites/default/files/VHHIS_2012_Final_Report.pdf).

<sup>17</sup> ACA § 1332(a)(3); 42 U.S.C. § 18052(a)(3).

financed health care coverage under Green Mountain Care.<sup>18</sup> Under the ACA waiver, the federal government would pay Vermont the aggregate amount of the premium tax credits and cost sharing reduction payments that would have otherwise been paid under the ACA.<sup>19</sup>

The ACA does not define how the premium tax credits and cost sharing reductions payments will be calculated. After analyzing various options, Vermont proposed that the federal government calculate the aggregate amount of the premium tax credits and cost sharing reduction payments by using a modified formula that the federal government is already using with the Basic Health Program (BHP).

With the BHP, the ACA gives states the flexibility to establish health coverage for low-income individuals not eligible for Medicaid.<sup>20</sup> Like the ACA waiver, a state's BHP must maintain the affordability and coverage requirements set out in the ACA.<sup>21</sup> In return, the federal government will transfer to the state 95% of the amount in premium tax credit and cost sharing reduction payments that would have otherwise been available under the ACA. The ACA and its attendant rules set out several requirements around these calculations, including the fact that the calculation must be made on a per enrollee basis where age, income, coverage tier, geographic area, and health status are taken into account.<sup>22</sup>

Because the principles behind the BHP program and the ACA waiver are similar, Vermont proposed using the BHP formulas modified by Vermont-specific factors to calculate the federal share for the premium tax credits and cost sharing reduction payments under the ACA waiver. For instance, Vermont uses community rating, so any factors based on age or tobacco rating would be omitted from the formula. Vermont is also comprised of one geographic area for insurance rates, so that factor may be omitted as well. Also, the ACA requires BHP funding to be 95% of the total estimated funding, whereas the ACA waiver has no such factor. After taking these adjustments into account, Vermont created formulas to calculate the premium tax credit and cost sharing payment amounts.

#### Premium Tax Credit Formula

Vermont created the following formula to calculate the premium tax credit:

$$PTC_{c,h,i} = [ARP_c - (\sum_j I_{h,i,j} \times PTCF_{h,i,j})/n] \times IRF \times E_{c,h,i}$$

$PTC_{c,h,i}$  = Premium tax credit portion of ACA waiver payment rate

c = Coverage status (self-only or applicable category of family coverage)

h = Household size

i = Income range (as percentage of FPL)

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<sup>18</sup> ACA § 1332(a)(2); 42 U.S.C. § 18052(a)(2).

<sup>19</sup> ACA § 1332(a)(3); 42 U.S.C. § 18052(a)(3).

<sup>20</sup> ACA § 1331; 42 U.S.C. § 18051.

<sup>21</sup> ACA § 1331(a)(2); 42 U.S.C. § 18051(a)(2) (with the exception of the cost sharing reduction standard where individuals from 150% FPL to 200% FPL may be covered by an 80% AV plan rather than an 87% AV plan).

<sup>22</sup> ACA § 1331(d)(3); 42 U.S.C. § 18051(d)(3); 79 FR 14111 (March 12, 2014).

ARP<sub>c</sub>= Adjusted reference premium

I<sub>h,i,j</sub>= Income (in dollars per month) at each 1 percentage-point increment of FPL

j= j<sup>th</sup> percentage-point increment FPL

n= Number of income increments used to calculate the mean PTC

PTCF<sub>h,i,j</sub>= Premium Tax Credit Formula percentage

IRF= Income reconciliation factor

E<sub>c,h,i</sub>= Number of individuals enrolled

#### *Premium tax credit portion of ACA waiver payment rate*

Like the BHP, the premium tax credit estimate would be calculated by rate cells in which coverage status, such as single, couple, or family, is taken into account along with household size and income range. Vermont would use income ranges up to 400% FPL because income eligibility for the premium tax credit goes up to 400% FPL. Within each rate cell, the formula would estimate the average premium tax credit, which is the difference between the second lowest cost silver plan premium available and the amount of income that a household would be required to pay if the members of the household were enrolled in the second lowest cost silver plan in Vermont Health Connect.

#### *Adjusted reference premium*

Vermont would take the current second lowest cost silver plan premium and trend it out to 2017. For its trend going forward, Vermont proposes using the regional average change in the second lowest cost silver plan premium or the National Health Expenditures projection if the regional trend has large variations that would normally not apply to Vermont. Vermont does not use age rating, but proposes applying an age adjustment to the reference premium in order to reflect Vermont's rapidly aging population.<sup>23</sup> Without an age adjustment, Vermont's reference premium would be based on the health of a population that no longer exists. Vermont also suggests employing a population health factor to the reference premium similar to the BHP's population health factor. The BHP population health factor takes into account that the cost of providing care to individuals with income below 200% FPL is often greater than other individuals with health insurance.<sup>24</sup> Similarly, to the extent that Vermont's large insurance market has a different rate than the small and individual market, that difference would be reflected in the adjusted reference premium.

#### *Calculation of the average premium tax credit*

Once the adjusted reference premium is determined, the average premium tax credit for the rate cell would be calculated by subtracting from the adjusted reference premium the average amount that would have been paid for a second lowest cost silver plan after applying the premium tax credit.

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<sup>23</sup> Vermont was one of three states with the largest increases in median age between 2000 and 2010. 2010 Census Briefs, *Age and Sex Composition: 2010*, May 2011, <http://www.census.gov/prod/cen2010/briefs/c2010br-03.pdf>.

<sup>24</sup> The BHP population health factor for 2015 and 2016 was 1.0. 79 FR 63363 (Oct. 23, 2014).

### *Income reconciliation factor*

Next, Vermont suggests multiplying the average premium tax credit calculation with an income reconciliation factor. Like the BHP, Vermont proposes that individuals do not have to reconcile their premium tax credits at the end of the year. Accordingly, Vermont applies an income reconciliation factor based on previous experience with reconciliation of tax credits in order to take reconciliation into account without Vermonters having to do the calculation on their tax forms.

### *Number of individuals enrolled*

For the number of individuals enrolled, Vermont estimated all of the individuals that would have been eligible for the premium tax credit under the ACA, absent the waiver.

### Vermont Premium Subsidy

Under Act 50 of 2013 and in its 1115 Global Commitment waiver, Vermont further subsidizes the premium tax credits by decreasing the percentage of income applied to the second lowest silver plan by 1.5%. Vermont received federal match for this program and would request retention of the match going forward through its Section 1115 waiver renewal. The request would be based on the total number of eligible Vermonters in Green Mountain Care who are ineligible for Medicaid, Medicare, TRICARE, federal employees and a small number of individuals estimated to take up employer sponsored insurance, whose incomes are between 138-300% of federal poverty.

### Cost sharing reduction formula

Vermont created the following formula to calculate the cost sharing reduction payments:

$$CSR_{c,h,i} = ARP_c \times FRAC / AV \times IUF_{h,i} \times \Delta AV_{h,i} \times E_{c,h,i}$$

$CSR_{c,h,i}$  = Cost-sharing reduction subsidy portion of BHP payment rate

c= Coverage status (self-only or applicable category of family coverage) obtained through BHP

h= Household size

i= Income range (as percentage of FPL)

$ARP_c$  = Adjusted reference premium

FRAC= Factor removing administrative costs


AV= Actuarial value of plan (as percentage of allowed benefits covered by the applicable QHP without a cost-sharing reduction subsidy)

$IUF_{h,i}$  = Induced utilization factor

$\Delta AV_{h,i}$  = Change in actuarial value (as percentage of allowed benefits)

### *Cost sharing reduction portion of ACA waiver payment rate*

As with the BHP and the premium tax credit calculations, the cost sharing reduction estimate would be calculated by rate cells in which coverage status, such as single, couple, or family, is taken into account along with household size and income range. Vermont uses income ranges up to 250% FPL because income eligibility for the cost sharing reduction goes up to 250% FPL. Within each rate cell, the formula estimated the average advance cost-sharing reductions



payment that would have been provided to individuals had they enrolled through Vermont Health Connect.

*Adjusted reference premium*

Vermont would take the current second lowest cost silver plan premium and trend it out to 2017. For its trend going forward, Vermont used the regional average change in the second lowest cost silver plan premium or the National Health Expenditures projection if the regional trend has large variations that would normally not apply to Vermont. As with the premium tax credit calculation, Vermont would apply an age adjustment and a population health factor to ensure an accurate reference premium in the future.

*Factor removing administrative costs*

The BHP formula includes a factor removing administrative costs (FRAC) to ensure that the federal government is funding essential health benefits rather than taxes and other administrative costs. Under the EHB rules, the suggested FRAC is 80% because that is the factor currently used to calculate cost sharing reduction payments. Vermont would use 88.3% because that number reflected the administrative costs of the largest insurer in Vermont and Vermont Medicaid, and to the extent that Green Mountain Care would reduce administrative costs, that reduction should be reflected in the cost sharing reduction calculation.

*Actuarial value of plan, induced utilization factor, and change in actuarial value*

As with the BHP formula, the actuarial value of the plan is 70% AV because the reference premium is the second lowest cost silver plan.

Vermont would also incorporate the BHP's induced utilization factor, which is also used to calculate the cost sharing reductions. The induced utilization factor takes into account that individuals with lower out of pocket costs are more likely to use health care services. The induced utilization factor used by the federal government is 1.12 for individuals up to 200% FPL and 1.00 for individuals up to 250% FPL.

The change in actuarial value is the difference between the second lowest costs silver plan's AV of 70% and the subsidized cost sharing actuarial values of 94% AV for those up to 150% FPL, 87% AV for those up to 200% FPL and 73% AV for those up to 250% FPL.

*Number of individuals enrolled*

For the number of individuals enrolled, Vermont estimated all of the individuals who would have been eligible for cost sharing reductions under the ACA, absent the waiver.

Vermont Cost Sharing Subsidy

Although Vermont further subsidizes the federal government's cost sharing reductions up to 300% FPL, the funding is purely state funds, so there is no need to calculate a federal contribution.

## The ACA Waiver Application

In order to comply with federal law,<sup>25</sup> Vermont's ACA waiver application would include actuarial analyses and actuarial certifications to support Vermont's estimates that Green Mountain Care would cover the same or more people as the ACA with health care coverage that is equally or more comprehensive and affordable than ACA coverage. Vermont would also submit:

- A comprehensive description of the Vermont legislation and program to implement waiver
- A copy of the enacted state legislation that provides the state with authority to implement the proposed waiver
- A list of the provisions the state is seeking to waive
- Actuarial analysis and actuarial certifications showing that Vermont has met:
  - Comprehensive coverage requirement
  - Affordability requirement
  - Scope of coverage requirement
- Economic analyses showing that Vermont has met:
  - Comprehensive coverage requirement
  - Affordability requirement
  - Scope of coverage requirement
  - Federal deficit requirement, including:
    - 10 year budget plan that is deficit neutral, including administrative costs
    - Analysis regarding the estimated impact of the waiver on health insurance coverage in Vermont
- Data and assumptions on comprehensive coverage requirement, affordability requirement, scope of coverage requirement and federal deficit requirement, including
  - Information on the age, income, health expenses and current health insurance status of the relevant population; the number of employers by number of employees and whether the employer offers insurance; cross- tabulations of these variables; and an explanation of data sources and quality;
  - An explanation of the key assumptions used to develop the estimates of the effect of the waiver on coverage and the federal budget, such as individual and employer participation rates, behavioral changes, premium and price effects, and other relevant factors.
- Implementation timeline
- Whether the waiver increases or decreases administrative burden on individuals, insurers and employers
- Explanation of how the waiver will affect the implementation of the provisions of the ACA that are not waived
- Explanation of how the waiver will affect residents seeking care outside of Vermont

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<sup>25</sup> 31 CFR Part 33; 45 CFR Part 155.



- Explanation of how Vermont will provide federal agencies with the necessary information to administer waiver at federal level
- Explanation of how the proposal will address individual, employer, insurer, or provider compliance, waste, fraud, and abuse
- Reporting targets: quarterly, annual, and cumulative targets for:
  - Comprehensive coverage requirement
  - Affordability requirement
  - Scope of coverage requirement
  - Federal deficit requirement
- Written evidence that Vermont held at least two public hearings
- Any other information consistent with guidance provided by the Secretary of Health and Human Services (HHS) or the Secretary of the Treasury.

### **Public Notice and Timelines for the ACA Waiver Process**

Under federal law, Vermont must ensure appropriate public comment on its ACA waiver application and follow the following timelines:

- Prior to submitting the application, the state would give public notice and provide a public comment period, including public hearings. The public notice would include:
  - A comprehensive description of the application for the waiver
  - Information on where copies of the application for the waiver are available for public review and comment
  - Information on where and how public comments may be submitted
  - The location, date, and time of state public hearings
- Vermont would then submit the application to HHS
- 45 days after submission, the HHS Secretary and Treasury Secretary would complete preliminary review of application
  - Federal agencies would then provide public notice of completed application
- No later than 180 days after preliminary review complete, HHS would provide a decision-making period and follow federal public notice process

### **Submissions to HHS**

Vermont submitted a white paper to CCIIO and to the general assembly on November 1, 2014.


This paper can be found here:

<http://hcr.vermont.gov/sites/hcr/files/2014/1332%20Concept%20Paper%20FINAL.pdf>

### **Meetings with Federal Partners**

Collaboration with federal partners is critical for Vermont to implement a universal health care program. Vermont has been working closely with the federal government since the passage of Act 48 to ensure the state is in position to be granted a waiver at the earliest possible opportunity as required by Act 48.

Vermont was expected to be the first state to apply for the waiver and thus our collaboration with the U.S. Department of Health and Human Services (HHS) has included contributing to the



development of the waiver application process itself, as well as discussing Vermont's specific proposals for meeting the waiver requirements, including evidence and analysis showing that Vermont can meet those requirements.

Vermont's health care reform team has been engaging in ongoing conversations with multiple federal agencies and offices to further our analysis of the coverage, tax, and subsidy implications of our waiver proposal and to strengthen our application. The cross-cutting policy issues intrinsic in Vermont's waiver proposals requires collaboration with the White House Executive Offices, the Department of Health and Human Services (HHS), which has regulatory authority over the consolidated waiver process, and about a dozen other offices and departments including Centers for Medicaid and Medicare Services (CMS), Center for Consumer Information and Insurance Oversight (CCIIO), Center for Medicaid and CHIP Services (CMCS), Center for Medicare and Medicaid Innovation (CMMI), CMS Office of the Actuary, the U.S. Department of Labor, U.S. Treasury, and the Office of Management and Budget.

Meetings with federal partners began in earnest in January of 2014. Vermont's Director of Health Care Reform, Deputy Director, and Special Counsel began regular teleconferences with CCIIO staff to discuss the waiver requirements and Vermont's proposals. Further analysis of the components of Vermont's proposals led to a meeting in April with Assistant Secretary Phyllis C. Borzi of the U.S. Department of Labor's Employee Benefits Security Administration (EBSA). In June Director Lunge traveled to Washington, D.C. to meet with the White House office of health reform policy director Jeanne Lambrew, who is Deputy Assistant to the President for Health Policy, and Christen Linke-Young, Senior Policy Advisor for Health. Director Lunge and Deputy Director Michael Costa also met with CMS staff in Bethesda in July.

The meetings in the first half of the year laid the groundwork for Governor Shumlin and his health policy advisors to travel to D.C. on September 24, 2014 to meet with HHS Secretary Sylvia Mathews Burwell, Assistant Secretary of the Treasury Mark Mazur, and the head of the health division for the Office of Budget and Management, Julian Harris. The objective of those meetings was to facilitate inter-agency collaboration from the top down and to establish the necessary lines of communication for Vermont to accomplish its goal of submitting a successful waiver application.

Following the Governor's meetings in September, Vermont's health care reform team organized a series of three interagency teleconferences/webinars. The teleconferences were held on October 24<sup>th</sup>, October 31<sup>st</sup>, and November 6<sup>th</sup>. Over 60 staffers from about a dozen offices, including the White House and the Vermont congressional delegation, were invited to participate in the calls. 20-30 people were on the line for each call. Vermont's health care reform team presented the information and our consultants from Wakely and UMass were on the line to provide back-up support.

During the October 24<sup>th</sup> teleconference Vermont presented an overview of Green Mountain Care for those who were new to Vermont's plan. We also presented proposed federal premium tax credit and cost-sharing reduction pass-through funding formulas. On October 31<sup>st</sup> Vermont

presented background information on the coverage and financing plan for Green Mountain Care including the approach to eligibility, benefit design, financing, operations, and delivery system reform. On November 6<sup>th</sup> Vermont walked through the assumptions the state was proposing to meet the remaining criteria for the ACA waiver. These include how we propose to show that we will cover at least as many people as under the ACA, with benefits that are at least as generous without increasing costs of coverage.

The federal staffers raised detailed questions during the multi-agency calls. The health care reform team engaged smaller groups from individual offices to drill down on issues within their areas of expertise. Multiple meetings were held with Treasury on tax implications for the financing plan. November 24<sup>th</sup> we held a call with Treasury, OMB, CMS and the Office of the Actuary to take a closer look at the issue of pass-through funding. November 25<sup>th</sup> we held a call with CMCS for a deeper dive on the interactions between Medicaid and Vermont’s ACA waiver.


Governor Shumlin spoke with with HHS Secretary Burwell again on December 15, 2014.

In conclusion, we found that our partners in the federal agencies were excited about Vermont’s plans and eager to help however they can. Staffers expressed enthusiasm for Vermont’s strides toward obtaining the ACA waiver, which was included in the Affordable Care Act for the express purpose of allowing states to come up with innovative ways to cover more of their population and provide better benefits. Participating in Vermont’s process toward applying for the waiver gave those federal agencies a first look at what may come to life under the ACA waiver provision.

The Table below provides a summary of meetings with the federal government.

**Table E-2.1 Summary of Meetings with Vermont’s Health Care Reform Team and Federal Partners**

<b>January 17, 2014</b>	Initial teleconference with CCIIO staff responsible for the 1332 waiver process. Continued meeting most months through 2014.
<b>April 7, 2014</b>	Teleconference with Assistant Secretary Phyllis Borzi of U.S. DOL EBSA.
<b>June 19, 2014</b>	White House meeting with Deputy Director Jeanne Lambrew.
<b>July 28-30, 2014</b>	Director Lunge and Deputy Director Costa in D.C., met with CMS and the congressional delegation.
<b>September 4, 2014</b>	Teleconference with HHS staff to prep for Gov. Shumlin’s meeting with Secretary Burwell.
<b>September 24, 2014</b>	Governor Shumlin in D.C. to meet with HHS Secretary Burwell, Treasury Assistant Secretary Mazur, and Julian Harris of OMB.



<b>October 24, 2014</b>	First interagency teleconference/webinar on Green Mountain Care and proposed federal PTC and CSR pass-through funding formulas.
<b>October 31, 2014</b>	Second interagency teleconference/webinar on background for the GMC coverage and financing plan.
<b>October 27, 2014</b>	Teleconference with Treasury.
<b>November 6, 2014</b>	Third interagency teleconference/webinar on the 1332 waiver criteria.
<b>November 24, 2014</b>	Teleconference on pass-through funding with OMB, Treasury, CMS, and OACT.
<b>November 25, 2014</b>	CMCS deep-dive on Vermont 1332 waiver and Medicaid interactions.
<b>December 15, 2014</b>	Conference call with Governor Shumlin and HHS Secretary Burwell.
<b>Ongoing</b>	Monthly calls with the Vermont congressional delegation.
<b>Ongoing</b>	Monthly calls with CCIIO on the 1332 waiver process.
<b>Ongoing</b>	Follow-up calls with all federal partners.

## Appendix F-1: Medicaid

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### Federal Financial Participation in Medicaid

The federal government pays each state a certain share of its Medicaid program. The share that the federal government pays, called the Federal Matching Assistance Percentage (FMAP), is determined annually pursuant to a statutory formula based on each state's per capita income. In calendar year 2015, the base FMAP for Vermont is 56.18%.<sup>1</sup> Vermont's FMAP rate has declined annually since 2009, and we estimate that it will continue to do so in future years. Likewise, the federal government pays a share of the Children's Health Insurance Program (CHIP). This amount is higher than the FMAP rate used for the Medicaid population, and is called the Enhanced FMAP rate. In calendar year 2015, the enhanced FMAP rate for Vermont's CHIP program is 74.95%.<sup>2</sup>

Furthermore, the ACA significantly expanded Medicaid, making individuals with income up to 138% of the federal poverty level (FPL) eligible for Medicaid. For most states, this will be a substantial expansion in their Medicaid population. In calendar year 2015, the enhanced FMAP rate for Vermont's "expansion population" is 82.47%. The federal government will pay a higher FMAP for this expansion population, leveling off at 90% in 2019.

Vermont, under its 1115 Demonstration Waiver, had previously expanded its Medicaid eligibility to income levels greater than the ACA. For states like Vermont that had previously expanded Medicaid eligibility, the federal government will phase-in a higher FMAP rate for some populations in their state.

The FMAPs used in this analysis are contained in Appendix C-2 with the other microsimulation analysis assumptions. Note that the base and enhanced FMAP rates are subject to change annually. For the purposes of this analysis, we used the 2015 rates as a starting point and then used the economic model to estimate future FMAP rates.


### Impacts on Existing Medicaid Funding Sources

Lost or reduced state Medicaid revenue add dollars to the required public financing. Lost Medicaid dollars would be replaced by fungible dollars within the Green Mountain Care Fund for the purposes of drawing down federal Medicaid match, as we would propose that the Green Mountain Care Fund absorb the State Health Care Resources Fund. The 2013 report estimated that the State would be able to apply \$637 million in existing State Medicaid revenue to GMC in 2017. We estimate the actual number to be \$341 million, a figure that increases the total amount to be publicly financed in 2017 by \$296 million.

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<sup>1</sup> See JFO website: [www.leg.state.vt.us/jfo/healthcare/](http://www.leg.state.vt.us/jfo/healthcare/)

<sup>2</sup> *Ibid.*



The reduction in Medicaid revenue from the original projection is due to two factors. First, the State has not increased Medicaid rates annually as assumed in the 2013 report due to economic headwinds and budget pressures. Second, some revenue sources used to support Medicaid today would not be viable under GMC. Specifically, GMC would feature repeal of provider taxes, the Claims Tax, and Employer Assessment once the State implemented GMC. Medicaid premiums would no longer be charged. Also, tobacco settlement funds are set to decline prior to 2017.

Table F-1.1 sets forth current state revenue streams that support Medicaid in FY 15 post rescission and estimate the availability of these revenue sources for Green Mountain Care for 2017 through 2021. Table F-1.2 sets forth the current state revenues that support the State Health Care Resources Fund in FY 15 post rescission and estimate the availability of these revenue sources for Green Mountain Care from 2017 through 2021.

Medicaid revenue estimates are typically done on a state fiscal year (SFY) basis. They are set forth by SFY here to ensure continuity with existing estimates. GMC would operate on a calendar year basis. Accordingly, state Medicaid revenue estimates would need to be converted to a calendar year basis once an implementation year is determined.

**Table F-1.1: State Medicaid Funding Sources FY 2015 as Passed through 2021 under GMC<sup>3</sup>**

State Medicaid Funding	FY 15 Post Rescission	FY 16	FY 17	FY 18	FY 19	FY 20	FY 21
<b>General Fund</b>	185,233,145	190,790,139	196,513,844	202,409,259	208,481,537	214,735,983	221,178,062
<b>Tobacco Funds</b>	33,031,032	28,547,443	27,310,469	16,310,469	16,310,469	16,310,469	16,310,469
<b>State Health Care Resources Fund</b>	268,592,899	268,984,365	96,173,000	99,173,000	101,173,000	103,173,000	105,173,000
<b>IDT</b>	40,000	40,000	40,000	40,000	40,000	40,000	40,000
<b>Insurance Fund</b>	883,847	883,847	883,847	883,847	883,847	883,847	883,847
<b>HIT</b>	2,080,754	3,000,000	0	0	0	0	0
<b>Agriculture Mosquito Control</b>	56,272	56,272	56,272	56,272	56,272	56,272	56,272
<b>Success Beyond Six</b>	21,037,211	21,743,125	22,300,000	22,300,000	22,300,000	22,300,000	22,300,000
<b>Next Generation</b>	300,000	300,000	300,000	300,000	300,000	300,000	300,000
<b>Exchange Funding</b>	-5,340,670	-8,400,000	0	0	0	0	0
<b>Carry Forward</b>	50,000	0	0	0	0	0	0
<b>Fund Balance used</b>	4,074,531	0	0	0	0	0	0
<b>TOTAL STATE MEDICAID REVENUE</b>	<b>510,039,021</b>	<b>505,945,191</b>	<b>343,577,432</b>	<b>341,472,847</b>	<b>349,545,125</b>	<b>357,799,571</b>	<b>366,241,650</b>

Source: Vermont Dept. of Finance and Management Prior to Completion of the FY 2016 Budget Recommendation

Assumptions and Notes

We assume three percent annual growth in General Fund support for Medicaid. Tobacco settlement funds are projected to decrease \$11 million in SFY 18. State Health Care Resource Fund revenue would be diminished substantially due to repeal of provider taxes,

<sup>3</sup> This table includes revenue sources for Managed Care Entity Investments, as well as Medicaid coverage.


claims taxes, and various premiums. The Medicaid allocable cost of the Exchange is included in the general GMC Medicaid cost estimates. The non-Medicaid allocable Exchange cost is included in the non-payer operations cost estimate.

**Table F-1.2: State Health Care Resources Fund FY 15 as Passed through 2021 under GMC**

State Health Care Resources Fund	FY 15	FY 16	FY 17	FY 18	FY 19	FY 20	FY 21
<b>Cig Tax<sup>4</sup></b>	64,900,000	61,900,000	76,000,000	79,000,000	81,000,000	83,000,000	85,000,000
<b>Tobacco Products</b>	7,700,000	6,800,000	6,800,000	6,800,000	6,800,000	6,800,000	6,800,000
<b>Claims Assessment</b>	14,000,000	14,280,000	0	0	0	0	0
<b>Employer Assessment</b>	15,738,631	16,800,000	0	0	0	0	0
<b>GME</b>	12,873,000	12,873,000	12,873,000	12,873,000	12,873,000	12,873,000	12,873,000
<b>Provider Tax – Hospitals</b>	127,639,915	131,150,013	0	0	0	0	0
<b>Provider Tax NH</b>	15,801,530	15,801,530	0	0	0	0	0
<b>Provider Tax Home Health</b>	4,233,302	4,233,302	0	0	0	0	0
<b>Provider Tax ICF-MR</b>	73,759	73,759	0	0	0	0	0
<b>Pharmacy \$0.10 Script</b>	800,000	800,000	0	0	0	0	0
<b>Premium Dr. D</b>	50,607	50,607	0	0	0	0	0
<b>Premiums SCHIP</b>	623,382	623,382	0	0	0	0	0
<b>Premiums Rx Programs</b>	3,045,450	3,045,450	0	0	0	0	0
<b>Recoveries</b>	500,000	500,000	500,000	500,000	500,000	500,000	500,000
<b>Other</b>	13,323	53,323	0	0	0	0	0
<b>TOTAL SHCRF REVENUE</b>	267,992,899	268,984,365	96,173,000	99,173,000	101,173,000	103,173,000	105,173,000

<sup>4</sup> Further analysis of the cigarette tax estimate is needed given the large variance between the current law and GMC estimates.





### Assumptions and Notes

Several SHCRF revenue streams would be repealed or substantially reduced after GMC implementation: The claims assessment would be repealed. The employer assessment would be repealed as all Vermont residents would have insurance. Current Medicaid premiums would be repealed. Provider Taxes would be repealed. Estimated cigarette tax revenue would increase due to increased wage growth and consumer spending change. GME would likely change as FMAP changes; however, any additional dollars needed to draw down federal match would likely be paid by the University of Vermont.

## Appendix F-2: Detailed Information on Financing

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This appendix provides additional information on issues related to the development of financing concepts and the results of the economic modeling. First, the appendix provides some additional perspective on the difficult task of transitioning businesses into GMC. Second, the appendix provides additional data on the wage effects of GMC. Third, the appendix provides additional data on changes in federal and state tax liability and collections due to GMC.

### Payroll Tax Phase-In

Governor Shumlin asked for a plan that would provide a transition for small employers. Accordingly, we focused on providing a way for businesses with less than \$1M in total payroll to transition into the plan over 3 years. We considered several approaches to phase in Vermont businesses, thereby providing transition relief to small businesses. The first approach was a three year phase in with a non-refundable credit.

#### Step Up Approach

A temporary non-refundable tax credit could be granted for the first three years of the tax, allowing businesses with smaller payrolls, those least likely to pay for insurance now, to phase into the system. The credit would work in the following way, using 8% as an example payroll tax rate.

- All businesses would determine their payroll tax liability at 8% of qualifying payroll.
- Businesses could apply the annual credit to their tax liability.
- The credit amount would be \$40,000 in year 1, \$25,000 in year 2, and \$12,000 in year 3.
- The credit would be phased out on a dollar for dollar basis for every dollar of tax incurred beyond the credit limit.
- The credit would be reduced annually until all businesses are phased into the full 8% tax in year four, 2020.

The result of the credit system would be that in each year of the phase-in the smallest employers are excluded from the tax, others pay a reduced rate, and the largest businesses by payroll pay the full tax. The credits phase out so that the largest employers do not receive the credit and unnecessarily drive up the needed payroll tax rate. The specific payroll thresholds for each category of business (excluded from the tax, reduced tax, and pay full tax) are set forth in Table F-2.1.

**Table F-2.1: Payroll Thresholds for Utilization of Phase-In Credit**

Tax Year	2017	2018	2019	2020
<b>Excluded from Tax Due to Credit</b>	Qualifying Payroll < \$500,000	Qualifying Payroll < \$312,500	Qualifying Payroll < \$150,000	Businesses Pay Full Tax
<b>Reduced Tax Due to Credit</b>	Qualifying Payroll between \$500,000 and \$1,000,000	Qualifying Payroll between \$312,500 and \$625,000	Qualifying Payroll between \$150,000 and \$300,000	
<b>Pay Full Tax</b>	Qualifying Payroll > \$1,000,000	Qualifying Payroll > \$625,000	Qualifying Payroll > \$300,000	

Examples of credit utilization are set forth below in the Tables using examples with \$1 million, \$575,000, and \$150,000 of qualifying payroll.

**Table F-2.2: 8% Payroll Tax with Phase-In for Business with \$1,000,000 in Qualifying Vermont Payroll**

Tax Year	2017	2018	2019	2020
<b>Qualifying Vermont Payroll</b>	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
<b>GMC Payroll Tax Liability @ 8%</b>	\$80,000	\$80,000	\$80,000	\$80,000
<b>Credit Value</b>	\$40,000	\$25,000	\$12,000	\$0
<b>Credit Phase Out</b>	\$40,000	\$25,000	\$12,000	N/A
<b>Value of Credit</b>	\$0	\$0	\$0	N/A
<b>Tax Due</b>	\$80,000	\$80,000	\$80,000	\$80,000

In this scenario, the business would be ineligible for the credit and would pay the full tax liability in year 1.

**Table F-2.3: 8% Payroll Tax with Phase-In for Business with \$575,000 in Qualifying Vermont Payroll**

Tax Year	2017	2018	2019	2020
<b>Qualifying Vermont Payroll</b>	\$575,000	\$575,000	\$575,000	\$575,000
<b>GMC Payroll Tax Liability @ 8%</b>	\$46,000	\$46,000	\$46,000	\$46,000
<b>Annual Credit Value</b>	\$40,000	\$25,000	\$12,000	\$0
<b>Credit Phase Out</b>	\$6,000	\$21,000	\$12,000	N/A
<b>Value of Credit</b>	\$34,000	\$4,000	\$0	N/A
<b>Tax Due</b>	\$12,000	\$42,000	\$46,000	\$46,000

In this scenario, the business would be eligible for a tax reduction via the credit in the first two years of the tax and would pay the full tax in year 3 and thereafter.

**Table F-2.4: 8% Payroll Tax with Phase-In for Business with \$150,000 in Vermont Payroll**

Tax Year	2017	2018	2019	2020
<b>Qualifying Vermont Payroll</b>	\$150,000	\$150,000	\$150,000	\$150,000
<b>GMC Payroll Tax Liability @ 8%</b>	\$12,000	\$12,000	\$12,000	\$12,000
<b>Annual Credit Value</b>	\$40,000	\$25,000	\$12,000	\$0
<b>Credit Phase Out</b>	\$0	\$0	\$0	N/A
<b>Value of Credit</b>	\$12,000	\$12,000	\$12,000	N/A
<b>Tax Due</b>	\$0	\$0	\$0	\$12,000

In this scenario, the business would be able to use the full value of the credit annually. They would be excluded from the tax during the phase-in and would pay the full tax in year 4 and thereafter.

The economic modeling revealed that these credits were expensive, creating a funding problem for the payroll tax and Green Mountain Care. This is due to the large number of small businesses in Vermont. Table F-2.5 sets forth the cost of the payroll tax phase in compared to the revenue generation potential of the payroll tax levied at eight percent.

**Table F-2.5: 8% Payroll Tax with Phase-In Credit Value in Millions**

Tax Year	2017	2018	2019	2020	2021
<b>Revenue Potential at 8%</b>	1,051	1,073	1,095	1,117	1,140
<b>Credit Value</b>	525	496	441	0	0
<b>Tax Collected</b>	526	577	654	1,117	1,140

A major issue with the credit described above is that it would bring large employers down in their spending while not bringing smaller employers up in spending. Fixing the credit would be expensive, requiring a high transitional payroll tax rate or an additional major revenue source. We constructed an option that could potentially have addressed this issue of losing revenue from employers that pay more today than the target rate while transitioning smaller businesses or those that pay an amount lower than the target GMC payroll tax. This was the step up/step down phase in.

#### Step Up/Step Down Phase In

The step up/step down would try to transition each business from where they are currently to the target payroll tax rate. It would require four steps.

- Select a base measurement year.
- Determine the current amount the firm spends on health care.
- The firm determines whether they pay more or less than the new tax at the target rate.
- Each firm moves 20% toward the goal each year.

Table F-2.6 illustrates how the phase-in works.

**Table F-2.6: Notional Example of Step Up/Step Down Payroll Tax Phase-In**

Company A		Company B	
2016 Health Care Spending	\$100,000	2016 Health Care Spending	\$0
Target GMC Tax at 8% Payroll	\$50,000	Target GMC Tax at 8% Payroll	\$50,000
Firm A Pays (Step Down)		Firm B Pays (Step Up)	
2017	\$90,000	2017	\$10,000
2018	\$80,000	2018	\$20,000
2019	\$70,000	2019	\$30,000
2020	\$60,000	2020	\$40,000
2021 (Target Tax)	\$50,000	2021 (Target Tax)	\$50,000

This solution to the phase-in issue prompted several concerns. First, it would create a complicated set of firm specific tax rates. Also, it would create uncertainty about what behavior firms may engage in during the base measurement year. The finance plan would need substantial modification if many firms dropped or reduced health care coverage prior to the base measurement year to enjoy preferential tax treatment during the first five years. This could be remedied by selecting a base year in the past; however, we rejected this idea as arbitrary and not reflecting a business’s current cash position. Also, this concept prompted some concern over legal risk.

### Ramp Up

Another alternative was to ramp employers up to the target payroll tax rate over time prior to implementation of GMC. The major concern with this approach was that businesses would be paying prior to receiving benefits, and they would be paying twice if they continued to offer insurance.

### Large Employer Credit

We designed a credit for large employers to use in Green Mountain Care if the legislature so chose to exempt large businesses. The credit would work in the following way.

- All businesses would be assessed GMC payroll tax
- Large employers over a certain number of employees would be eligible for a credit against payroll tax.
- A dollar for dollar credit would be granted for all health spending, including, but not limited to, employer sponsored insurance.
- The credit would be taken against the Green Mountain Care payroll tax.

Our legal analysis determined that such a credit likely would pass legal muster.

Overall, the credit proved too costly to be deployed within a sustainable finance plan. The credit would have cost \$394 million if applied to all firms with more than 1,000 employees at a payroll tax of 11.5%, more than 25% of the payroll tax base. The credit would cost \$468 million if applied to all firms with more than 500 employees at a payroll tax rate of 11.5%, more than 30% of the payroll base. Here, the proportion of the base is more important than the dollar amount. We drew the tentative conclusion that it does not seem possible to construct a publicly financed system that excludes Vermont's largest employers.

### Tiered Brackets

We considered and rejected tiered payroll tax brackets due to three main concerns. First, a tiered structure would likely require high and seemingly uncompetitive payroll tax rates. Second, a tiered system would not create a level playing field for Vermont's businesses. Third, we wanted to ensure tax neutrality, meaning that we did not want a tax system that created an incentive to avoid adding the next dollar of payroll.

### Wage Effects of GMC

Each firm would determine whether they pay more or less under GMC than the status quo given a firm's current level of health care spending and their prospective payroll tax due. The economic model made certain assumptions about firm behavior regarding employee wages depending on whether the firm would pay more or less under GMC and whether the firm chose to purchase supplemental GMC coverage or continue to offer its own coverage. (See Appendix C.) Generally, the model measured three types of firm behavior in regards to wages.

- Firms that would pay less under GMC shift some of the savings to workers in the form of higher wages.
- Firms that would pay more under GMC would likely shift this cost onto workers except that they generally cannot due to nominal and minimum wage restrictions. This amount would be the "remaining unshifted" amount.
- Given our assumptions about wage stickiness, some firms would retain dollars that they would otherwise shift to wages. These would be called "wages withheld."

Figure F-2.7 breaks down wage shifting in each of the above categories by employer type. How firms would act with dollars in the unshifted and shifting withheld categories would be a major focus of any future macroeconomic analysis.

**Table F-2.7: GMC Wage Effects, 2017 – 2021. (Value in Millions)**

	2017	2018	2019	2020	2021
<b>Private Business</b>					
Payroll Tax	1,163	1,186	1,216	1,236	1,257
Total Amount Shifted to Wages	78	68	129	67	22
Total Remaining Unshifted	518	367	249	163	102
Total Shifting Withheld	189	103	-	-	-
<b>State</b>					
State Employee Spending	111	114	117	121	124
Payroll Tax	111	114	117	121	124
Total Amount Shifted to Wages	44	43	60	68	80
Total Remaining Unshifted	30	23	15	8	3
Total Shifting Withheld	57	43	22	12	-
<b>Local Government</b>					
Payroll Tax	62	63	64	66	67
Total Amount Shifted to Wages	9	6	9	10	12
Total Remaining Unshifted	22	16	11	7	4
Total Shifting Withheld	18	14	8	4	-
<b>Schools</b>					
Payroll Tax	145	149	153	158	162
Total Amount Shifted to Wages	43	43	60	69	83
Total Remaining Unshifted	45	32	21	11	5
Total Shifting Withheld	62	50	26	14	-

## GMC Tax Effects

Green Mountain Care would change the total tax collected by the State and Federal government. We estimate that State revenues would improve modestly due to increased wages and a resulting increase in consumption. We estimate that the federal government would collect less in tax revenue as a result of GMC, due primarily to the use of Schedule A to deduct the public premium.

### State Tax Effects

We estimate state tax collections would increase \$34 million in 2017, increasing annually thereafter, and grow to \$99 million over the status quo by 2021. The increase would be driven mostly by property tax collections. Income tax collections would be down. We believe that this estimate is due to increased utilization of the EITC and some additional utilization of itemized deductions, as Vermont allows taxpayers to deduct up to \$5,000 of state taxes paid for income tax purposes.

**Table F-2.8: GMC State Tax Effects, 2017 – 2021 (Value in Millions)**

Tax Type	2017	2018	2019	2020	2021
State Income Taxes	-2	-7	-4	-7	-8
Property Tax	22	33	48	58	67
Sales Tax	6	10	15	18	19
Meals/Alcohol/Hotel Tax	2	2	3	3	4
Gas Tax	1	2	3	3	3
Cars Tax	3	5	7	8	9
Cigarette Tax	1	3	3	4	4
Corporate Tax	0	0	0	0	0
Other Tax	1	1	1	1	1
<b>TOTAL</b>	<b>34</b>	<b>49</b>	<b>76</b>	<b>88</b>	<b>99</b>

Federal Tax Effects

We estimate that Vermont residents would pay less in federal taxes under GMC. The main driver of this estimate is the ability to deduct the public premium from federal income taxes on Schedule A. The table below compares the change in federal tax liability between federal income taxes and federal payroll taxes (FICA and Medicare Taxes) under GMC.

**Table F-2.9: GMC Federal Tax Effects, 2017 – 2021 (Value in Millions)**

	2017	2018	2019	2020	2021
<b>Federal Income Taxes</b>	-191	-222	-223	-236	-242
<b>Payroll Taxes</b>	56	57	75	70	70

It is important to note that some Vermonters would pay more in federal income tax due to higher wages; however, the Schedule A impact offsets in the aggregate the taxes owed due to wage gains. Increased payroll taxes would be due solely to wage gains. GMC would change the value of other federal tax calculations. For more information see the modeling output, which can be viewed online at <http://hcr.vermont.gov/library>.



## Appendix F-3: Alternative Financing Concepts and Balance Sheets

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We considered and tested myriad finance concepts during the project. Some concepts were tested using State of Vermont data prior to the microsimulation modeling project. We tested other concepts during the development of microsimulation model but prior to its completion. We ran a variety of concepts through the completed microsimulation model, defining completion as a point at which we had a high degree of confidence that the model was forecasting health care coverage costs correctly. This appendix describes alternative financing concepts that were run through the microsimulation model after its completion.

### Population Scenarios

Ultimately, we tested finance concepts against two distinct population scenarios. The first is described in the body of the report. The alternative makes the following changes to the underlying assumptions.

#### Alternative Population Scenario

The alternative scenario changes the population assumptions in the following ways:

- GMC would not cover non residents working for Vermont firms.
- GMC would not cover federal employees.
- GMC would not provide wrap coverage for employer sponsored insurance.

This reduces the population receiving GMC and the cost. Also, it more closely matches the assumptions of the 2013 report, being the same population except for wrap coverage of employer sponsored insurance. Multiple finance concepts were tested against both population scenarios.

#### Key Notes

Each alternative concept contains a description of the coverage assumptions. The two key pieces of coverage information are the actuarial value of the plan and the population covered. The concepts include three separate AV levels (80, 87, and 94) and two separate population concepts. Also, the 80AV concepts include concepts with the recommended focused deductible plan designed described in the coverage chapter and appendices and a standard deductible design.

Each alternative concept contains a description of finance assumptions. These include a payroll tax and Public Premium set at varying levels. Alternative financing concepts 1-7 mirror the standard report assumptions, including commuters and federal employees in the coverage and taxes. Also, these concepts assume repeal of provider taxes. Alternative financing concepts 8 - 14 contain different population assumptions, excluding commuters and federal employees from the coverage and tax. Also, these scenarios assume that Vermont retains provider taxes.

## **Alternative Finance Concept 1**

- Coverage Assumptions
  - 94 AV Plan
  - Population assumptions consistent with main body of report, including:
    - Vermont residents
    - Commuters
    - Federal employees
    - Wrap of employer sponsored insurance
    - Population excludes TRICARE and Non-Medicare retirees, excluding state and teacher retirees
- Finance Assumptions
  - Phased-In Payroll Tax with credit designed to transition businesses with up to \$1 million in qualifying payroll.
  - The credit is phased out on a dollar for dollar basis for every dollar of tax incurred beyond the credit limit.
  - Payroll Tax is 21% in year 1 and 20% in years 2 and 3.
  - The credit is reduced annually until all businesses are phased into the full 12.5% tax in year four.
  - The credit amount is \$105,000 in year 1, \$50,000 in year 2, and \$25,000 in year 3.
  - Sliding scale Public Premium from 0% - 9.5% up to 400% FPL.
  - Requires all Vermonters at or above 400% FPL to pay 9.5% of income, capped at \$27,500.
  - Repeals Provider Taxes

**Alternative Financing Concept 1 Continued**

	2017	2018	2019	2020	2021
<b>Spending (All Values in Millions)</b>					
<b>GMC Coverage and Operations</b>	-4,340	-4,579	-4,820	-5,001	-5,177
<b>Current Law Revenue Estimates</b>					
<b>Federal Medicaid Match</b>	1,310	1,364	1,413	1,445	1,505
<b>Federal ACA Waiver Funding</b>	106	118	122	125	132
<b>State Medicaid Dollars</b>	344	341	350	358	366
<b>New Revenue Needed</b>	<b>-2,580</b>	<b>-2,756</b>	<b>-2,935</b>	<b>-3,073</b>	<b>-3,174</b>
<b>Payroll Tax Starting at 21% and Phasing in to 12.5%</b>	1,511	1,631	1,754	1,746	1,781
<b>Public Premium up to 9.5% at 400% FPL Capped at \$27,500</b>	1,247	1,306	1,359	1,373	1,382
<b>GMC Fund Fiscal Position</b>	<b>178</b>	<b>181</b>	<b>178</b>	<b>46</b>	<b>-11</b>

## **Alternative Finance Concept 2**

- Coverage Assumptions
  - 94 AV Plan
  - Population assumptions consistent with main body of report, including:
    - Vermont residents
    - Commuters
    - Federal employees
    - Wrap of employer sponsored insurance
    - Population excludes TRICARE and Non-Medicare retirees, excluding state and teacher retirees
- Finance Assumptions
  - Phased-In Payroll Tax with credit designed to transition businesses with up to \$1 million in qualifying payroll.
  - The credit is phased out on a dollar for dollar basis for every dollar of tax incurred beyond the credit limit.
  - Payroll Tax is 8% annually.
  - The credit is reduced annually until all businesses are phased into the full 8% tax in year four.
  - The credit amount is \$40,000 in year 1, \$25,000 in year 2, and \$12,000 in year 3.
  - Sliding scale Public Premium from 0% - 8.0% up to 624% FPL.
  - Requires all Vermonters over 624% FPL to pay 9.5% of income, capped at \$27,500.
  - Repeals Provider Taxes

**Alternative Financing Concept 2 Continued**

	2017	2018	2019	2020	2021
<b>Spending (All Values in Millions)</b>					
<b>GMC Coverage and Operations</b>	-4,340	-4,579	-4,820	-5,001	-5,177
<b>Current Law Revenue Estimates</b>					
<b>Federal Medicaid Match</b>	1,310	1,364	1,413	1,445	1,505
<b>Federal ACA Waiver Funding</b>	106	118	122	125	132
<b>State Medicaid Dollars</b>	344	341	350	358	366
<b>New Revenue Needed</b>	<b>-2,580</b>	<b>-2,756</b>	<b>-2,935</b>	<b>-3,073</b>	<b>-3,174</b>
<b>Payroll Tax of 8% with Three Year Phase In</b>	526	577	654	1,117	1,140
<b>Public Premium up to 8% at 624% FPL Capped at \$27,500</b>	949	995	1,037	1,047	1,055
<b>GMC Fund Fiscal Position</b>	<b>-1,105</b>	<b>-1,184</b>	<b>-1,244</b>	<b>-909</b>	<b>-979</b>

### **Alternative Finance Concept 3**

- Coverage Assumptions
  - 94 AV Plan
  - Population assumptions consistent with main body of report, including:
    - Vermont residents
    - Commuters
    - Federal employees
    - Wrap of employer sponsored insurance
    - Population excludes TRICARE and Non-Medicare retirees, excluding state and teacher retirees
- Finance Assumptions
  - 12% payroll tax on all Vermont businesses on their qualifying Vermont payroll, no exceptions and no transitions.
  - Sliding scale Public Premium from 0% - 9% up to 400% FPL.
  - Requires all Vermonters at or above 400% FPL to pay 9% of income, capped at \$27,500.
  - Repeals Provider Taxes

### **Alternative Financing Concept 3 Continued**

	2017	2018	2019	2020	2021
<b>Spending (All Values in Millions)</b>					
<b>GMC Coverage and Operations</b>	-4,340	-4,579	-4,820	-5,001	-5,177
<b>Current Law Revenue Estimates</b>					
<b>Federal Medicaid Match</b>	1,310	1,364	1,413	1,445	1,505
<b>Federal ACA Waiver Funding</b>	106	118	122	125	132
<b>State Medicaid Dollars</b>	344	341	350	358	366
<b>New Revenue Needed</b>	<b>-2,580</b>	<b>-2,756</b>	<b>-2,935</b>	<b>-3,073</b>	<b>-3,174</b>
<b>Payroll Tax of 12%</b>	1,576	1,609	1,642	1,676	1,710
<b>Public Premium up to 9% above 400% FPL capped at \$27,500</b>	1,191	1,247	1,298	1,311	1,320
<b>GMC Fund Fiscal Position</b>	<b>187</b>	<b>100</b>	<b>5</b>	<b>-86</b>	<b>-144</b>

#### **Alternative Finance Concept 4**

- Coverage Assumptions
  - 80 AV Plan
  - Population assumptions consistent with main body of report, including:
    - Vermont residents
    - Commuters
    - Federal employees
    - Wrap of employer sponsored insurance
    - Population excludes TRICARE and Non-Medicare retirees, excluding state and teacher retirees
- Finance Assumptions
  - Phased-In Payroll Tax with credit designed to transition businesses with up to \$1 million in qualifying payroll.
  - The credit is phased out on a dollar for dollar basis for every dollar of tax incurred beyond the credit limit.
  - Payroll Tax is 13% in years one through three and 9.5% in years four and five.
  - The credit is reduced annually until all businesses are phased into the full 9.5% tax in year four.
  - The credit amount is \$65,000 in year 1, \$32,500 in year 2, and \$16,250 in year 3.
  - Sliding scale Public Premium from 0% - 9.5% up to 400% FPL.
  - Requires all Vermonters at or above 400% FPL to pay 9.5% of income, capped at \$27,500.
  - Repeals Provider Taxes

**Alternative Finance Concept 4 Continued**

	2017	2018	2019	2020	2021
<b>Spending (All Values in Millions)</b>					
<b>GMC Coverage and Operations</b>	-3,751	-4,000	-4,291	-4,452	-4,613
<b>Current Law Revenue Estimates</b>					
<b>Federal Medicaid Match</b>	1,294	1,344	1,400	1,432	1,491
<b>Federal ACA Waiver Funding</b>	106	118	122	125	132
<b>State Medicaid Dollars</b>	344	341	350	358	366
<b>New Revenue Needed</b>	<b>-2,007</b>	<b>-2,197</b>	<b>-2,419</b>	<b>-2,537</b>	<b>-2,624</b>
<b>Payroll Tax Starting at 13% and Phasing in to 9.5%</b>	886	983	1,102	1,327	1,354
<b>Public Premium up to 9.5% above 400% FPL capped at \$27,500</b>	1,153	1,237	1,340	1,354	1,365
<b>GMC Fund Fiscal Position</b>	<b>32</b>	<b>23</b>	<b>23</b>	<b>144</b>	<b>95</b>



## **Alternative Finance Concept 5**

- Coverage Assumptions
  - 80 AV Plan
  - Population assumptions consistent with main body of report, including:
    - Vermont residents
    - Commuters
    - Federal employees
    - Wrap of employer sponsored insurance
    - Population excludes TRICARE and Non-Medicare retirees, excluding state and teacher retirees
- Finance Assumptions
  - 9.5% payroll tax on all Vermont businesses on their qualifying Vermont payroll, no exceptions and no transitions.
  - Sliding scale Public Premium from 0% - 8.0% up to 400% FPL.
  - Requires all Vermonters at or above 400% FPL to pay 8.0% of income, capped at \$27,500.
  - Repeals Provider Taxes

**Alternative Finance Concept 5 Continued**

	2017	2018	2019	2020	2021
<b>Spending (All Values in Millions)</b>					
<b>GMC Coverage and Operations</b>	-3,751	-4,000	-4,291	-4,452	-4,613
<b>Current Law Revenue Estimates</b>					
<b>Federal Medicaid Match</b>	1,294	1,344	1,400	1,432	1,491
<b>Federal ACA Waiver Funding</b>	106	118	122	125	132
<b>State Medicaid Dollars</b>	344	341	350	358	366
<b>New Revenue Needed</b>	<b>-2,007</b>	<b>-2,197</b>	<b>-2,419</b>	<b>-2,537</b>	<b>-2,624</b>
<b>Payroll Tax at 9.5%</b>	1,248	1,274	1,300	1,327	1,354
<b>Public Premium up to 8.0% above 400% FPL capped at \$27,500</b>	994	1,068	1,158	1,170	1,181
<b>GMC Fund Fiscal Position</b>	<b>235</b>	<b>145</b>	<b>39</b>	<b>-40</b>	<b>-89</b>

## **Alternative Finance Concept 6**

- Coverage Assumptions
  - 80 AV Plan
  - Population assumptions consistent with main body of report, including:
    - Vermont residents
    - Commuters
    - Federal employees
    - Wrap of employer sponsored insurance
    - Population excludes TRICARE and Non-Medicare retirees, excluding state and teacher retirees
- Finance Assumptions
  - 11.5% payroll tax on all Vermont businesses on their qualifying Vermont payroll, no exceptions and no transitions.
  - Sliding scale Public Premium from 0% - 9.5% up to 400% FPL.
  - Requires all Vermonters at or above 400% FPL to pay 9.5% of income, capped at \$27,500.
  - Repeals Provider Taxes

**Alternative Finance Concept 6 Continued**

	2017	2018	2019	2020	2021
<b>Spending (All Values in Millions)</b>					
<b>GMC Coverage and Operations</b>	-3,751	-4,000	-4,291	-4,452	-4,613
<b>Current Law Revenue Estimates</b>					
<b>Federal Medicaid Match</b>	1,294	1,344	1,400	1,432	1,491
<b>Federal ACA Waiver Funding</b>	106	118	122	125	132
<b>State Medicaid Dollars</b>	344	341	350	358	366
<b>New Revenue Needed</b>	<b>-2,007</b>	<b>-2,197</b>	<b>-2,419</b>	<b>-2,537</b>	<b>-2,624</b>
<b>Payroll Tax at 9.5%</b>	1,510	1,542	1,574	1,606	1,639
<b>Public Premium up to 9.5% above 400% FPL capped at \$27,500</b>	1,153	1,237	1,340	1,354	1,365
<b>GMC Fund Fiscal Position</b>	<b>656</b>	<b>582</b>	<b>495</b>	<b>423</b>	<b>380</b>

## **Alternative Finance Concept 7**

- Coverage Assumptions
  - 80 AV Plan with standard deductible plan design
  - Population assumptions consistent with main body of report, including:
    - Vermont residents
    - Commuters
    - Federal employees
    - Wrap of employer sponsored insurance
    - Population excludes TRICARE and Non-Medicare retirees, excluding state and teacher retirees
- Finance Assumptions
  - 9.5% payroll tax on all Vermont businesses on their qualifying Vermont payroll, no exceptions and no transitions.
  - Sliding scale Public Premium from 0% - 8.0% up to 400% FPL.
  - Requires all Vermonters at or above 400% FPL to pay 8.0% of income, capped at \$27,500.
  - Repeals Provider Taxes

**Alternative Finance Concept 7 Continued**

	2017	2018	2019	2020	2021
<b>Spending (All Values in Millions)</b>					
<b>GMC Coverage and Operations</b>	-3,773	-4,027	-4,320	-4,482	-4,643
<b>Current Law Revenue Estimates</b>					
<b>Federal Medicaid Match</b>	1,293	1,344	1,400	1,432	1,491
<b>Federal ACA Waiver Funding</b>	106	118	122	125	132
<b>State Medicaid Dollars</b>	344	341	350	358	366
<b>New Revenue Needed</b>	<b>-2,030</b>	<b>-2,224</b>	<b>-2,448</b>	<b>-2,567</b>	<b>-2,654</b>
<b>Payroll Tax at 9.5%</b>	1,248	1,274	1,300	1,327	1,354
<b>Public Premium up to 9.5% above 400% FPL capped at \$27,500</b>	992	1,067	1,158	1,170	1,181
<b>GMC Fund Fiscal Position</b>	<b>210</b>	<b>117</b>	<b>10</b>	<b>-70</b>	<b>-119</b>

### **Alternative Finance Concept 8**

- Coverage Assumptions
  - 94 AV Plan
  - Alternative coverage population
    - No commuters
    - No federal employees
    - No wrap of employer sponsored insurance
- Finance Assumptions
  - 8.0 % payroll tax on all Vermont businesses on their qualifying Vermont payroll, no exceptions and no transitions.
  - Sliding scale Public Premium from 0% - 8% of income, depending on income and family size. Sliding scale covers 90% of Vermont households.
  - Requires all Vermonters at or above 624% FPL to pay 8.0% of income, capped at \$27,500.
  - Retains Provider Taxes

### **Alternative Finance Concept 8 Continued**

	2017	2018	2019	2020	2021
<b>Spending (All Values in Millions)</b>					
<b>GMC Coverage and Operations</b>	-3,792	-4,008	-4,225	-4,381	-4,543
<b>Current Law Revenue Estimates</b>					
<b>Federal Medicaid Match</b>	1,291	1,344	1,392	1,424	1,483
<b>Federal ACA Waiver Funding</b>	106	118	122	125	132
<b>State Medicaid Dollars</b>	502	509	529	549	570
<b>New Revenue Needed</b>	<b>-1,893</b>	<b>-2,037</b>	<b>-2,182</b>	<b>-2,283</b>	<b>-2,358</b>
<b>Payroll Tax of 8%</b>	1,051	1,073	1,095	1,117	1,140
<b>Public Premium up to 8% at 624% FPL Capped at \$27,500</b>	803	847	885	896	906
<b>GMC Fund Fiscal Position</b>	<b>-39</b>	<b>-117</b>	<b>-202</b>	<b>-270</b>	<b>-312</b>

### Alternative Finance Concept 9

- Coverage Assumptions
  - 94 AV Plan
  - Alternative coverage population
    - No commuters
    - No federal employees
    - No wrap of employer sponsored insurance
- Finance Assumptions
  - 9.5 % payroll tax on all Vermont businesses on their qualifying Vermont payroll, no exceptions and no transitions.
  - Sliding scale Public Premium from 0% - 8% of income, depending on income and family size.
  - Requires all Vermonters at or above 400% FPL to pay 8.0% of income, capped at \$27,500.
  - Retains Provider Taxes

### Alternative Finance Concept 9 Continued

	2017	2018	2019	2020	2021
<b>Spending (All Values in Millions)</b>					
<b>GMC Coverage and Operations</b>	-3,792	-4,008	-4,225	-4,381	-4,543
<b>Current Law Revenue Estimates</b>					
<b>Federal Medicaid Match</b>	1,291	1,344	1,392	1,424	1,483
<b>Federal ACA Waiver Funding</b>	106	118	122	125	132
<b>State Medicaid Dollars</b>	502	509	529	549	570
<b>New Revenue Needed</b>	<b>-1,893</b>	<b>-2,037</b>	<b>-2,182</b>	<b>-2,283</b>	<b>-2,358</b>
<b>Payroll Tax of 9.5%</b>	1,248	1,274	1,300	1,327	1,354
<b>Public Premium up to 8% at 400% FPL Capped at \$27,500</b>	911	960	1,002	1,015	1,026
<b>GMC Fund Fiscal Position</b>	<b>266</b>	<b>197</b>	<b>120</b>	<b>59</b>	<b>22</b>



**Alternative Finance Concept 10**

- Coverage Assumptions
  - 94 AV Plan
  - Alternative coverage population
    - No commuters
    - No federal employees
    - No wrap of employer sponsored insurance
- Finance Assumptions
  - 9.5 % payroll tax on all Vermont businesses on their qualifying Vermont payroll, no exceptions and no transitions.
  - Sliding scale Public Premium from 0% - 8% of income, depending on income and family size.
  - Requires all Vermonters at or above 500% FPL to pay 8.0% of income, capped at \$27,500.
  - Retains Provider Taxes

**Alternative Finance Concept 10 Continued**

	2017	2018	2019	2020	2021
<b>Spending (All Values in Millions)</b>					
<b>GMC Coverage and Operations</b>	-3,792	-4,008	-4,225	-4,381	-4,543
<b>Current Law Revenue Estimates</b>					
<b>Federal Medicaid Match</b>	1,291	1,344	1,392	1,424	1,483
<b>Federal ACA Waiver Funding</b>	106	118	122	125	132
<b>State Medicaid Dollars</b>	502	509	529	549	570
<b>New Revenue Needed</b>	<b>-1,893</b>	<b>-2,037</b>	<b>-2,182</b>	<b>-2,284</b>	<b>-2,359</b>
<b>Payroll Tax of 9.5%</b>	1,248	1,274	1,300	1,327	1,354
<b>Public Premium up to 8% at 500% FPL Capped at \$27,500</b>	861	908	947	960	971
<b>GMC Fund Fiscal Position</b>	<b>216</b>	<b>145</b>	<b>65</b>	<b>3</b>	<b>-11</b>

### **Alternative Finance Concept 11**

- Coverage Assumptions
  - 94 AV Plan
  - Alternative coverage population
    - No commuters
    - No federal employees
    - No wrap of employer sponsored insurance
- Finance Assumptions
  - 8.95 % payroll tax on all Vermont businesses on their qualifying Vermont payroll, no exceptions and no transitions.
  - Sliding scale Public Premium from 0% - 8% of income, depending on income and family size.
  - Requires all Vermonters at or above 624% FPL to pay 8.0% of income capped at \$27,500. Sliding scale covers 90% of Vermont households.
  - Retains Provider Taxes

### **Alternative Finance Concept 11 Continued**

	2017	2018	2019	2020	2021
<b>Spending (All Values in Millions)</b>					
<b>GMC Coverage and Operations</b>	-3,792	-4,008	-4,225	-4,381	-4,543
<b>Current Law Revenue Estimates</b>					
<b>Federal Medicaid Match</b>	1,291	1,344	1,392	1,424	1,483
<b>Federal ACA Waiver Funding</b>	106	118	122	125	132
<b>State Medicaid Dollars</b>	502	509	529	549	570
<b>New Revenue Needed</b>	<b>-1,893</b>	<b>-2,037</b>	<b>-2,182</b>	<b>-2,284</b>	<b>-2,359</b>
<b>Payroll Tax of 8.95%</b>	1,175	1,200	1,225	1,250	1,275
<b>Public Premium up to 8% at 624% FPL Capped at \$27,500</b>	803	847	885	896	906
<b>GMC Fund Fiscal Position</b>	<b>85</b>	<b>10</b>	<b>-72</b>	<b>-138</b>	<b>-178</b>

**Alternative Finance Concept 12**

- Coverage Assumptions
  - 87 AV Plan
  - Alternative coverage population
    - No commuters
    - No federal employees
    - No wrap of employer sponsored insurance
- Finance Assumptions
  - 8 % payroll tax on all Vermont businesses on their qualifying Vermont payroll, no exceptions and no transitions.
  - Sliding scale Public Premium from 0% - 8% of income, depending on income and family size.
  - Requires all Vermonters at or above 624% FPL to pay 8.0% of income, capped at \$27,500. Sliding scale covers 90% of Vermont households.
  - Retains Provider Taxes

**Alternative Finance Concept 12 Continued**

	2017	2018	2019	2020	2021
<b>Spending (All Values in Millions)</b>					
<b>GMC Coverage and Operations</b>	-3,563	-3,785	-4,018	-4,168	-4,322
<b>Current Law Revenue Estimates</b>					
<b>Federal Medicaid Match</b>	1,284	1,335	1,386	1,418	1,476
<b>Federal ACA Waiver Funding</b>	106	118	122	125	132
<b>State Medicaid Dollars</b>	502	509	529	549	570
<b>New Revenue Needed</b>	<b>-1,671</b>	<b>-1,823</b>	<b>-1,981</b>	<b>-2,076</b>	<b>-2,144</b>
<b>Payroll Tax of 8%</b>	1,051	1,073	1,095	1,117	1,140
<b>Public Premium up to 8% at 624% FPL Capped at \$27,500</b>	771	825	875	888	897
<b>GMC Fund Fiscal Position</b>	<b>151</b>	<b>75</b>	<b>-11</b>	<b>-71</b>	<b>-107</b>

### **Alternative Finance Concept 13**

- Coverage Assumptions
  - 80 AV Plan with standard deductible plan design
  - Alternative coverage population
    - No commuters
    - No federal employees
    - No wrap of employer sponsored insurance
- Finance Assumptions
  - 8% payroll tax on all Vermont businesses on their qualifying Vermont payroll, no exceptions and no transitions.
  - Sliding scale Public Premium from 0% - 8% of income, depending on income and family size.
  - Requires all Vermonters at or above 624% FPL to pay 8.0% of income, capped at \$27,500. Sliding scale covers 90% of Vermont households.
  - Retains Provider Taxes

### **Alternative Finance Concept 13 Continued**

	2017	2018	2019	2020	2021
<b>Spending (All Values in Millions)</b>					
<b>GMC Coverage and Operations</b>	-3,354	-3,559	-3,806	-3,949	-4,097
<b>Current Law Revenue Estimates</b>					
<b>Federal Medicaid Match</b>	1,274	1,324	1,379	1,411	1,469
<b>Federal ACA Waiver Funding</b>	106	118	122	125	132
<b>State Medicaid Dollars</b>	502	509	529	549	570
<b>New Revenue Needed</b>	<b>-1,472</b>	<b>-1,608</b>	<b>-1,776</b>	<b>-1,864</b>	<b>-1,926</b>
<b>Payroll Tax of 9.5%</b>	1,051	1,073	1,095	1,117	1,140
<b>Public Premium up to 8% at or above 624% FPL Capped at \$27,500</b>	754	807	874	886	897
<b>GMC Fund Fiscal Position</b>	<b>333</b>	<b>272</b>	<b>193</b>	<b>139</b>	<b>111</b>

**Alternative Finance Concept 14**

- Coverage Assumptions
  - 80 AV Plan
  - Alternative coverage population
    - No commuters
    - No federal employees
    - No wrap of employer sponsored insurance
- Finance Assumptions
  - 8% payroll tax on all Vermont businesses on their qualifying Vermont payroll, no exceptions and no transitions.
  - Sliding scale Public Premium from 0% - 8% of income, depending on income and family size.
  - Requires all Vermonters at or above 624% FPL to pay 8.0% of income, capped at \$27,500.
  - Retains Provider Taxes

**Alternative Finance Concept 14 Continued**

	2017	2018	2019	2020	2021
<b>Spending (All Values in Millions)</b>					
<b>GMC Coverage and Operations</b>	-3,343	-3,550	-3,796	-3,938	-4,085
<b>Current Law Revenue Estimates</b>					
<b>Federal Medicaid Match</b>	1,275	1,324	1,379	1,411	1,469
<b>Federal ACA Waiver Funding</b>	106	118	122	125	132
<b>State Medicaid Dollars</b>	502	509	529	549	570
<b>New Revenue Needed</b>	<b>-1,460</b>	<b>-1,599</b>	<b>-1,766</b>	<b>-1,853</b>	<b>-1,914</b>
<b>Payroll Tax of 9.5%</b>	1,051	1,073	1,095	1,117	1,140
<b>Public Premium up to 8% at or above 624% FPL Capped at \$27,500</b>	754	807	873	886	897
<b>GMC Fund Fiscal Position</b>	<b>345</b>	<b>281</b>	<b>202</b>	<b>150</b>	<b>123</b>

## Appendix F-4: GMC Public Premium Tax Exclusions and Credits

### Medicare

Medicare enrollees would be exempt from the public premium. Joint filers where one member of a household is a Medicare enrollee and others are not (split households) would pay a reduced tax, one half of the normal tax liability. The Medicare exclusion could be revisited during a subsequent phase of GMC where Medicare enrollees may receive wrap around coverage from GMC.

**Table F-4.1: Medicare, Split Household, and Non-Medicare Public Premium Tax Liability**

Taxpayer	Medicare Household	Split Household	Non-Medicare Household
Income	\$68,848	\$68,848	\$68,848
Family Size	2	2	2
FPL	400%	400%	400%
Public Premium	\$0	\$3,147	\$6,294

An additional policy question is how to treat Medicare and Medicare split households the year they enroll in Medicare. The legislature could devise a credit system, make taxpayers pay a pro rata share of the tax based on time in the system, or treat Medicare recipients as enrolled for the full year during the year of Medicare enrollment.

### TRICARE

Active duty and retired military service members with active TRICARE coverage would be enrolled in GMC but have their enrollment suspended for any period of time where they have TRICARE coverage. TRICARE recipients would be allowed a non-refundable tax credit for each month where they are enrolled in TRICARE coverage. The tax calculation would work in the following way for TRICARE recipients.

- Determine public premium tax liability
- Divide liability by 12 to determine credit amount per month of TRICARE coverage.
- Determine number of months covered by TRICARE
- Multiply credit amount and months enrolled in TRICARE to determine full credit value
- Subtract credit amount from public premium
- Pay remaining tax liability.

**Table F-4.2: Example of TRICARE Recipient Public Premium Tax Liability**

<b>Taxpayer</b>	<b>TRICARE Household #1</b>	<b>TRICARE Household #2</b>
<b>Income</b>	\$55,462	\$55,462
<b>Family Size</b>	4	4
<b>FPL</b>	200%	200%
<b>Public Premium</b>	\$1,973	\$1,973
<b>Monthly Credit Amount (public premium/12)</b>	\$164.42	\$164.42
<b>Months Enrolled in TRICARE</b>	6	12
<b>Credit Value</b>	\$987	\$1,973
<b>Public Premium Tax Liability</b>	\$986	\$0

As shown above, someone with TRICARE coverage for an entire year would be exempt from the tax.

### Non-Medicare Retirees, Excluding State and Teacher Retirees

There would be a limited credit for Non-Medicare retirees, excluding state and teacher retirees. Eligible retirees, generally under age 65, would be enrolled in GMC but have their enrollment suspended for any period of time where they have employer-sponsored retiree health care coverage. These taxpayers would be allowed a non-refundable tax credit for each month where they have employer coverage. The tax calculation would work in the following way, mirroring the TRICARE credit.

- Determine public premium tax liability
- Divide liability by 12 to determine credit amount per month of employer retiree coverage.
- Determine number of months covered by employer retiree coverage
- Multiply credit amount and months enrolled in employer retiree coverage
- Subtract credit amount from public premium
- Pay remaining tax liability.

The credit would be aimed primarily at existing federal retirees and those with existing private sector employer-sponsored retiree coverage. In a sense, the credit would be an attempt to grandfather these employees who are close to Medicare eligibility and already relying on their retiree coverage. This credit should sunset by January 1<sup>st</sup>, 2027 to reflect the fact that Vermont residents would have time to plan for retirement considering the impact of GMC coverage and taxes. State and teacher retirees would be ineligible for the credit, as the State retiree system would be readjusted to account for the transition to Green Mountain Care.

**Table F-4.3: Limited Non-Medicare Retiree Credit Recipient Public Premium Tax Liability**

<b>Taxpayer</b>	<b>Retiree Household #1</b>	<b>Retiree Household #2</b>
<b>Income</b>	\$55,462	\$55,462
<b>Family Size</b>	1	1
<b>FPL</b>	200%	200%
<b>Public Premium</b>	\$1,973	\$1,973
<b>Monthly Credit Amount (public premium/12)</b>	\$164.42	\$164.42
<b>Months Enrolled in TRICARE</b>	6	12
<b>Credit Value</b>	\$987	\$1,973
<b>Public Premium Tax Liability</b>	\$986	\$0

As shown above, retirees with coverage for an entire year would be exempt from the tax.