

Equitable Financing Plan For Vermont's Universal Healthcare System



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February 2015

Vermont Workers' Center
&
The National Economic and Social Rights Initiative

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1. INTRODUCTION

Healthcare financing is a matter of justice and human rights. The system of private, market-based payment for healthcare has caused a deep crisis of inequity that the state of Vermont must address now. The Healthcare Is a Human Right (HCHR) Campaign presents this proposal for public healthcare financing because we speak for thousands of people affected by this crisis. Too many people cannot use their limited insurance plans to get adequate care, struggle with high out-of-pocket costs and unpaid bills, and have unmet health needs. People's health and wellbeing are on the line.

Market-based health insurance financing is profoundly inequitable: low-income people pay proportionally more for healthcare than the wealthy, while making do with low-value insurance plans.¹ One in five people are struggling with medical bills, while ten BCBSVT executives are paid up to half a million dollars each.² This failing system-- with its different and unequal insurance products, different and unequal prices for health services, and different and unequal access to doctors-- costs Vermont a fortune. Healthcare spending is growing faster than our GDP, and this trend is projected to continue if we fail to act.³ We can no longer afford to protect and perpetuate a healthcare system that is both wasteful and unjust.

Vermont is in a prime position to implement a publicly financed healthcare system that guarantees access to care for all, increases equity, and reduces costs. To do so, we do not require new money; we need to share existing payments more equitably. In this report, the HCHR Campaign shows how this can be achieved in our state by 2017. We develop an equitable healthcare financing plan that is grounded in Governor Shumlin's proposals and provides solutions to the questions raised in the Governor's report. We present cost and revenue models that demonstrate that it is not only possible, but financially and economically advantageous to implement a publicly financed healthcare system in Vermont.

HUMAN RIGHTS PRINCIPLES FOR HEALTHCARE FINANCING

The HCHR Campaign has built a people's movement for the human right to healthcare since 2008. Our goal is to realize the human right to healthcare in Vermont by establishing a universal healthcare system that provides healthcare as a public good for all. This system must be guided by the human rights principles of universality, equity, transparency, accountability and participation. We successfully advocated for the incorporation of these principles into Act 48, Vermont's universal healthcare law, passed in 2011.

Act 48 set Vermont on the road to establishing a publicly financed healthcare system, Green Mountain Care (GMC), by 2017. It did not prescribe a financing mechanism but stated that the "financing of health care in Vermont must be sufficient, fair, predictable, transparent, sustainable, and shared equitably."⁴

¹ Brian Robertson and Mark Noyes, *2014 Vermont Household Health Insurance Survey Initial Findings* (Vermont Department of Financial Regulation Insurance Division, 2014).

² Blue Cross Blue Shield of Vermont, *Annual Statement* (Vermont Department of Financial Regulation, 2013).

³ Al Gobeille, "The Senate Committee on Finance," February 4, 2015,

<http://legislature.vermont.gov/assets/Documents/2016/WorkGroups/Senate%20Finance/Health%20Care/Green%20Mountain%20Care%20Board/W~Al%20Gobeille~Presentation%20to%20Senate%20Finance~2-4-2015.pdf>.

⁴ 18 VSA § 9371, *An Act Relating to a Universal and Unified Health System*, 2011,

<http://www.leg.state.vt.us/statutes/fullsection.cfm?Title=18&Chapter=220&Section=09371>.

In 2012, the HCHR Campaign published a healthcare financing report that analyzed the compatibility of various financing mechanisms and revenue sources with human rights standards⁵. We used the five basic human rights principles to develop detailed financing standards to guide the design of the GMC financing plan. To ensure **universality**, financial resources must follow health needs, and the financing plan has to ensure the sufficiency of funds. To ensure **equity**, financing has to be public, using progressive taxes. Access to care should be free at the point of service. To ensure **accountability, transparency** and **participation**, healthcare financing and administration has to move from the private to the public sector and support people's participation in governance.

Guided by these principles, the HCHR Campaign's 2012 report suggested a progressive income tax, a wealth tax and a graduated payroll tax on businesses to finance GMC. We suggested that decision-makers ground their policy choices in the human rights standards, which are reflected in Act 48. Yet when the Governor's plan was finally published on December 30, 2014 - missing Act 48's deadline of January 2013 by almost two years - it was not based on principles. Although the Governor proposed income and payroll taxes for healthcare, these taxes were not designed to function in a sufficiently equitable way. The failure to adequately take into account individuals' and businesses' ability to pay contributed to dooming the Governor's proposals – an unnecessary fate for an otherwise sound plan. Guided by human rights principles, the HCHR Campaign seeks to propose necessary design changes to the Governor's plan, so that it can be used to guide the implementation of GMC.

HUMAN RIGHTS ASSESSMENT OF THE GOVERNOR'S PROPOSALS

The HCHR Campaign conducted a basic human rights assessment of the Governor's healthcare financing proposals. By flagging issue areas in need of better solutions, this assessment offers a guide for the subsequent development of a financing plan that improves and expands on the Governor's proposals.

Human Rights Assessment of Governor Shumlin's Financing Plan:

Universality

- **Populations included:** The Governor's plan is inclusive, though for legal reasons it carves out the Medicare population. It offers no Medicare wrap-around for seniors.
- **Health services provided:** The Governor's plan excludes dental, vision, hearing and long-term care.

Equity

- **Out-of-pocket costs:** At an actuarial value of 94% GMC greatly improves on commercial plans, but low-income and sick people would still struggle with co-pays. Seniors, in particular, would continue to face high out-of-pocket costs.
- **Income Tax:** The Governor's income tax proposal is more equitable than private premiums. However, the tax rate rises steeply for middle income people, while payments are capped for the wealthy.
- **Payroll Tax:** The Governor's payroll tax is flat, which means businesses would not contribute based on their ability to pay.

Accountability

- **GMC Operations:** The Governor's proposed public utility model for healthcare administration would enable better regulation but also monopolizes the position of a private insurer and guarantees operating surpluses.

⁵ Healthcare is a Human Right Campaign, *Toward Equitable Financing of Green Mountain Care*, December 10, 2012, <http://www.workerscenter.org/sites/default/files/gmcfiancingplan-vwcproposalfinal.pdf>.

- **System costs:** Savings from future rate setting for healthcare prices are not explicitly calculated. Drug price negotiation is not included.

Transparency

- **Income and payroll taxes:** Taxes are more transparent than insurance premiums and other hidden fees.
- **System costs:** The Governor’s plan assumes administrative costs will have close to commercial-level overheads (7%); and costs will grow at 4% annually. The assumptions and data points behind these projections and trends are unclear.

Participation

- **Health services provided:** The Governor’s exclusion of dental, vision and hearing care does not take into account the health needs expressed by people in consultations.
- **GMC Operations:** A public utility model does not enable meaningful public participation in governance.

2. METHODOLOGY

Over the past decade, many studies, analyses, designs, projections, and models have examined the feasibility of universal, publicly financed healthcare in Vermont. Produced by academics, consultants and government officials, this body of work offers a rich source of information and proposals for moving to the implementation stage of GMC. The HCHR campaign draws on this work to produce a concrete financing plan for implementing GMC in the timeframe set out by Act 48. Our contribution consists of selecting the most relevant data for bringing a financing plan to life in a real world setting and putting forth solutions that are viable and politically possible.

We consider the most recent report, the Governor’s proposal, as the blueprint for GMC; indeed we believe the decision to implement public financing could have been made solely on the evidence provided by that report, despite its shortcomings⁶. Since this did not happen, we chose to develop solutions to the problems raised in the Governor’s report, and we put these forward here to facilitate the implementation of public healthcare financing. In other words, we seek to make the Governor’s report more useful for moving GMC forward. This is why we have maintained comparability with the Governor’s report wherever possible and why we explain our improvements next to his proposals. In addition to drawing on the Governor’s report and appendices, we also received advice from his team, although two public records requests submitted by the campaign were not filled. Other key data sources for this report are the RAND report⁷, the UMass/Wakely report⁸, and the Hsiao report⁹.

We used primary data sources for our revenue proposals, mainly from the IRS, the Bureau of Labor Statistics and the Vermont Department of Labor. We took the greatest departure from the Governor’s report with the development of a new payroll tax model, with the pro bono help of an expert data scientist.

⁶ Peter Shumlin et al., *Green Mountain Care: A Comprehensive Model for Building Vermont’s Universal Healthcare System*, December 30, 2014,

<http://hcr.vermont.gov/sites/hcr/files/2014/GMCRReport2014/GMC%20FINAL%20REPORT%20123014.pdf>.

⁷ Christine Eibner et al., *The Economic Incidence of Healthcare Spending in Vermont*, January 2015, http://www.rand.org/content/dam/rand/pubs/research_reports/RR900/RR901/RAND_RR901.pdf.

⁸ University of Massachusetts Medical School Center for Health Law and Economics, and, and Wakely Consulting Group, Inc., *State of Vermont Health Care Financing Plan Beginning Calendar Year 2017 Analysis*, January 24, 2013.

⁹ William C. Hsiao, Steven Kappel, and Jonathan Gruber, *Act 128 Health System Reform Design: Achieving Affordable Universal Health Care in Vermont*, February 17, 2011.

DATA LIMITATIONS

Unlike the Administration, we did not have access to the econometric microsimulation model used to develop the Governor's projections and trend them forward. Instead, we developed our revenue proposals using the best available data, creating a new data model for a different type of payroll tax, and cross-checking our results against the Governor's projections. While we had to limit our estimates to 2017, we are confident that our plan is viable in the longer term, since we project a very robust fiscal position for the GMC Fund in that year. We had no access to the primary data used by the Administration to prepare the Governor's report; instead, we used the secondary sources listed above, supplemented with publicly available primary data. Throughout the report we explain the methodological limitations faced by the different parts of our plan.

We intend our proposals to revive a serious planning and transition process for public healthcare financing, and we expect that this will be supported by the Joint Fiscal Office (JFO). We recommend that the JFO and the Administration take our proposals and conduct their own cost and revenue analysis to ensure that the best and most updated data is applied to support the implementation of GMC.

3. POPULATIONS AND THE PRINCIPLE OF UNIVERSALITY

The principle of universality is an essential foundation of human rights. All people, without exception, are entitled to exercise their human rights, including the right to healthcare. This basic principle is undermined by the federal government's failure to enact a national universal healthcare system, and leaves states challenged to establish subnational systems that, by definition, limit the population scope to state residents.

In Vermont, Act 48 adopted this definition of universality: "The purpose of Green Mountain Care is to provide, as a public good, comprehensive, affordable, high-quality, publicly financed health care coverage for all Vermont residents"¹⁰

However, the law also references further federal limitations: populations currently part of federal health programs, specifically Medicare and TRICARE, cannot be automatically included in a state-based program. Federally supported or sponsored programs - Medicaid, CHIP, and federal employees insurance - are more flexible and can be merged with GMC. Since Vermont already has a Medicaid waiver, those populations can be integrated as long as their benefits are not reduced. Federal employees are free to choose their health plans. As a result, our proposal assumes, as does the Governor's, that Medicaid recipients and federal employees will be part of GMC, but that Medicare and TRICARE populations cannot be included without a federal waiver. We recommend that the state redouble its efforts to obtain a Medicare waiver, in particular since the Medicare program has significant gaps that leave many seniors without adequate access to care. This is why, in contrast to the Governor's plan, we propose stopgap measures to increase seniors' access to care, as outlined below.

Wherever legally possible, our proposal follows Act 48's requirement to include all residents, defined as every person living in Vermont, including immigrants with and without documentation¹¹. Unlike the Governor's

¹⁰ 33 V.S.A § 1821, *An Act Relating to a Universal and Unified Health System*, 2011, <http://www.leg.state.vt.us/statutes/fullchapter.cfm?Title=33&Chapter=018>.

¹¹ Green Mountain Care Board, *Report Regarding the Costs and Health Services Provided to Undocumented Immigrants*, January 24, 2013, 7.

proposal, we do not, at this point, seek to expand GMC to residents of other states who work in Vermont, although we offer an option for including people from other states in the future.

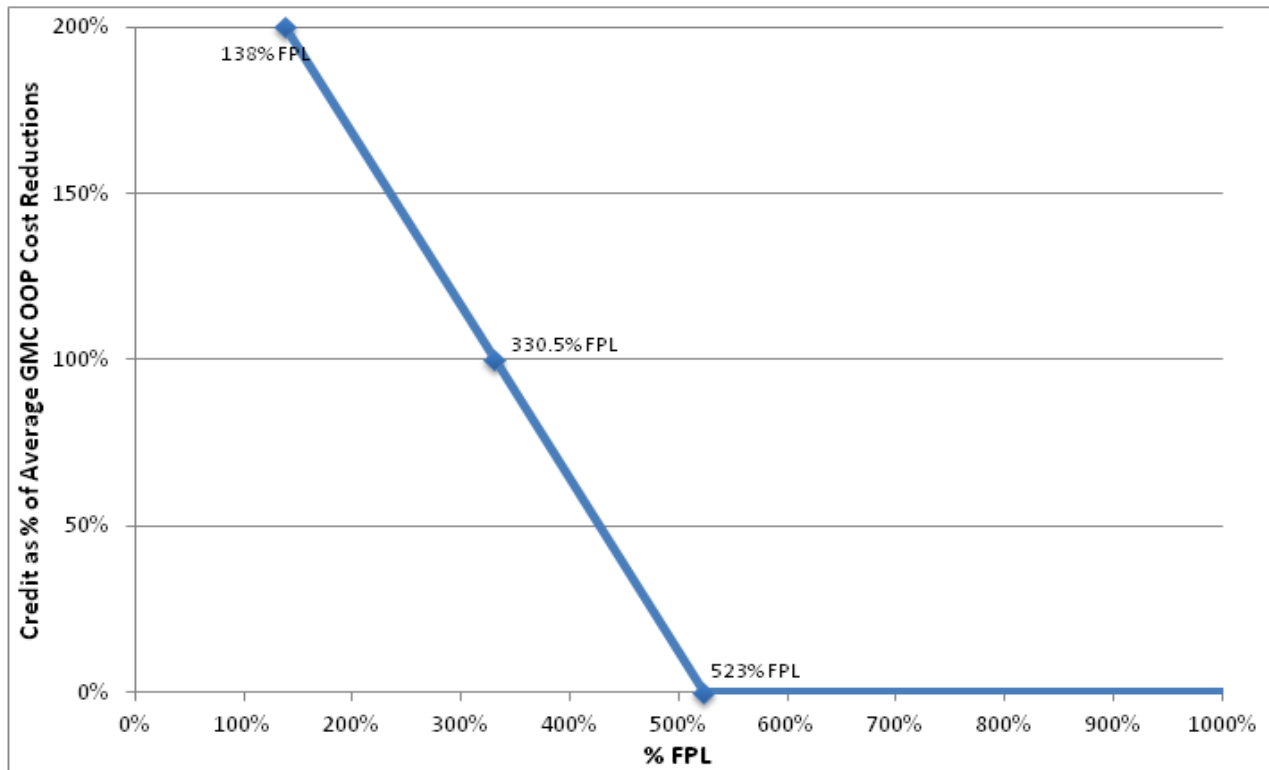
MEDICARE AFFORDABILITY CREDIT

In order to remedy the disparity between access to care for individuals enrolled in Green Mountain Care and those enrolled in Medicare, which has much higher out-of-pocket costs, we propose a Medicare Affordability Credit for seniors with incomes under \$65,000.

Our Medicare Affordability Credit provides out-of-pocket cost relief for those seniors whose primary coverage is Medicare (i.e. not dual eligibles or others with secondary Medicare coverage, who are already eligible for GMC) and whose incomes are under 523% of the Federal Poverty Level. This is how the credit will work:

- GMC provides average savings of \$497 per person per year in out-of-pocket (OOP) costs in 2017 (based on the Governor’s projected \$258 million reduction in OOP Costs)
- Medicare recipients will receive an income-sensitive credit, guided by the general GMC OOP cost reductions, for out-of-pocket costs, provided their income is at or lower than 523% FPL. The credit amount will be determined based on based on a person’s income as a percent of FPL.
- The credit will start at 200% of the cost reduction received by those with Green Mountain Care primary coverage, and will decrease as incomes rise. Figure 4 below shows the credit amount in relation to income, as measured by % FPL.
- The Medicare Affordability Credit will be given to seniors in the form of a preloaded card that can be used at the point of service.

Figure 1. Medicare Affordability Credit



(See Appendix A for Methodology)

OUT-OF-STATE RESIDENTS

The Governor's proposal included residents from other states who work in Vermont. We estimate that the cost of including this population, around 61,000 people, would be approximately \$350,000,000.¹² According to the Governor's modeling outputs, part of the cost would be offset by an income tax contribution from those out-of-state residents of \$150,000,000. We propose including out-of-state residents in a later phase of GMC and prioritize the core population – Vermont residents – as required by Act 48 in the initial establishment of GMC.

4. HEALTH SERVICES AND THE PRINCIPLE OF UNIVERSALITY

The principle of universality in healthcare has two aspects - who is included in the healthcare system and what services are included to ensure people's health. The right to healthcare extends to all people and includes the provision of all needed care. Act 48 requires that comprehensive, medically necessary services are provided to all residents, yet it leaves some specific decisions to the Green Mountain Care Board (GMCB). We assume that the GMCB will undertake a full review of the list of services proposed by the Governor, and we encourage the board to shift away from the insurance practice of listing benefits and instead presume the provision of all necessary care, as is the practice in other universal healthcare systems.

The HCHR Campaign proposes the inclusion of dental, vision and hearing care in GMC, all of which are excluded from the Governor's proposal. We also recommend a phased-in approach for long-term care, starting with a commission on long-term care. Such a commission should design public financing options for long-term care, with a view to phasing in long-term care over the first five years of GMC operations.

DENTAL, VISION, AND HEARING CARE

Dental, vision and hearing care constitute medically necessary healthcare and as such must be part of Green Mountain Care, whose purpose is to provide comprehensive services that include all medically necessary care. The health and financial crisis caused by the widespread lack of access to dental care in particular has been well-documented.¹³ The unjustifiable exclusion of certain body parts from the standard definition of benefits in the current health insurance system has harmed personal and population health alike. The Governor's proposal, however, did not include adult dental, vision and hearing care, although optional scenarios were prepared, based on the requirement in Act 48.

The HCHR Campaign proposes the inclusion of full adult dental, vision and hearing care. In calculating the cost of these services, we were limited to data provided in the Governor's report, as well as the Hsiao and UMass/Wakely reports. We chose the most comprehensive scenario calculated by the Administration¹⁴ (Scenario 2, Appendix, Table B-1.2), and added federal employees (10,000) and employees in need of wrap-

¹² This was calculated by multiplying the average cost PMPM by 12 months per year by the total number of commuters, 61,000.

¹³ Green Mountain Care Board, *Vermont Dental Landscape Study*, JSI Research and Training Institute: Burlington, 2014, http://gmcbboard.vermont.gov/sites/gmcbboard/files/Dental_Landscape_Report.pdf.

¹⁴ Table B-1.2 in Shumlin et al., *Green Mountain Care: A Comprehensive Model for Building Vermont's Universal Healthcare System*, Appendix B-1.

around for their employer-sponsored coverage (31,000)¹⁵ We left all other assumptions in place, including the rather hefty 7% administrative costs built into the per member per month (PMPM) cost.

Table 1. Cost of Adult Dental Care

GMC without Medicaid	
PMPM cost	\$41.40
Estimated GMC Adults	300,150
Subtotal Cost	\$ 149,114,520
Medicaid	
PMPM cost	\$11.80
Estimated GMC Adults	81,822
Subtotal Cost	\$11,600,000
Total 2017 Cost	\$160,714,520

For vision and hearing care we used the only options provided by the Administration, and once again added federal employees and those with ESI.

Table 2. Cost of Adult Vision Care

GMC without Medicaid	
PMPM cost	\$7.80
Estimated GMC Adults	300,150
Subtotal Cost	\$28,094,040
Medicaid (hardware only)	
PMPM cost	\$4.73
Estimated GMC Adults	81,822
Subtotal Cost	\$4,600,000
Total 2017 Cost	\$32,694,040

¹⁵ This led us to overestimating the GMC population in need of these services, since we had insufficient data to subtract children, who already receive dental, vision and hearing care.

Table 2. Cost of Adult Hearing Care

GMC without Medicaid	
PMPM cost	\$0.52
Estimated GMC Enrollees	300,150
Subtotal Cost	\$1,872,936
Medicaid (already covers hearing care)	
PMPM cost	-
Estimated GMC Enrollees	-
Subtotal Cost	-
Total 2017 Cost	\$1,872,936

Providing adult dental, vision and hearing care at the level calculated by the Administration will add another \$195,281,496 to the total cost of GMC.

PHASING OUT USER FEES

The universal provision of care is also challenged by user fees, or cost-sharing, which create barriers to using needed services and result in inequitable access to care.¹⁶ The Governor’s proposed actuarial value of 94%, while appropriately higher than commercial insurance plans, maintains out-of-pocket charges in GMC that disproportionately harm sick people and those with low incomes. The HCHR Campaign proposes a transition to a fully pre-paid, public healthcare system that decouples payment entirely from the use of care, so that healthcare becomes free at the point of service. Transitioning the proposed GMC population to 100% A/V would, according to the Governor’s report, cost \$201 million,¹⁷ and we propose planning this transition as soon as possible.

5. HEALTH SYSTEM OPERATIONS AND THE PRINCIPLE OF ACCOUNTABILITY

Green Mountain Care is a public good and, as such, should be publicly financed and publicly administered. Any private subcontracting arrangement would not only significantly reduce transparency and accountability, but would also be more expensive, as experiences with the Catamount program have shown. The Governor’s proposal appears to take one step in the direction of ending the privatization of healthcare administration by proposing a public utility approach to administering GMC operations. His report suggested that the payment for health services be executed through a public-private partnership with the private partner operating as either a “designated public utility” or a “designated facilitator.” The private partner would be expected to bring

¹⁶ Healthcare is a Human Right Campaign, *Research Brief: Evidence for Adverse Health Effects of out-of-Pocket Costs (“cost-Sharing”)*, December 2014.

¹⁷ Shumlin et al., *Green Mountain Care: A Comprehensive Model for Building Vermont’s Universal Healthcare System*, Appendix B–1.

appropriate financial reserves, expertise in administering coverage and negotiating rates, and access to other provider networks.

This public utility approach essentially warrants the publicly sanctioned and regulated private monopoly that comes with this designation, guaranteeing the regulated private company operating revenues and reasonable returns for investors.¹⁸ In order to improve transparency, accountability, and participation, the HCHR Campaign instead proposes to move healthcare administration from the private to the fully public realm by establishing a public corporation as the administrator of GMC. This proposal is congruous with the mandate to provide publicly financed healthcare “as a public good” for all Vermont residents.¹⁹ Rather than creating an entirely new body, we see the Green Mountain Care Board (GMCB) as best placed to take on this role. With additional powers, it could become a public corporation similar to other Vermont public authorities.

The facilitation of provider relationships and administration of claims through the GMCB is consistent with the powers already granted to the board by Act 48, and will ensure the public participation, transparency, and accountability that is required by GMC principles.²⁰ The GMC Board already is required to:

- Solicit public input (18 VSA §9378),
- Adhere to the state agency procedures relative to rules (18 VSA §9380), including those involving payment reform and cost containment (which are to be issued only after engaging Vermonters and submitting methodologies to the General Assembly (18 VSA §9375)
- Adopt an administrative appeals process (18 VSA §9381)
- Conduct investigations and issue subpoenas (18 VSA §9374(i))
- Establish consumer, patient, business and health care professional advisory groups to provide input and recommendations [18 VSA §9374(e)(1)]
- Seek advice from the Office of Health Care Advocate [18 VSA §9374(f)], and
- Make annual reports to the General Assembly (18 VSA §9375).

The conversion of GMCB to a public corporation could, far more efficiently than a public utility approach, fulfill Act 48’s directives to establish GMC in a “seamless and equitable manner” through a “simplified, uniform, single administrative system.”²¹ Administrative functions unified in a single public corporation and coordinated with the Agency would include a range of tasks, as listed in the Governor’s report. Fifteen function areas are flagged for “further analysis,” among them medical necessity determinations, enrollment, program integrity and customer service. Each of these function areas is, in our opinion, clearly a public responsibility, to be carried out by a public corporation or a public agency.²²

We propose that the GMCB become the successor public corporation to Blue Cross Blue Shield Vermont (BCBSVT), which is a non-profit public asset of Vermont that currently possesses \$214 million in assets, with \$81

¹⁸ 30 VSA §1 et. seq., *An Act Relating to a Universal and Unified Health System*, 2011.

¹⁹ 33 V.S.A § 1821, *An Act Relating to a Universal and Unified Health System*.

²⁰ 18 VSA §9371.

²¹ See 33 VSA §1821 and 18 VSA §9373(5).

²² For example, Act 48’s goal is to “ensure universal access to and coverage for high quality, *medically necessary* health services for all Vermonters.” 18 VSA §9371(1). Historically, privatized determinations of medical necessity have frequently led to unnecessary denials and costly grievance and appeals. Additionally, there is little justification for bifurcating customer service and grievances, with a private entity handling the former and a public agency the latter (as the Governor suggests). Efficiency demands unitary administration of both these functions, as well as fraud and abuse determinations. As the Agency of Human Services already is responsible for GMC eligibility determinations under 33 VSA §1824, efficiency also warrants the Agency handle GMC enrollment as well.

million in liabilities.²³ The roughly \$132 million in surplus it currently maintains could be used to fund the transition to and administration of GMC, were the non-profit company dissolved and the GMCB transformed into a public corporation.

Last year, the General Assembly appeared to anticipate such a conversion by directing the Vermont Department of Financial Regulation to examine the financial and legal considerations of Health Insurance Company dissolution.²⁴ The Department opined that BCBSVT could be dissolved by statute, yet withheld conclusions about asset transference absent a specific proposal.²⁵ It did note, however, that non-profit dissolution customarily warrants the transfer of assets to a charity or public corporation.²⁶ We propose to give the GMC Board the powers to be this corporation.

This approach will reduce GMC operations cost, starting with the insurance reserves included in the Governor's plan. The Governor determined that the state would need to have access to reserves to account for "claims risk" and unexpected slowdowns in the economy. The Administration's actuarial firm, Wakely Consulting Group, estimated that GMC would require between \$70 and \$117 million in reserve capital were it treated identical to an insured product.²⁷ In short, were GMC analyzed under a traditional claims risk analysis, BCBSVT converted assets of \$132 million would easily meet GMC reserve requirements, with \$15 million to spare.

The Governor, however, also pointed out that GMC reserves would have to provide a hedge against slowdowns in state tax collection. Wakely put this total reserve estimate at \$136 million.²⁸ The Governor then took the Wakely estimate and increased the reserve requirement to \$146.2 million, explaining that this would constitute five percent of the amount of state taxes in the GMC fund, comporting with state law requirements. This reserve would not only cover GMC, but would provide an additional and new reserve for Medicaid.

In conclusion, the Governor recommended a one-time bond issue to establish reserves at a hefty \$200 million, which is \$54 million over his own reserve estimate and \$68 million beyond the Wakely estimate. A comparison of these reserve estimates is set forth in Table 4, with a comparison to BCBSVT's assets that would be available through conversion.

²³ BCBSVT's 2013 Annual Statement, on File with the VT Department of Financial Regulation.

²⁴ VT Dept of Financial Regulation, *When A Health Insurer Ceases Business in Vermont, Legal and Financial Considerations* (July 15, 2014), at p. 51.

²⁵ BCBSVT is a creation of state law, See 8 VSA §4511 et. seq.; 8 VSA §4581 et. seq.; and 11B VSA §1 et. seq. In 1984, the Vermont Supreme Court found that BCBSVT "is not a private business operating freely within the competitive marketplace; it is a quasi-public business subject to the regulation of the commissioner." *In re Vt. Health Serv. Corp.*, 144 Vt.617, 482 A.2d 294 (1984). See also n.6, at p. 24. It has no investors, but simply a governing Board of Directors

²⁶ BCBSVT itself sought a conversion to profit status in 2002, but the legislature refused.

²⁷ Green Mountain Care: A Comprehensive Model for Building Vermont's Universal Health Care System, Submitted by Governor Peter Shumlin to the Vermont State Legislature, December 30, 2014, (hereinafter "Governor's Plan") p26.

²⁸ Wakely Letter to Michael Costa, Dec. 24, 2014. Governor's Report, Appendix D.

Table 3. Reserves Needed for GMC

Reserve Assumption	Estimated Reserve Needed	Reserve Provided by BCBSVT Conversion	Difference between Reserve Needed and BCBSVT Net Assets
GMC treated as private product w/traditional claims risk	\$70 to \$117 million	\$132 million	+ \$15 million
GMC w/traditional claims risk plus tax revenue downturn risk [Wakely Estimate]	\$136 million	\$132million	(-\$4million)
GMC w/traditional claims risk plus tax revenue downturn risk [Governor Estimate]	\$146.2 million	\$132 million	(-\$14.2 million)
Governor's Final Recommendation	\$200 million	\$132 million	(-\$68 million)

As Table 4 shows, BCBSVT assets would cover GMC reserves using a traditional claims risk analysis. They would fall \$4 million short of providing an expanded reserve of \$136 million calculated by the Wakely Group as a hedge against the added risk of tax revenue shortfalls. Using the Governor's augmented hedge against such tax revenue lags, BCBSVT assets fall \$14.2 million short. The Governor's desire for a hefty reserve of \$200 million exceeds actuarial estimates, and is therefore not the option we chose.

Given the above, it is clear that the conversion of BCBSVT would obviate the need for the \$200 million one-time bond proposed by the Governor to establish a large reserve.²⁹ Instead, solid GMC reserves can be obtained through the \$132 million obtained through BCBSVT conversion, plus a one-time infusion of \$14.2 million of state revenue.

As a successor public corporation, the GMC Board also could absorb the BCBSVT staff, utilizing its experience in claims administration and provider negotiation, while reducing administrative costs.³⁰ While it is likely that economies of scale and savings garnered from reduced functions (such as auditing, actuarial and other consulting services, etc.) are likely to reduce administrative costs below the Governor's estimate, we conservatively restrict our projected cost savings to the item of debt service costs for an insurance reserves bond, and leave the Governor's 7% administrative cost assumption in place.³¹

²⁹ And its \$44 million in debt service costs, annualized over the first five years of GMC. Governor's Proposal, p. 27.

³⁰ According to its 2013 Annual Statement, BCBSVT's President and Chief Executive Officer is paid \$553,059 in annual salary, with \$16,406 in other compensation. In fact, the lowest salary of its ten company officers is \$214,250, with the officer salary average at \$296,159. The actual total is \$3,661,911. [All figures taken from BCBSVT 2013 Annual Statement filed with the Vermont Department of Financial Regulation, Act 150 (2011 Adj. Sess.) and FY 2013 Addendum to Health Insurer Annual Statement.] In contrast, the head of the State's Finance and Management Department is paid \$92,141 annually and the eleven staff persons that make up the Department are paid an average of \$76,219. In fact, the \$3.6 million currently paid BCBSVT officers is equivalent to the total FY 2015 state appropriation for the personnel costs of the Vermont legislature.

³¹ The Hsiao report found that BCBSVT could save between \$43.4million and \$56 million in administrative costs annually were Vermont to convert to a single payer or single pipe system, reducing BCBSVT administrative costs to as low as 4.7% to 6.7% of premiums. Act 128, Health System Reform Design, Achieving Affordable Universal Health Care in Vermont, (Feb., 2011), p.41.

The annualized cost of GMC is adjusted in Table 5 to reflect the net result of BCBSVT conversion, and the reduced need for public contribution to the GMC reserve.

Table 4. 2017 Annualized Green Mountain Care Cost

GMC Plan (Costs Excludes Out-of-pocket Costs)	Value in Million of Dollars
Coverage	
GMC Primary (Non Medicaid Eligible)	2,171
GMC Medicaid Primary	1,126
State Medicaid Fixed Costs	680
Medicaid Dual Eligible	259
Employer Sponsored Insurance Wrap	28
Total Cost of Coverage	4,263
State Operations Cost	
Insurance reserves*	146.2
Insurance reserves from BCBS	(132)
Contingency	10
Total GMC Annual Cost	4310.2

* A one-time infusion of \$14.2 million in state revenue is needed to bring reserve to \$146.2 million

As Table 5 indicates, conversion of BCBSVT to a successor public corporation, such as the GMC Board, could reduce annualized GMC costs by \$44 million, eliminating the “bonding for revenue reserves” category seen in the Governor’s Annualized Green Mountain Care Cost table³². Given these expenses, and the one time revenue infusion of \$14.2 million to establish a \$146.2 million reserve, the total GMC costs from 2017-2012 are estimated in Table 6.

Table 5. Green Mountain Care Costs, 2017-2021

GMC Plan Costs (in millions)	2017	2018	2019	2020	2021
Coverage	4,263	4,501	4,741	4,921	5,096
Total State Operations Costs*	47	34	35	36	37
Total GMC Cost	4,310	4,535	4,776	4,957	5,133

* 2017 contains the one-time infusion of \$14million for the reserve account.

³² Shumlin et al., *Green Mountain Care: A Comprehensive Model for Building Vermont’s Universal Healthcare System*, 33.

6. HEALTH SYSTEM COSTS AND THE PRINCIPLE OF TRANSPARENCY

One of the great opportunities of Green Mountain Care is to create a transparent, accountable public healthcare system in Vermont. The shift from private, market-based healthcare financing to public, tax-based financing would bring the system under public oversight, yet clear transparency and accountability mechanisms are required to facilitate the meaningful exercise of such oversight.

At this point, important policy choices, in particular relating to the overall cost of GMC, suffer from a lack of transparency. It is impossible for anyone outside the Administration to accurately project the cost savings that would come with a shift to Green Mountain Care. The UMASS/Wakely study and the Hsiao study both estimate that GMC would save hundreds of millions of dollars per year,³³ yet the underlying data used to make these calculations are not readily available to the public. The Governor's proposal does not appear to fully account for system-wide cost savings³⁴. His report projects a cost of \$4.527 billion for GMC in 2017 (including out-of-pocket costs) and estimates that costs will rise each year at 4%³⁵. This rate is assumed to be lower than the current system's growth trend, yet savings figures are not disaggregated.

Without access to detailed data underlying the various cost and trend projections, the HCHR Campaign has to accept the Governor's cost projections. However, we seek to highlight below key areas in which research demonstrates significantly lower costs under universal, publicly financed healthcare than under a fragmented, market-based system. Some of these areas have already been explored in previous studies —although not explicitly calculated as part of GMC cost savings— while others have largely been ignored, and merit further exploration.

Administrative savings: Vermont could realize significant administrative savings as soon as GMC goes into effect, and could also bend the healthcare cost curve over time, reigning in the growing cost of care. These administrative savings would come from both the payer side and the provider side, and could include:

- **Moving from private to public insurance:** By moving from a fragmented market-based health insurance system to a single public payer for most people in Vermont, GMC would eliminate or reduce costs that private insurance companies currently pay for business development, marketing, sales, underwriting, and risk analysis. The Governor's report pegs GMC's administrative overheads at 7%, which appears to be a rather conservative figure.
- **Create a public corporation to manage payments:** Even with multiple payers, Vermont could greatly simplify payment administration by creating a single public corporation to handle all medical payments within the state.³⁶ This public entity would reduce redundant administrative functions among payers

³³ The UMASS/Wakely report estimates that administrative savings alone will save Vermont between \$116.2 million and \$535.2 million by 2020 (UMASS/Wakely 50). The Governor's report estimates that GMC would save \$378 million over its first five years (Shumlin 55), and includes these savings in the 4% GMC growth rate. The Hsiao report estimated that in a single-payer system, Vermont would see savings of \$530 million in year one of GMC (with year one beginning in 2015, and measured in 2010 dollars), and \$1.55 billion in absolute savings by year 10 (Hsiao 38). It also estimated that in a multi-payer "single pipe" system, Vermont would see savings of \$320 million in year one and \$980 million in absolute savings by year 10. Because GMC would reduce the number of payers in Vermont but would still include more than one payer, an updated estimate for GMC should fall between these two figures.

³⁴ Gerald Friedman, *Governor Shumlin's Report on Green Mountain Care*, January 6, 2015.

³⁵ Shumlin et al., *Green Mountain Care: A Comprehensive Model for Building Vermont's Universal Healthcare System*, 31.

³⁶ Providers who treat out-of-state residents would still have to bill payers in other states separately.

(like selecting, negotiating, and contracting with providers)³⁷ and would greatly simplify billing for providers.³⁸

Price controls and price uniformity: In the current system, prices for health services are neither sufficiently scrutinized or controlled, nor uniform across the system. High prices especially by large, near monopoly providers contribute to significant system-wide cost increases. Since the GMCB started approving hospital budgets, costs have decreased, but a full price control function has not yet been implemented (GMCB presentation). In addition to price controls, unifying the cost of services - patients with the same medical procedures pay very different rates - would simplify billing for both payers and billers, resulting in additional cost savings. An all-payer rate setting system is assumed in the Governor's report (p. 29) but actual costs savings are not specified beyond the assumption of a 4% growth rate. As the terms of an all-payer system will be developed by the GMCB, and are dependent on a federal waiver, savings are difficult to project. Given Maryland's mixed experience with an all-payer system, it appears necessary for rate setting to go hand-in-hand with other payment reform measures, such as global budgeting and moving away from fee-for-service payments. The Governor's report assumes a shift from volume-based to outcomes-based provider payment (p. 24), but savings are not specified.

Providing appropriate care: Vermont's market-based healthcare system skews incentives for healthcare providers, creating financial incentives to overprescribe tests and treatments in some cases, and to skirt the provision of preventive and primary care in others. Key policy changes could help ensure that medical decisions are based on people's healthcare needs, not finances, resulting in better cost effectiveness.

- **Reducing "utilization" through provider-level measures:** The Governor's report adds cost from increased utilization due to improved access to care, yet it does not seem to account for provider-level reforms that could lead to more cost-effective practices. The fee-for-service payment model is known to lead to the overprescription of diagnostic tests and other procedures, and lack of coordinated patient care across different providers leads to duplication.
- **No-fault care for injuries from medical care:** As the Hsiao and UMASS/Wakely studies explain, the risk of being sued for malpractice is a major concern for medical providers, so much so that at least 2% of healthcare in the U.S. is estimated to be "defensive medicine," unnecessary healthcare that providers prescribe not for medical reasons, but to avoid lawsuits.³⁹ By shifting from a malpractice system to a no-fault administrative system, Vermont could cut its medical costs by 2% (Hsiao 37).

Improved public health and productivity: Underinsurance and uninsurance in the current system mean that people delay or forego needed care, or are forced to cut back on their work hours or downscale their spending on rent and other goods and services. By providing access to all needed care, Green Mountain Care would likely improve the health and productivity of Vermont's population. Improved public health and worker productivity can be linked to economic growth as well as lower healthcare costs⁴⁰. These benefits to the state can be very significant and should be explored thoroughly.

³⁷ Hsiao estimates that between 1% and 3% of Vermont's total healthcare expenditures could be eliminated by simplifying payer administration through a single-pipe or single-payer system (41).

³⁸ Hsiao estimates that between 2.65% and 3.53% of Vermont's total healthcare expenditures could be eliminated by simplifying billing for providers through a single-pipe or single-payer system (44, 46).

³⁹ Hsiao estimates that Vermont could save 2% of its healthcare costs by moving to a no-fault system for compensating injuries or illnesses resulting from medical care (37).

⁴⁰ Anne Alexander, *Treating Health Care As a Human Right in Montana: A Cost-Benefit Analysis* (National Economic and Social Rights Initiative, June 2010).

Integration of workers' compensation with GMC: Vermont's workers' comp system is designed to get workers who are injured or made ill on the job healthcare and, if needed, replacement wages for time that they are unable to work. It is financed separately from the rest of the healthcare system (through employers' workers' compensation insurance premiums), which requires its own set of public and private administration. Integrating or aligning the healthcare side of workers' comp would streamline healthcare access for workers and would also reduce redundant administration, saving money. A portion of what employers are currently paying in workers' comp insurance premiums could simply be shifted over into taxes paid into Green Mountain Care.

Rein in pharmaceutical costs: Vermont has several options to help reign in high drug prices. Act 48 (Section 18) sets out that, to the extent allowed by law, a single prescription drug formulary be used by all payers along with a uniform set of drug management rules, and that this be combined with a single mechanism for negotiating rebates and discounts across payers. Examples of significantly more cost-effective provision of pharmaceuticals abound in comparable countries. Canada, for example, uses formulary management, reference-based pricing, price freezes, and limits on markups to keep a lid on the cost. Economists have stipulated that mark-ups for drug prices in the non-negotiated U.S. market reach 37.5%,⁴¹ and suggest that states move to act as bulk buyers and negotiate drug prices with pharmaceutical companies.⁴²

7. FINANCING SOURCES AND THE PRINCIPLE OF EQUITY

PROGRESSIVE INCOME TAXES

Taxes on income are direct and progressive, which allow the equitable sharing of responsibility for financing the healthcare system based on people's ability to pay. The HCHR Campaign proposed a progressive income tax for healthcare in our 2012 report, after reviewing evidence of different tax structures across the world (2012 report). An income tax's positive effect on equity can be enhanced by designing a progressive tax *structure*, in which the tax rate increases as income increases, so that higher income earners pay a greater proportion of their income than lower income earners. This can also be accomplished by taking into account a breadth of *different types of income*, for example through specifically taxing income sources generally found in high income populations, such as non-wage income from stocks, derivatives and other capital gains. Our proposal pursues a combination of both strategies; a progressive income tax structure up to a certain threshold, coupled with a tax on unearned income to capture revenue beyond that threshold.

TAX ON EARNED INCOME

The Governor's proposed income tax, which he called a "public premium", has progressive elements, such as a sliding scale between 138% and 400% of the Federal Poverty Level (FPL), and an exemption for individuals below 138% FPL. But it is also designed to benefit high-income earners by capping the amount of income subject to the tax. This regressive element can be seen in the shape of the tax curve, which becomes flat after it reaches 400% of the FPL and remains at 9.5% until the contribution reaches a cap of \$27,500. At this point, a household's actual tax payment stays at \$27,500, regardless of increases in income level. In effect, this creates a regressive tax rate that decreases as income increases.

⁴¹ McKinsey Global Institute, "Accounting for the cost of healthcare in the United States," January 2007.

⁴² Gerald Friedman, *Single Payer Rhode Island: Impact and Implementation*, December 2014.

The HCHR campaign’s proposal eliminates this cap on contributions by the wealthy, based on the principle that wealthy households should pay according to ability, just as low and middle income families do. But eliminating the cap does not resolve the issue of the flat 9.5% tax and its implications for equity. Therefore, we propose a wealth tax on unearned income (discussed in the following section) that ensures that wealthy earners pay according to ability rather than according to an arbitrary flat tax.

The HCHR campaign’s progressive tax curve was designed with the principle of equity in mind, using the following parameters:

1. Any household below 138% of the FPL is excluded from the income tax. This population qualifies for Medicaid, and is similarly excluded from the Governor’s tax proposal.
2. There should be no exceptions in the form of capped contributions for high-income earners.
3. The tax should be designed to provide a sliding scale “on-ramp” for as many low and middle-income households as possible, with only higher income earners paying the maximum tax rate. Our target was that at least 75% of Vermont’s population would be taxed on the sliding scale ramp and that no more than 25% would pay the maximum tax.

In order to make sure that low and middle-income families do not bear a disproportionate burden of healthcare costs, our proposed income tax starts with a 1% tax rate for households at 138% of the FPL, and reaches 9.5% at 523% of the FPL. All households above 523% of the FPL pay a tax of 9.5% on their household income.

Figure 2 shows how the HCHR tax provides relief for low and middle-income families relative to the Governor’s proposal. Figure X shows the impact of removing the cap on the wealthiest households.

Figure 2. Governor’s and HCHR Income Tax Curve for a Low- and a Middle-Income Household

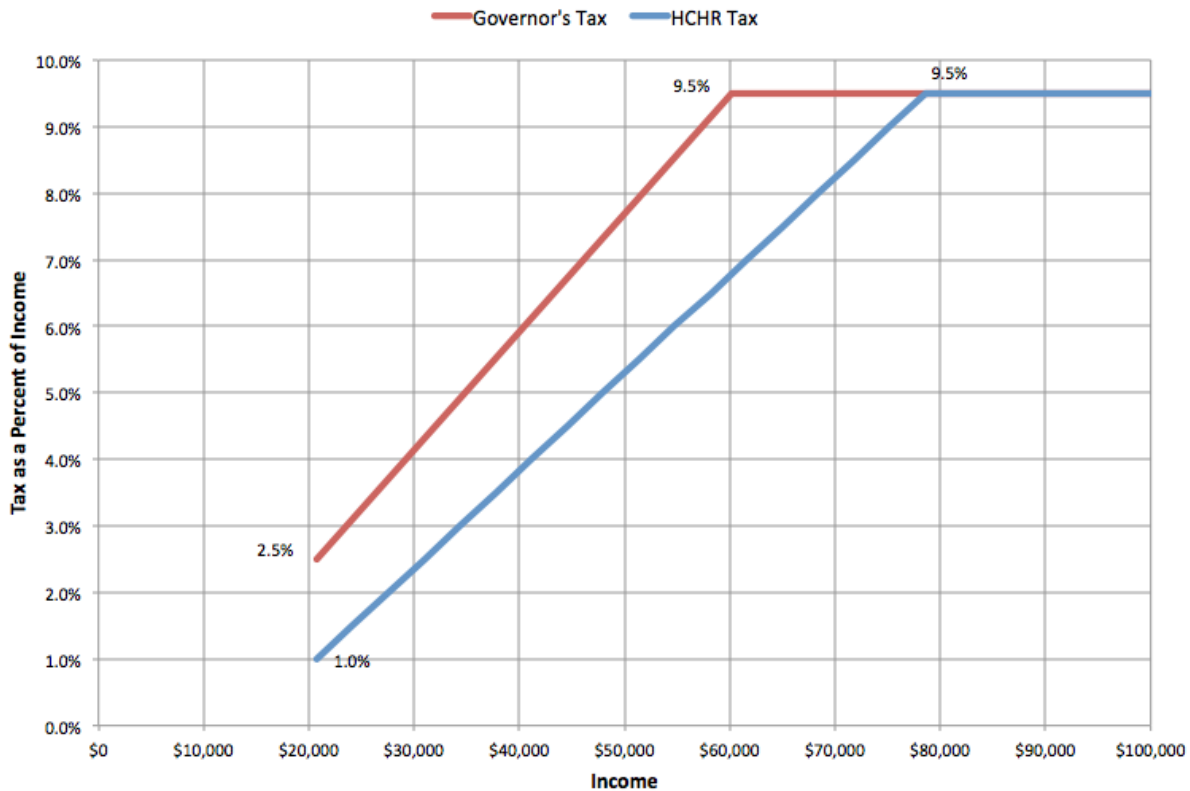
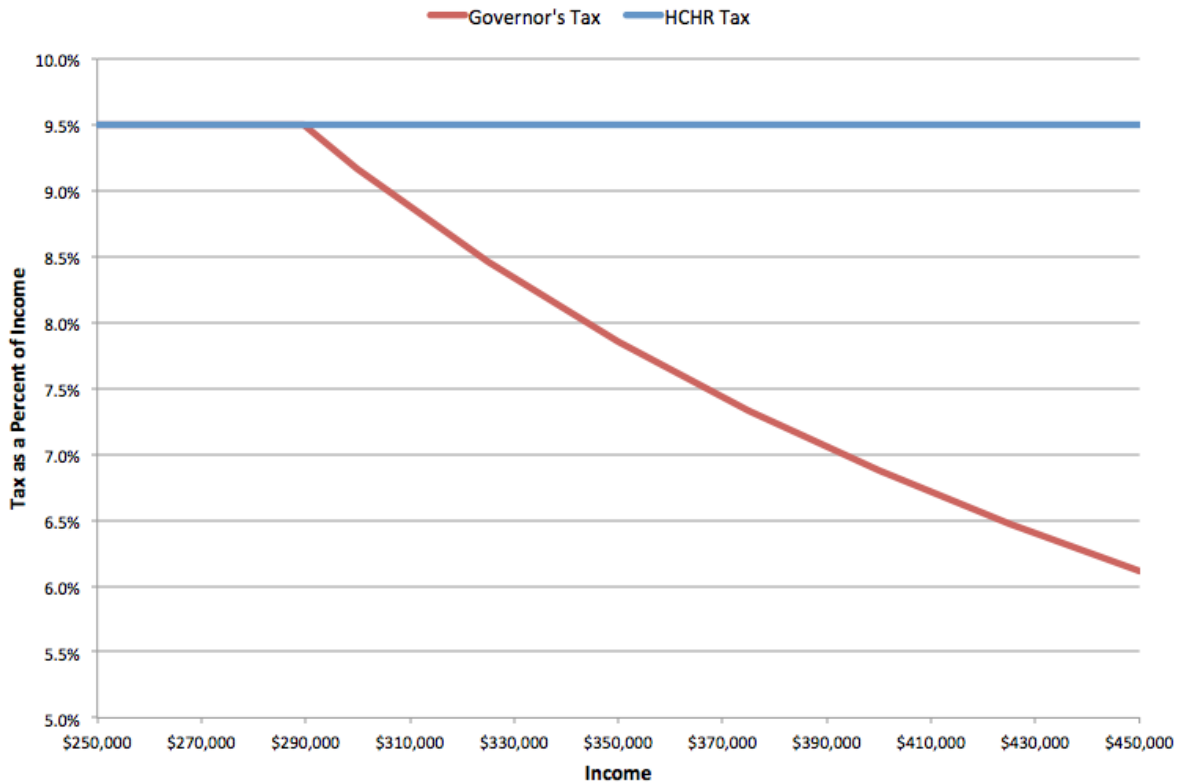


Figure 3. Governor’s and HCHR Income Tax Curve for a High Income Household



Benefitting Low and Middle Income Families

The HCHR Campaign’s income tax is designed to benefit low and middle income families:

- 76% percent of Vermont’s population will be taxed at less than 9% of their income
- 65% of Vermont’s residents will pay less than under the Governor’s scenario
- People under 500% FPL⁴³ pay between 4% and 10% of their income on healthcare costs, whereas they would pay between 11% and 16% without a transition to GMC
- A family whose total income is \$50,000 will pay an average 40% less in healthcare costs than without GMC.⁴⁴

Generating Sufficient Revenue

Table 7. Revenue Estimates

Total Revenue Generated by HCHR Income Tax	\$1,121,893,647
Revenue Generated in Governor’s Model	\$1,097,000,000⁴⁵
Difference	\$24,893,647

⁴³ Not counting the Medicaid population

⁴⁴ Comparing income tax and OOP contributions under GMC to premium and OOP contributions without GMC Scenario without GMC comes from RAND report projected figures for cost of healthcare for individuals under 65 in 2017.

⁴⁵ For comparison purposes to the HCHR scenario, this figure does not include contributions from out-of-state residents.

The HCHR Campaign’s proposal generates a comparable amount of revenue to the Governor’s proposal, when adjusted for the same populations (Table 7). As seen in Table 8, our proposal generates more revenue from higher income households, while forgoing revenue from lower and middle-income families. Through these changes, we are able to create a more equitable tax while generating similar revenue for GMC.

Table 8. Revenue Impact of Equity Features

Removing Cap	+ \$131,385,433
Flattening curve	-106,491,786

(See Appendix A for *Methodology*)

TAX ON UNEARNED INCOME

The principle of equity requires that low- and middle-income people pay proportionally less of their income on healthcare costs than the wealthy. In the current healthcare system, the opposite is the case (RAND). Our sliding scale income tax model changes this by progressively increasing tax rates in proportion to income. Yet we do not propose to increase the tax rate any further once the 9.5% threshold has been reached at 523% FPL; instead, the tax rate for people earning above that threshold stays flat (although we remove the Governor’s cap on high earners).

To ensure that the very wealthy contribute based on their ability, we proposed in our 2012 report a wealth tax on assets, independent of income flows. We investigated existing wealth tax regimes in comparable settings (in Switzerland, where a wealth tax is levied at state level; and in Iceland, which has a comparable population size to Vermont), and estimated that a Vermont wealth tax could yield around \$88 million if applied in a similar way (Wealth Tax Brief). Yet we also flagged the lack of available data on taxable assets, and therefore do not have the necessary information to take our proposal further at this time. Instead, we propose two steps to increase the progressivity of Vermont’s income tax structure.

Repeal of capital gains exclusion

The first essential step to improving tax equity between the very wealthy and the rest of the population is to remove a tax loophole that disproportionately benefits those with great wealth. We propose, as we did in our 2012 report, to repeal the capital gains tax exclusion, which, according to the most recent figures, cost the state \$17.3 million⁴⁶. This would increase the income tax base for funding the healthcare system and other essential public goods. In 2012, over \$7.8 million of this tax expenditure went to the very wealthy with incomes greater than \$1 million (ibid). The top 6% of taxpayers received almost 60% of this special tax benefit, which makes it highly inequitable. Vermont is one of only nine states that allows for this preferential treatment of certain forms of capital gains⁴⁷; the principle of equity requires that this tax benefit be removed.

⁴⁶ Legislative Joint Fiscal Office, *Vermont Tax Expenditures: 2015 Biennial Report* (Vermont Department of Taxes, January 2015), 85.

⁴⁷ Institute on Taxation and Economic Policy, *Who Pays? A Distributional Analysis of the Tax System in All 50 States*, January 2015.

A tax on non-wage income

A new tax on unearned or non-wage income will ensure that those with substantial wealth contribute to GMC based on their ability. We propose a tax rate of 5% on non-wage income from stocks, dividends, capital gains, interest, and on the trading of stocks and derivatives. To design this tax in a progressive way, we extend a sliding scale credit to all tax filers with non-wage income under \$200k. Only unearned income above the credit amount will be taxed.⁴⁸

Table 9. Tax credits for non-wage income

Total household income	Credit
Under \$25,000	\$5,000
\$25,000 to under \$50,000	\$4,000
\$50,000 to under \$75,000	\$3,000
\$75,000 to under \$100,000	\$2,000
\$100,000 to under \$200,000	\$1,000
\$200,000 or above	\$0

For example, for a household whose total income is between \$50,000 and \$75,000 the first \$3000 of non-wage income is tax exempt.

We project that a tax on non-wage income, designed in this way, will generate annual revenue of \$97,335,100, and that 77% of this revenue will come from tax filers with incomes greater than \$200,000. A household with less than \$50,000 in total income would, on average, have no non-wage tax obligation, according to our projection.

Table 10. Average per person non-wage income tax obligation

Total household income	Average per household tax obligation on non-wage income
Under \$25,000	\$0
\$25,000 to \$50,000	\$0
\$50,000 to \$75,000	\$10
\$75,000 to \$100,000	\$152
\$100,000 to \$200,000	\$578
\$200,000 or above	\$9,002

⁴⁸ The credit is not a reimbursement; the credit amount marks the threshold after which the tax takes effect.

PAYROLL TAXES FOR UNIVERSAL HEALTHCARE

Employers currently pay around 80% of private health insurance premiums⁴⁹. In Green Mountain Care, these premium payments will no longer be necessary, as all employees will be eligible for publicly financed healthcare. Instead, businesses will contribute to the universal healthcare system, paying their share toward funding an essential public good that ensures the health of their employees.

The principle of equity applies to businesses as well as individuals. Once healthcare is decoupled from employment and financed through taxation, businesses contribute according to their ability to pay, which is best measured by profits or surplus revenue generated. In theory, corporate income taxes would be the most equitable way to ensure that business contributions are sensitive to ability to pay. The HCHR campaign explored the feasibility of using corporate income taxes in our 2012 report, yet we found that only a minority of businesses are subject to corporate income tax, that loopholes were numerous and that tax avoidance was a significant problem. For these reasons, we concluded that unless Vermont implemented comprehensive corporate tax reforms, corporate income tax would not be an equitable, stable and sufficient mechanism for ensuring that businesses contribute to healthcare financing. (2012, p. 11-14). Instead we proposed a progressive payroll tax for businesses, levied on employers only, not employees.

In his GMC financing report, Governor Shumlin likewise suggested a payroll tax on employers only. Yet with a proposed flat tax of 11.5% for all businesses, capped at wages for any individual employee in excess of \$200,000, the Governor's plan failed to account for businesses' ability to pay, which turned into a major obstacle for proceeding with a GMC financing plan. Large businesses, and those with high executive compensation, would do significantly better under the Governor's plan than the smallest of businesses. The Governor's report concluded that the transition costs for small businesses that currently do not provide health insurance would be too high, and he dismissed scenarios for gradually transitioning businesses to the same flat rate as too costly.

The HCHR Campaign proposes a different payroll tax approach. We noted in our 2012 report the inequity of charging small businesses the same tax rate as large corporations. We also noted that a payroll tax could lead to a depression of wages. To mitigate these challenges, we proposed the idea of a graduated tax that takes into account business size as well as wage disparity (p.16).

Based on these goals, we have now developed a payroll tax model that generates sufficient revenue for financing GMC while protecting small businesses and preventing negative wage effects. Payroll tax rates will be lower for small businesses and businesses with low wage disparity, and higher for larger corporations and those that have a greater top to bottom wage ratio. Specifically, our proposed tax model will ensure that businesses pay according to their ability in the following ways:

1. A sliding scale tax rate from 1% to 20%, increasing with company size and wage ratio of top-tier salaries to bottom-tier salaries.
2. Nine size-based tax categories, from businesses with 4 or fewer employees to more than 1000 employees.
3. A wage ratio that measures the discrepancy between the wages of the top 1% (i.e. management and CEOs) and the average wage of the bottom 50% of workers. If a company's wage ratio is greater than average, it will pay a higher tax than others in its size category, if its wage ratio is lower than average, the company will pay less.

⁴⁹ University of Massachusetts Medical School Center for Health Law and Economics, and, and Wakely Consulting Group, Inc., *State of Vermont Health Care Financing Plan Beginning Calendar Year 2017 Analysis*.

The principle of equity is the guiding factor for this proposal. Only if businesses are actually able to pay without experiencing challenges to their financial viability, and only if they are encouraged to raise rather than depress the wages of those earning the least, will a payroll tax financing mechanism be beneficial for Vermont. A payroll tax graduated by business size and wage gap will meet this standard in the following ways:

1. The tax obligation increases with business size, measured in the number of full-time equivalent employees (FTE). This gives relief for small businesses and ensures that large corporations and large public employers pay what they can. Large employers' current payment for health insurance premiums indicates their ability to pay (the majority of businesses that do not offer insurance are small) (Franco, Gov's report).
2. The tax obligation decreases with greater wage equality. This will prevent negative wage effects and increases income equality.
 - a. Introducing wage ratio as a variable in tax obligations prevents the lowering of worker wages. If a company seeks to pass the cost of the tax onto their employees by reducing wages of the bottom 50% of workers (but not executives), their wage ratio "rating" will get worse and result in a higher tax rate. If a company seeks to pass the cost of the tax to *all* workers (including executives) by reducing everyone's wages (and maintaining the same wage ratio), their tax contribution will be lowered through a decrease in payroll size, not a decrease in their tax rate. In other words, a company may want to reduce their payroll size in order to reduce their tax contribution (an inevitable incentive produced by any payroll tax), but the wage ratio rating prevents the lowering of the wages of only the bottom 50% of workers as a way to achieve this goal.
 - b. The wage ratio model provides an incentive for increasing equity between workers' and CEO wages, as a company's tax obligation will be reduced if CEO wages are lowered or workers' wages raised.
 - c. The inclusion of the wage ratio in our payroll tax model reduces the risk that a business would reduce its size solely to decrease its tax rate, because company size has less weight than in a graduated tax model based only on size. Similarly, companies would be disincentivized to lay off workers from the bottom 50 % of earners, as this would increase the company's wage ratio and thereby its tax rate. A company could only effectively reduce its tax obligations by laying off the top 1% wage earners. Similarly, the inclusion of the wage ratio factor helps mitigate against hiring disincentives created by the size factor.

Modeling Results

We have modeled various payroll tax scenarios using industry level wage and size data. Based on the modeling outputs, we recommend a company level payroll tax formula that results in the following average tax rates.

The smallest businesses (1 to 4 FTE) receive a size credit – a credit that results in a zero tax obligation for the business if each employee receives the same wage. However, on average, our model shows that those smallest businesses do not have equal wages across the board and therefore, despite the size credit, will pay a payroll tax of around 4%. This means that over 60% of Vermont businesses would have an average tax obligation of 4%, determined solely by the gap between the wages of the top 1% and bottom 50% of wage earners. All businesses under 50 FTEs - the vast majority of Vermont businesses - would pay a lower tax rate than under the Governor's proposal. Our model suggests that the top end of the tax scale would be occupied by companies with over 1000 FTE and public sector employers, as well as mid-size and large companies with high wage discrepancies. To ensure predictability of tax obligations, and to avoid large tax burdens, we have capped the tax rate at 20%. According to the model, some mid-size as well as large companies benefit from this cap, as their high wage gaps would otherwise take them beyond a 20% tax rate.

Table 11. Distribution of businesses and average tax rate by business size, 2017

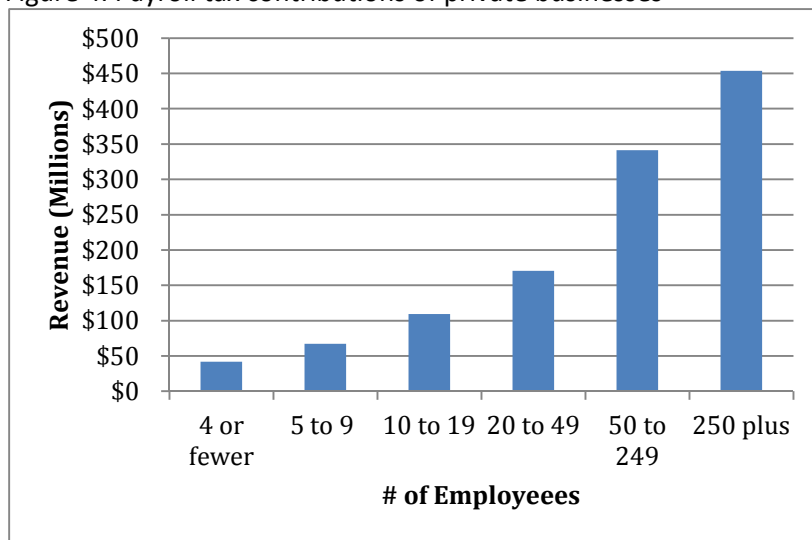
FTE	4 or fewer	5 to 9	10 to 19	20 to 49	50 to 99	100 to 249	250 to 499	500 to 999	1,000 plus	Gov
Average tax rate	4.10%	7.72%	9.88%	10.68%	12.32%	14.41%	15.74%	16.96%	19.81%	20%
% of private businesses	60.49%	18.04%	11.28%	6.94%	1.88%	1.03%	0.18%	0.11%	0.06%	N/A

Table 12. GMC payroll tax rates, 2017 – Governor’s proposal and HCHR proposal

Business Size	4 or fewer Workers	5 to 9 Workers	10 to 19 Workers	20 to 49 Workers	50 to 99 Workers	100 to 249 Workers	250 to 499 Workers	500 to 999 Workers	1,000 plus Workers
Gov’s payroll tax proposal	11.5%	11.5%	11.5%	11.5%	11.5%	11.5%	11.5%	11.5%	11.5%
HCHR model for GMC	4.10%	7.72%	9.88%	10.68%	12.32%	14.41%	15.74%	16.96%	19.81%
Difference Gov’s & HCHR proposal	-7.40%	-3.78%	-1.62%	-0.82%	0.82%	2.91%	4.24%	5.46%	8.31%

In our simulation at industry level, these average tax rates yield \$1,605,110,481 in revenue. The modeling inputs can be changed to produce different rates and different revenue projections as needed. It is important to note that this model is designed for the purpose of predicting revenue only. We do not propose to set tax rates by size and/or wage ratio categories; instead, each business will calculate its own actual rate, based on the formula provided.

Figure 4. Payroll tax contributions of private businesses



Payroll tax calculator

Our modeling produces an equitable tax formula that raises sufficient revenue by giving similar weight to size and wage ratio variables.

Payroll tax amount per employee: $r \times \beta + \alpha$;

Wage ratio r = average wage of the top 1% of wage earners divided by the average wage of the bottom 50% of wage earners. The wage ratio cannot be smaller than 1 ($r \geq 1$). If r equals 1, this means everyone employed by a business earns the same wage.

$\beta = 650$; α =see table below

FTE	1-4	5-9	10-19	20-49	50-99	100-249	250-499	500-999	1000+	Gov't
α	-650	-300	300	800	1750	3000	6250	7500	12,000	10,000

The values of the coefficients β and α have been set based on our modeling outputs. Below we have also tested the formula with sample companies.

Comparing modeling data with sample companies

Below are three sample scenarios that illustrate how the payroll tax formula would be applied by individual companies.

Company 1:

A very small company with 3 employees. The highest wage earner has a salary of \$60k, the other two employees each earn \$40k.

Wage ratio: 60/40: $r=1.5$

$1.5 * 650 + (-650) = \$325$ per person. This company pays \$975 payroll tax per year - a tax rate of 0.7%.

Company 2:

A small company with 6 employees. Its CEO gets paid \$150k, the director makes \$100k and four workers get paid \$50k.

Wage ratio: 150/50: $r = 3$

$3 * 650 + (-300) = \$1,650$ pp, to a total of \$9,900 per year. Since its total payroll is \$450,000, this company's tax rate is 2.2%.

Company 3:

A mid-sized company with 75 employees. The CEO gets paid \$150k, the bottom 50% of workers receive an average wage of \$29,737. The wage ratio is 5.04.

$5.04 * 650 + 1750 = \$5,029$ pp, to a total of \$377,157 per year. This company's total payroll is \$3,300,000, which means its tax rate is 11.43%.

In these examples, companies 1 and 2 – both small businesses under 10 employees - pay tax rates significantly below the modeled average. We assume that the modeling outputs tend to overestimate tax rates for small size businesses, which are likely to have a lower wage ratio than larger companies. In our modeling, we were limited to industry level data, which is likely to produce higher wage ratio estimates than company level data, especially for small businesses. Although we made some adjustments to the modeling inputs to address this issue, it is

possible that tax yields from small businesses will be lower in reality than in our model, unless the wage ratio coefficient beta is adjusted upwards. That said, small businesses contribute only a small part of the overall tax revenue, and we explicitly designed the model to benefit small companies with excellent wage ratios.

The state also has the option to produce a very accurate and updated revenue projection by conducting a data survey prior to implementation of GMC, asking all businesses subject to the payroll tax to submit their calculated tax rates for review. This “trial run” would enable an accurate revenue forecast for the first year of implementation.

(See Appendix C for Methodology)

STATE AND FEDERAL FUNDING SOURCES

Significant funding for Green Mountain Care will come from existing state and federal sources, including from Affordable Care Act (ACA) premium subsidies once Vermont obtains a Section 1332 waiver that enables the dissolution of Vermont Health Connect. For the purposes of this report, we mostly accepted the funding projections listed in the Governor’s report when calculating state and federal revenues for GMC, even though it appears that not all available state and federal funds were included in the Administration’s estimates. While some state Medicaid funding streams are explicitly listed (Governor’s report, Appendix, Table F-1.1), many others are not, and we are unable to ascertain whether these have been deliberately omitted, and if so, for what reasons. We reiterate our concern with the lack of transparency in the Administration’s processing of primary data, which makes it difficult to discern how existing state funds are accounted for.

We estimate that additional existing funds are likely to be available for incorporation into GMC, yet in lieu of firm evidence, we opt to accept the Governor’s conservative estimates. We do, however, have a different proposal for one identified source of state funding, Vermont’s various provider taxes.

PROVIDER TAXES

The Governor’s report proposes to eliminate five provider taxes (specified at 33 V.S.A. §1953-55b), which are projected to generate \$ 152,058,604 in 2016 (Appendix Table F-1.2). We agree with the Administration that these taxes are – and have, in fact, always been - largely circular (Gov’s report p. 37); however, we propose a phasing out period, tied to the establishment of an effective hospital and pharmaceuticals rate setting system.

Specifically, we propose to maintain the assessment on hospitals and the very small assessment on pharmaceuticals, which together are projected to generate \$131,950,013 in 2016, until effective price controls are in place. Since the Governor’s proposal is not transparent about its assumptions regarding the baseline costs of health services in GMC, including what price control mechanisms are incorporated into the projected 4% annual cost inflation rate, we cannot be confident that effective rate setting for the cost of services, as set forth in 18 V.S.A § 9376 (b), is included in the calculation of GMC cost trends. The UMass/Wakely report recommended reducing current commercial rates from 155% to 105% of Medicare rates (p.25). No set rates are specified in the Governor’s report; rather, it appears that baseline and projected costs continue to be based on existing prices charged by hospitals and pharmaceutical companies, especially those in near monopoly market positions.

In this context, eliminating these two taxes without setting reasonable rates for services supplied under GMC would effectively result in a windfall for hospitals at the expense of the health system as a whole. Until an all-payer rate setting system is fully operational and results in effective price controls for GMC services, we propose

maintaining existing checks and balances with the hospital and pharmaceuticals tax. Once prices start getting under control, these two taxes can be phased out.

8. RESULTS AND RECOMMENDATIONS

This report has put forward a concrete financing plan for Green Mountain Care and presented new evidence for the economic feasibility of a state-based universal, publicly financed healthcare system. By taking the blueprint provided by Vermont's Governor and addressing the challenges raised in his report, we created solutions that demonstrate the viability of GMC.

Our plan builds a comprehensive healthcare system that vastly improves access to care for all Vermont residents, beyond the Governor's proposals, and lays out additional scenarios for a phased implementation of meeting all healthcare needs of all people in the state. Importantly, our plan guarantees that this system will be financed in an equitable way, thus giving immense relief to low- and middle-income people who are currently burdened with disproportionately high healthcare costs. Even the Governor's report showed that 9 in 10 families will benefit financially from public healthcare financing; our more progressive income tax proposal creates further savings in healthcare costs for low- and middle income families.

At the heart of our financing plan is an equitable payroll tax for businesses that solves the Governor's main conundrum: how to ensure that businesses pay into the system based on their ability. By graduating the tax based on business size and wage differential, we designed an equitable tax that is affordable for all businesses.

Finally, our plan greatly increases transparency, accountability and participation in the healthcare system by moving responsibility for administering healthcare as a public good to a public corporation, the Green Mountain Care Board.

This financing plan shows that the small state of Vermont, despite legal and financial challenges, can adopt an equitably financed healthcare system that provides universal care as a public good, accountable to the people. This can be done in a financially sustainable way, as our balance sheet shows, especially if reforms within the healthcare delivery system, which are not fully reflected in these figures, start taking shape.

Our financing plan improves the GMC Fund's fiscal position in 2017 by over \$200 million compared to the Governor's proposal. While we do not have access to the econometric model that enabled the Governor to trend these projections forward until 2021, this sizable initial surplus creates a solid basis for maintaining a positive fiscal position in the longer term. Compared to the failing current healthcare system, which is projected to consume a growing part of people's incomes as well as state spending, a publicly financed alternative is the only rational solution.

Table 12. Comparison of GMC Balance Sheets, in millions, 2017

	Governor	HCHR
Spending		
Cost of GMC Services and Operation	-4,340	-4,354
Revenue		
Federal Funding		
Federal Medicaid Match	1,310	1,310
Federal ACA Waiver Funding	106	106
State Funding		
State Medicaid	344	344
Hospital & Pharma Tax	--	132
New Revenue Needed	-2,580	-2,462
Payroll Tax	1,510	1,605
Income Tax	1,247	1,122
Non-wage income tax	--	97
GMC Fund Fiscal Position	177	362

Our financing plan achieves this sound fiscal position even with providing additional health services and giving out-of-pocket cost relief to seniors. The tables below show detailed cost and revenue estimates for Green Mountain Care.

Table 13. GMC cost projection, in millions, 2017

GMC services (excludes out-of-pocket)	
GMC Primary (Residents, Non Medicaid Eligible)	1,971
GMC Medicaid Primary	1,126
State Medicaid Fixed Costs	680
Medicaid Dual Eligible	259
Employer Sponsored Insurance Wrap	28
Dental, vision, hearing	195
Medicare Affordability Credit	48
Total Cost	4,307
State Operations Cost	
Insurance reserves	146.2
Insurance reserves from BCBS	(132)
Health Care Innovation Spending	23
Contingency	10
Total GMC Annual Cost	4,354

Table 14. GMC revenue projection, in millions, 2017

Federal Funds	
Federal: Medicaid Match	1,310
Federal: ACA Waiver Funds	106
Total Federal Funds	1,416
Existing State Funds	
State Medicaid Revenue	344
Hospital & Pharma Tax	132
New GMC Taxes	
GMC Payroll Tax	1,605
GMC Income Tax	1,122
GMC Non-wage Income Tax	97
TOTAL State Funds	3,300
TOTAL GMC REVENUES	4,716

In summary, our plan’s main additional costs consist of \$195 million for adult dental, vision and hearing care, and \$45 million for a Medicare Affordability Credit to give out-of-pocket cost relief to seniors. Our plan’s main additional revenue centers are an extra \$105 million from a more equitable payroll tax, \$97 million from a wealth tax on unearned income, along with maintaining at least a portion of the provider tax until all payer rate setting produces effective cost controls. As stated in chapter 5 and chapter 6, additional cost savings should be implemented through drug price negotiation and malpractice reform, as well as lower administrative costs through transitioning to a public administration system. Yet in keeping with conservative projections, we have refrained from changing the Governor’s estimate of GMC administrative overhead (at 7%) and growth in system costs (4%).

PHASE-IN OF SYSTEM IMPROVEMENTS AND EXPANSIONS

The plan outlined in this report is designed as the baseline for implementing GMC by 2017. Throughout the report we pointed to options for increasing the universality of the system, both in terms of people included and health services provided. We consider these expansions essential steps toward building a truly universal system. Some of these steps require legal permission; others simply need better data to produce cost and revenue projections. We recommend taking the following phase-in steps:

1. Extend dental, vision and hearing services to the Medicare population: this can be done immediately upon obtaining a cost estimate and designing a financial contribution mechanism for Medicare recipients.
2. Implement a fuller Medicare wrap-around approach that replaces our proposed out-of-pocket credit.
3. Ensure that savings measures, such as all payer rate setting, moving away from fee-for-service, drug price negotiation, malpractice reform, etc. are implemented swiftly.
4. Increase GMC’s actuarial value to 100% A/V.
5. Include residents from other states in GMC if they work in Vermont.
6. Obtain a federal Medicare waiver and include the Medicare population in GMC.
7. Incorporate Workers’ Compensation into GMC.
8. Include long-term care in GMC.

10. CONCLUSION

Vermont has the ability and obligation to implement a universal, publicly financed healthcare system by 2017, as set out by state law enacted in 2011. The HCHR Campaign's financing plan improves upon the Governor's proposal with a more equitable solution for businesses' contribution to the healthcare system, thus making payroll financing economically feasible. Our plan sets GMC on a solid financial footing, with a \$362 million surplus in 2017, and guarantees access to comprehensive healthcare for all Vermont residents. By transitioning from private, market-based insurance to public financing of universal care, it flips the way we pay for care: people will contribute based on their ability, so that low and middle income people pay a smaller share of their income on healthcare than the wealthy – the opposite of the current system.

Vermont cannot afford to maintain a dysfunctional market-based insurance system that fails to provide adequate access to care and has unsustainable rates of cost growth. Fundamental changes are needed to ensure that healthcare financing and delivery systems serve the people of Vermont, realize their right to health and advance equity. Those changes cannot be made in a piecemeal fashion, as all components of a healthcare system are interconnected. Guided by years of studies, reports, modeling and projections, Vermont is ready to implement a public financing plan for GMC, and we submit our proposal for serious consideration. Only by providing healthcare as a public good, equitably financed and publicly administered, can Vermont finally realize the promise of ensuring the human right to healthcare for all.

APPENDIX A: MEDICARE METHODOLOGY

Assumptions:

- 128,739 of Medicare recipients in Vermont are above 138% of the FPL and not dual eligible, therefore qualifying for GMC secondary coverage according to the UMass/Wakely Report⁵⁰
- The distribution of individuals at various percentages of FPL is the same for the Medicare population as it is for the population described in the RAND report. Following this assumption, roughly 60% of the Medicare population is between 138% and 523% of the FPL, or 80% of those who qualify for wrap coverage are between 138% and 523% of the FPL. Therefore, 96,554 Medicare recipients will receive the Medicare Affordability Credit on a sliding scale.
- The Medicare population is evenly distributed between 138% and 523% FPL, and the average recipient will receive the average level of support -- 100% of out-of-pocket savings seen by Green Mountain Care recipients.

Calculating Cost:

Average Medicare Affordability Credit X Qualifying Population
\$497 X 96,554= \$47,998,066

ALTERNATIVE PROPOSAL 1

Raising the actuarial value (AV) of the Medicare population from the average to 94% to match the Green Mountain Care population.

Assumptions: The average Medicare recipient receives coverage at an actuarial value of ~85%.

The extra cost of bringing Medicare recipient from ~85% AV to ~94% AV is \$80 PMPM⁵¹, which is \$960 per year. According to the Governor's projection, the Medicare population will be 140,000 in 2017. Therefore, the total annualized cost of this proposal is \$134,400,000.

ALTERNATIVE PROPOSAL 2

Raising the AV of the Medicare population from the average to 100% AV.

Assumptions:

- 1) The average Medicare recipient receives coverage at an actuarial value of ~85%
- 2) Medicare population in 2017: 140,000

The extra cost of bringing Medicare recipients from ~85% AV to ~100% AV is \$132 per member per month⁵². Therefore, the total annualized cost of this proposal is \$222,284,160.

⁵⁰ Ibid.

⁵¹ Cost extrapolated from table in Shumlin et al., *Green Mountain Care: A Comprehensive Model for Building Vermont's Universal Healthcare System*, Appendix B-10.

⁵² Ibid.

APPENDIX B: INCOME TAX METHODOLOGY

Our income tax design mirrors the income tax scenarios put forth by the Governor. The appendix to the Governor’s report includes 14 “Alternative Financing Concepts”, some of which with similar features to ours, including flattening the ramp of the tax curve and excluding out-of-state residents⁵³. However, the exact combination of measures to increase equity, as put forward above, are not among the Governor’s modeled scenarios. With access to the model used for the Governor’s projections, calculating the revenue generated by our proposed income tax would be straightforward and require minimal effort. In the absence of access to this model, we developed our own methodology for calculating the expected income tax revenue, as described below.

DESIGNING THE TAX CURVE

Determining the Federal Poverty Level for 2017

For the purposes of this report, the FPL for 2017 was calculated based on projections from the RAND report, which forecasts that 100% of the FPL will be a household income of \$12,506 for a single individual and \$25,559 for a family of four⁵⁴. From those data points, calculations were made to determine the salary at 138% FPL and 523% FPL for various household sizes.

Table 1: Projected household incomes at 100% FPL

% FPL	Household Size	Income
100%	1	\$12,506 ⁵⁵
100%	2	\$16,857
100%	3	\$21,208
100%	4	\$25,559 ⁵⁶
100%	5	\$29,909

Vermont Population and the Federal Poverty Level

Roughly 75% of Vermont’s population is below 523% of the FPL. We used this as a guideline for determining the point at which the income tax should reach its maximum level of 9.5%.

Household Income and Tax Rates

Knowing the household income start and end points of the tax, the equation for a straight line was used to generate multiple points along the tax curve and create a guide for tax rates for various households at various income levels.

Table 2. Guide for determining individualized tax based on household size, household income, and universal healthcare tax rates¹

⁵³ Shumlin et al., *Green Mountain Care: A Comprehensive Model for Building Vermont’s Universal Healthcare System*, Appendix F–3.

⁵⁴ Eibner et al., *The Economic Incidence of Healthcare Spending in Vermont*, 12.

⁵⁵ Ibid.

⁵⁶ Ibid.

Tax Rate (% of income)	Taxable Income: 1 Person Household	Taxable Income 2 Person Household	Taxable Income 3 Person Household	Taxable Income 4 Person Household	Taxable Income 5 Person Household
0% if taxable income is below:	\$17,258	\$23,262	\$29,267	\$35,271	\$41,275
1% if taxable income is above: but below:	\$17,258 \$22,917	\$23,262 \$30,890	\$29,267 \$38,863	\$35,271 \$46,836	\$41,275 \$54,809
2% if taxable income is above: but below:	\$22,917 \$28,576	\$30,890 \$38,518	\$38,863 \$48,460	\$46,836 \$58,401	\$54,809 \$68,343
3% if taxable income is above: but below:	\$28,576 \$34,235	\$38,518 \$46,146	\$48,460 \$58,056	\$58,401 \$69,966	\$68,343 \$81,877
4% If taxable income is above: but below:	\$34,235 \$39,894	\$46,146 \$53,773	\$58,056 \$67,653	\$69,966 \$81,532	\$81,877 \$95,411
5% If taxable income is above: but below:	\$39,894 \$45,553	\$53,773 \$61,401	\$67,653 \$77,249	\$81,532 \$93,097	\$95,411 \$108,945
6% If taxable income is above: but below:	\$45,553 \$51,212	\$61,401 \$69,029	\$77,249 \$86,845	\$93,097 \$104,662	\$108,945 \$122,479
7% If taxable income is above: but below:	\$51,212 \$56,871	\$69,029 \$76,657	\$86,845 \$96,442	\$104,662 \$116,227	\$122,479 \$136,013
8% If taxable income is above: but below:	\$56,871 \$62,530	\$76,657 \$84,284	\$96,442 \$106,038	\$116,227 \$127,793	\$136,013 \$149,547
9% If taxable income is above: but below:	\$62,530 \$65,359	\$84,284 \$88,098	\$106,038 \$110,837	\$127,793 \$133,575	\$149,547 \$156,314
9.5% if taxable income is above:	\$65,359	\$88,098	\$110,837	\$133,575	\$156,314

CALCULATING REVENUE

Selecting a Revenue Base

The earned income tax was applied to the state total Adjusted Gross Income in Vermont, as was the Governor's projection, for tax returns representing individuals under 65 in 2013⁵⁷. This particular tax base excludes the Medicare population and out-of-state residents.

Determining Average Household Size

⁵⁷ Vermont Tax Department, "2013 Vermont Personal Income Tax Returns- Individuals Under Age 65," December 2014.

Average household size, for the purpose of determining income in relation to the start and end points of the tax curve (138% FPL and 523% FPL), was calculated with the following equation:

$$\begin{aligned} & (\text{Total Vermont in-state returns under 65 in 2012} \\ & + \text{Total count of dependents for all ages in 2012 in Vermont}) \\ & / \text{Total Vermont in-state returns under 65 in 2012} \\ & = \text{Average Household of 1.58 individuals} \end{aligned}$$

2012 figures⁵⁸ were used because figures for number of dependents were not available for Vermont in 2013. All dependents were attributed to tax filers under 65, based on the assumption that a majority of the dependents would be on tax returns of filers under 65.

$$(255,589 \text{ returns} + 148,160 \text{ dependents}) / 255,589 \text{ returns} = 1.58 \text{ individuals}$$

Determining Income Targets for Household of 1.58

Income for a household of 1.58 at 100% FPL was determined by adding .58 of the difference in income between a household of 1 and a household of 2 at 100% FPL to the income for a household of 1 at 100% FPL. Then, this figure was multiplied by 1.38 to find income for a household at 138% FPL, \$20,741. Similarly, the income at 100% FPL was multiplied by 5.23 to determine the income at 523% FPL.

Table 3.

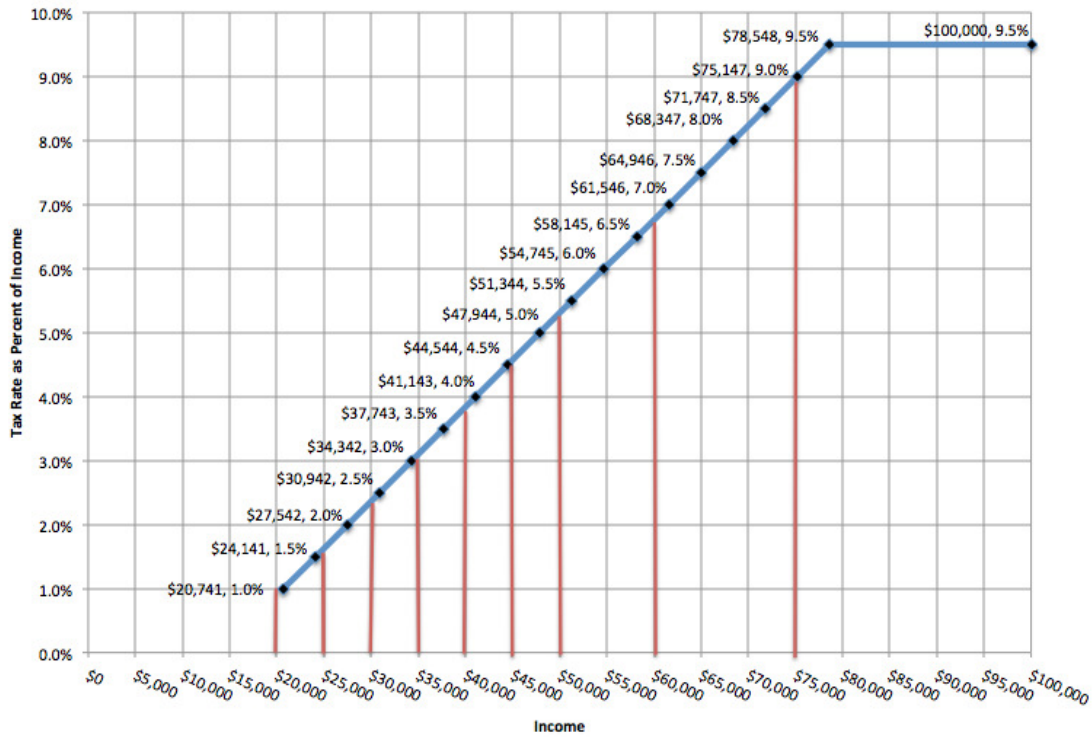
% FPL	Household Size	Income
138%	1.58	\$20,741
523%	1.58	\$78,548

AGI at Various Income Levels

Vermont income tax returns report AGI in income classes. The following figure shows the Vermont Tax Return income ranges as they correspond with a HCHR tax curve designed for a household of 1.58.

Figure 1. Tax rate as a percentage of income for a household of 1.58 and AGI Income Ranges

⁵⁸ Vermont Tax Department, “2012 Vermont Personal Income Tax Returns- Individuals Under Age 65,” December 2013.



*Vertical lines represent the delineations between income classes as defined by Vermont Tax Returns.

With the assumption that income is distributed evenly within income classes, tax rates were applied to each income range based on averages of the tax rates present in each income range. The following table shows the average rate at which each income class is taxed for the purpose of taxing total income in that range, and the revenue generated from each income class. Note, this procedure is for generating a total revenue estimate for the income tax, and therefore deals with a “synthetic” household of 1.58 individuals. For individuals to determine their personal tax rates, Table X shows tax rates, household income, and household size.

Table 4. Income tax rate and income class

Income Range	Tax	Income Range	Tax
0.01-4999	0	50000-59999	6.00%
5000-9999	0	60000-74999	7.75%
10000-14999	0	75000-99999	9.25%
15000-19999	0	100000-124999	9.50%
20000-24999	1.25%	125000-149999	9.50%
25000-29999	2.00%	150000-199999	9.50%
30000-34999	2.75%	200000-299999	9.50%

35000-39999	3.50%	300000-499999	9.50%
40000-44999	4.25%	500000-999999	9.50%
45000-49999	5.00%	1000000	9.50%

Table 5. Total income tax revenue generated by income class

Income Class	Revenue	Income Class	Revenue
0.01-4999	0	50000-59999	\$55,516,656.48
5000-9999	0	60000-74999	\$101,381,308.10
10000-14999	0	75000-99999	\$186,716,392.08
15000-19999	0	100000-124999	\$141,695,916.96
20000-24999	4882791.65	125000-149999	\$89,758,419.84
25000-29999	\$9,244,170.70	150000-199999	\$102,037,011.67
30000-34999	\$13,991,647.64	200000-299999	\$88,573,657.17
35000-39999	\$17,584,925.30	300000-499999	\$63,420,222.55
40000-44999	\$20,679,530.19	500000-999999	\$48,017,942.00
45000-49999	\$23,271,291.15	1000000 and over	\$90,258,618.69
		Total	\$1,057,030,502.15

Inflation Rate

Various inflation rates were considered for the purposes of inflating the 2013 tax base to reflect 2017 income. Ultimately, a conservative inflation rate of 1.5% was selected to most closely approximate the Governor's projection; higher inflation rates would have yielded more revenue than the estimates shown in the Governor's scenarios. In the absence of access to the model that the Administration used to estimate revenue for 2017, we replicated the Governor's curve based on the data points provided in his proposal: a tax that starts at 2.5% at 138% FPL and flattens out at 9.5% at 400% FPL, with a cap at a contribution of \$27,500. Using our methodology, the revenue estimate for this curve is \$1,038,687,998 in 2013. Since we used in-state AGI to generate this revenue estimate, and we know that the Governor's proposal includes commuters, we expanded this number (in state revenue accounts only for 88% of the total revenue generated in the Governor's model) to \$1,180,327,270. This figure, inflated by 1.5% each year between 2013 and 2017 is \$1,252,756,343, which brings us close to the Governor's revenue estimate. Therefore, we inflated our revenue estimate of \$1,057,030,502 by the same 1.5% annually to reach our Total Revenue Generated: **\$1,121,893,647**, in effect replicating any income base impacts present in the Governor's model that we could not otherwise account for.

APPENDIX C: PAYROLL TAX METHODOLOGY

Our payroll tax model is based on three data sets: the Covered Employment and Wages table and the Size of Establishment by Industry table, both produced by the Quarterly Census of Employment and Wages (QCEW), available from the Vermont Department of Labor⁵⁹; and Occupational Employment Statistics Research Estimates for wage distribution by industry, available for Vermont from the Bureau of Labor Statistics⁶⁰. All data sets use the North American Industry Classification System (NAICS) to group industries. We used 2013 data, the most recent year with complete datasets.

After merging those datasets, we modeled wage ratios for eight different industries to approximate wage ratios at company level. We used the mean wages within the bottom 10th, 25th, 50th, 75th and 90th percentiles to extrapolate the wages of the top one percentile, fitting a third order polynomial to those percentiles to replicate the expected wage distribution up to the top 1% of wage earners. We restrained the polynomial at the bottom end to avoid dropping below minimum wage. We obtained wage ratios for these eight industries ranging from 3.98 (in construction) to 5.68 (in retail).

We assigned pre-determined wage ratios to another 10 industries, at levels that reflected our assumption that industry-wide wage ratios are likely to be higher than company-level ratios (because they include the lowest earners and the highest earners across the whole industry as opposed to within a given company). One remaining industry and state and local government were assigned the average ratio of 4.87. Government data proved challenging to integrate; first, because it is not differentiated into size categories; and second, because the education sector is reported within an industry category, rather than, as in the Governor's report, as the "municipal government" sector. This may have led to underestimating the tax obligation of the public education sector, and to overestimating the tax rate of other government employers. We did not allocate any tax obligation to the federal government.

Keeping within the parameters of our data sources, the tax base we use to project revenue is smaller than our preferred tax base. The data includes only establishments subject to the Vermont Unemployment Compensation Law, whereas our preference would be to include every employer subject to withholding tax, which would generate additional revenue.

Unlike the Governor's model, we do not cap the tax for wages in excess of \$200,000k, but we do cap the overall tax rate at 20%. To trend 2013 payroll data forward to 2017, we applied the same 2.48% payroll inflation rate used by the Administration.

⁵⁹ <http://www.vtmi.info/indnaics.htm#industry>

⁶⁰ http://www.bls.gov/oes/2012/may/oes_research_estimates_2012.htm