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Agency of Administration
Health Care Reform
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REPORT TO THE VERMONT LEGISLATURE

Report on Universal Primary Care

In accordance with Act 172 of 2016, Section E.100.10

Submitted to
Health Reform Oversight Committee
Joint Fiscal Committee
House Committee on Appropriations
House Committee on Health Care
House Committee on Ways and Means
Senate Committee on Appropriations
Senate Committee on Finance
Senate Committee on Health and Welfare

Submitted by
Director of Health Care Reform
Agency of Administration

November 23, 2016

Table of Contents

Executive Summary

In order to further advance health care reform, the Vermont Legislature passed Act 54 of 2015, which required the Agency of Administration to report the costs of a system of universal primary care (UPC) for all Vermonters. In 2015, the Agency of Administration reported the following costs for the following primary care services:

Figure 1: Universal Primary Care Service Categories and Specialty Types

Universal Primary Care Service Categories
•New or Established Patient Office or Other Outpatient Visit
•Initial New or Established Patient Preventive Medicine Evaluation
•Other Preventive Services
•Patient Office Consultation
•Administration of Vaccine
•Prolonged Patient Service or Office or Other Outpatient Service
•Prolonged Physician Service
•Initial or Subsequent Nursing Facility Visit
•Other Nursing Facility
•New or Established Patient Home Visit
•New or Established Patient Assited Living Visit
•Other Home or Assisted Living Facility
•Alcohol, Smoking , or Substance Abuse Screening or Counseling
•All-Inclusive Clinic Visit (FQHCs/RHCs)
•Behavioral Health

Universal Primary Care Specialty Types
•Family Medicine MD
•Registered Nurse
•Internal Medicine MD
•Pediatrician MD
•Physician Assistant/Nurse Practitioner
•Psychiatrist
•OB/GYN MD
•Naturopath
•Geriatric
•Registered Nurse - Psychiatric/Mental Health
•Social Worker
•Psychologist
•Counselor
•Counselor - Addiction

Table 1a. Summary of Claim Cost Estimates for Universal Primary Care in 2017, With and Without Cost-Sharing[1]

Claim Costs	Status Quo	UPC With Cost-Sharing	UPC Without Cost-Sharing
Total Claim Costs	$221,747,000	$220,236,000	$281,929,000
Paid by Medicaid[2]	($107,371,000)	($107,371,000)	($107,371,000)
Net Claim Costs	$114,376,000	$112,865,000	$174,558,000
% Covered by the payer, on average	87%	87%	100%

In 2016, the Legislature passed Act 172, which required the Agency of Administration report on:

- A literature review of any savings realized by universal health care programs over time that are attributable to the availability to the access to primary care.

[1] This methodology results in a cost estimate range for the legislature from status quo to 100% coverage.
[2] Actuarial firm Wakely Consulting assumed a payment rate trend of 1.7% for Medicaid estimates and trended forward three years from 2014 to 2017. If Medicaid grows more slowly the total cost estimate will increase.

- Analysis of the primary care payment models created through the development of the all-payer model.
- A potential implementation timeline for universal primary care.

Part 1. Investigating Cost Savings Attributable to Universal Primary Care: A Literature Review

The Agency reviewed 49 sources from the academic and policy literature. A summary of key articles reviewed and full list of sources is included in Appendix B. Key findings include:

- No studies directly exploring the cost savings attributable to universal access to primary care were found in the literature.
- Many studies demonstrated elements of primary care that produced cost savings and improved health outcomes. Four of these studies demonstrated cost savings attributable to Vermont Blueprint for Health, a primary care intervention based in the patient-centered medical home model that contributed to primary care payment and delivery reform in Vermont since 2003.
- Other studies from around the US further demonstrated the evidence of primary care interventions to reduce costs through continuity of care, access to care, utilization of care, alternative payment models, and electronic health records. Around the world, countries with higher investment in primary care and social service spending had better health outcomes and lower health care costs. Policymakers should consider whether and how this would apply to UPC.

Part 2. Primary Care Models Created in All-Payer Model

After Act 172 was passed, the State of Vermont finalized the Vermont All-Payer Accountable Care Organization Agreement, commonly referred to as the all-payer model.[3] The final agreement, executed on October 27, 2016, set 2017 as a planning year and 2018 as the first year that requires Vermont to have aligned accountable care organization (ACO) programs across Medicare, Medicaid, and commercial insurers. Accordingly, it is not yet possible to describe and evaluate primary care models created for the all-payer model and their impact on the UPC concept. The study would need to be updated as ACOs and their constituent providers develop and implement primary care models in 2017 and future years.

Part 3. Draft Implementation Timeline

An implementation timeline consists of several phases. In the first phase, the Legislature must refine elements of the universal primary care program and provide direction to the Agency of Human Services in order to complete the cost analyses and financing plan. During Phase 2, the Agency of Administration will perform cost analyses and developing financing plans. In phase 3, the Legislature must pass a financing plan. And in the final phase, the State of Vermont will apply for federal waivers and implement the program. These tasks may be spread out over a five-year period with the State of Vermont starting implementation in Year 3 or Year 4.

[3] See http://gmcboard.vermont.gov/sites/gmcb/files/documents/10-27-16-vermont-all-payer-accountable-care-organization-model-agreement.pdf.

Part 1. Investigating Cost Savings Attributable to Universal Primary Care: A Literature Review

Introduction

Vermont has a long tradition of leadership in health care reform through Dr. Dynasaur, Catamount Health and Vermont Access Programs (VHAP), Act 48, and other initiatives. In 2011, Act 48 established a framework for an integrated health care delivery system to steer Vermont towards the following goals:

1. Reducing health care costs and cost growth
2. Assuring that all Vermonters have access to and coverage for high quality care
3. Assuring greater fairness and equity in how we pay for health care
4. Improving the health of Vermont's population [1]

In 2015, universal primary care (UPC) was proposed by members of the General Assembly as an intervention to potentially decrease costs over time, improve health equity, and ensure universal coverage through a publicly financed program for these services as a step towards a larger universal coverage program. The Legislature approved what would become Act 875 of 2016, Sec. E.100.10, requiring the Agency of Administration to produce a literature review on the cost savings attributable to universal access to primary care.

Act 875 Sec. E.100.10 UNIVERSAL PRIMARY CARE; REPORT reads,

> "(a) Regardless of any future developments in payment and delivery system reform, Vermont is likely to continue to have uninsured or underinsured residents. As expanding access to primary care services is a proven method for improving population health, the General Assembly intends to move forward with implementation of universal primary care for all Vermonters.
> (b) In order to determine a path forward toward implementing universal primary care in Vermont, the Secretary of Administration or designee shall:
> (1) conduct a literature review of any savings realized by universal health care programs over time that are attributable to the availability of universal access to primary care." [2]

This is the second report produced by the Agency of Administration on the topic of UPC. In December of 2015, a report was released comparing the estimated costs of implementing UPC with costs of maintaining the status quo. The claims cost estimates for UPC in 2017 were projected to be $221,747,000 for the status quo, $220,236,000 with cost sharing, and $281,929,000 without cost sharing (Figure 2)[4]. To put these numbers in context, total health care spending in Vermont in 2014 was $5.5 billion [3].

[4] These figures do not include administrative costs or transition costs.

Figure 2: Costs Scenarios for Primary Care [4]

Claim Costs	Status Quo	UPC With Cost-Sharing	UPC Without Cost-Sharing
Total Claim Costs	$221,747,000	$220,236,000	$281,929,000
Paid by Medicaid[9]	($107,371,000)	($107,371,000)	($107,371,000)
Net Claim Costs	$114,376,000	$112,865,000	$174,558,000
% Covered by the payer, on average	87%	87%	100%

The purpose of this literature review is to investigate studies on cost savings attributable to universal access to primary care. A comprehensive literature review using three different research databases did not yield any results directly applicable to studies on universal primary care. In the US, there is no precedent for universal primary care and Vermont would be the first state to implement UPC, which may explain the gap in the literature. Other studies did show cost savings attributable to primary care in non-universal programs in the United States and in universal health care programs in other countries. In the absence of studies directly related to universal access to primary care, this literature review examines the evidence on the best use of primary care with key findings and considerations for Vermont.

The literature also includes information on cost sharing, as cost sharing was studied in the 2015 Cost Estimates for Universal Primary Care Report. This study was limited to analyzing the claims costs and provider reimbursement increases for UPC, and did not include the full costs associated with administration or costs related to a public financing plan, economic analysis of the financing plan, legal and waiver analysis, operational plan, or benefit design [4].

Defining primary care

Act 54 of 2015 authorizes a cost estimate report on UPC and defines UPC as,

> "A publicly financed program that would provide primary care services to all Vermonters, regardless of insurance coverage, ensuring that all Vermonters have access to primary care." [5]

The Legislature defines primary care as,

> "Health services provided by health care professionals who are specifically trained for and skilled in first-contact and continuing care for individuals with signs, symptoms, or health concerns, not limited by problem origin, organ system, or diagnosis, and includes pediatrics, internal and family medicine, gynecology, primary mental health services, and other health services commonly provided at federally qualified health centers. Primary care does not include dental services" [5].

This literature review precedes an outline of a defined UPC program established by the General Assembly, which necessarily leaves outstanding issues and questions as to the program design.

Methods

The search terms *universal primary care, cost savings, health outcomes, population health, primary care*, and *return on investment* were used separately and in combination in Medline, CINAHL, and Proquest. A secondary search using the terms *cost savings, primary care utilization, emergency department use*, and *hospitalization rates* was also performed. A "snowballing" strategy was used to include studies referenced in the articles that were found via search. Academic peer-reviewed articles, white papers, and reports by leading health organizations were also included for study.

Literature on cost-sharing was found in Medline using the following search terms: *cost sharing, cost sharing and primary care, deductibles, coinsurance, and primary care*, and *cost sharing and chronic disease*. In total 125 studies and articles were reviewed and fifty, including six systematic literature reviews, were included in this report.[5]

Key Findings

For each key finding, a summary of the literature is presented followed by a discussion of considerations for policy makers. A review of the literature produced the following findings:

1. No peer-reviewed studies showed cost savings directly attributable to universal access to primary care.
2. Many studies showed cost savings attributable to access to primary care in non-universal settings, including in Vermont.
3. Many studies showed countries with a foundation in strong primary care systems had lower costs, greater health equity, and better population health than the US.
4. Many studies showed cost sharing can decrease healthcare utilization and disproportionately impact the poor.

Key Finding 1: No peer-reviewed studies showed cost savings directly attributable to universal access to primary care.

Summary of Findings

Studies on universal access to primary care were not explicitly available through any of the database searches.

Considerations for Vermont

Vermont would be the first place where data on universal access to primary care could be collected.

[5] The Joint Fiscal Office and Dr. Deb Richter also contributed studies to this review.

Key Finding 2: Many studies showed cost savings attributable to access to primary care in non-universal settings, including in Vermont.

Summary of Findings

A total of thirteen studies investigated the cost savings from a primary care intervention in the US (Tables 2-4). This section provides definitions for key terms, tables of the thirteen cost savings studies, a Vermont case study, and other elements of primary care that were shown to affect cost, quality, and/or health outcomes.

Definitions

This section provides definitions relevant to the discussion of the studies on cost savings.

Patient-Centered Medical Home (PCMH): The patient-centered medical home is an alternative care model certified by the National Committee for Quality Assurance (NCQA) using evidence-based practices for quality, cost reduction, and population health management to achieve the following standards [6]:

- To improve prevention and management of chronic disease and ambulatory care sensitive conditions;
- To create multi-specialist, team-based care, including linkage with social workers, nutritionists, and other social service professionals outside the scope of traditional primary care; and
- To reduce unnecessary medical expenditures.

High-intensity primary care: According to the Bailit Health Purchasing report, "High-Intensity Primary Care provides patient-centered, team-based care to those patients with the most significant health care needs (e.g., multiple chronic conditions). The patient's team of medical professionals (which may include a primary care physician, specialist, a behavioral health clinician, a nurse manager, a health educator, and a community health worker) work together with the patient to support him or her in developing and following his or her individualized care plan. This model of care often includes a significant level of patient-provider interaction (potentially daily) using in-person visits, telephone calls, and e-mail" [7].

Ambulatory care sensitive conditions (ACSCs): According to Purdy, et al. (2009), "Ambulatory or primary care sensitive conditions (ACSCs) are those conditions for which hospital admission could be prevented by interventions in primary care," and include at least thirty-six identified conditions such as asthma, hypertension, congestive heart failure, chronic obstructive pulmonary disease, common infections, and others [8].

Studies of Cost Savings Attributable to Primary Care Interventions

Of the thirteen studies of cost savings attributable to primary care interventions, six studies focused on primary care interventions for Medicare and/or Medicaid beneficiaries [9-13], three studies focused on primary care interventions for private sector and non-profits [7, 14, 15], and

four studies focused on five statewide programs. Of the five statewide programs, four of the studies occurred in Vermont[6] [6, 10, 16, 17].

In terms of primary care interventions, three of the studies focused on high-intensity primary care, eight focused on patient-centered medical homes, two focused on home-based primary care, and one focused on insuring previously uninsured patients and providing access to a community primary care clinic.

Tables 2 – 4 on pages 9-10 provide summaries of the studies described above.

[6] These were studies assessing Vermont Blueprint for Health: two studies focused on PCMHs, one focused on SASH, and one on the Vermont Chronic Care Initiative.

Table 2. Primary Care Programs with Return on Investment: Medicare/Medicaid Specific

Program	Cost savings	Focus	Size of Study	Timeframe
Priority Access Primary Care (PAPC) Pilot in East Baltimore, MD Study conducted internally by PAPC team with results published in John Hopkins Medicine BestPractice News	2-to-1 ROI [30% decrease in ED use, 41% decrease in hospital admissions]	High intensity primary care	70 patients enrolled in Medicaid	1.5 years
Virginia Commonwealth University Medical Center program Study by Bradley, et al. (2012) and published in the journal *Health Affairs*	Costs went from $8,899 to $4,569 per patient per year, almost 50% reduction in costs	Insuring previously uninsured patients and providing access to a community primary care clinic	26,284 patients enrolled in Medicaid	7 years
Community Care of North Carolina[7] Study by Steiner, et al (2008) published in the journal *Annals of Family Medicine*	$160 million annual savings 2008 $336 million annual savings in 2014	PCMH	750,000 patients enrolled in Medicaid in 2008, 1.44 million in 2014	N/A, but program began in 1998
Home Based Primary Care practice, Washington D.C. Study by de Jonge, et al. (2014) published in *Journal of the American Geriatrics Society*	$8,477 per patient (17% lower than projected Medicare costs) over two years	Home based primary care	722 patients enrolled in Medicare	2 years
Hennepin Health, a Medicaid ACO pilot program in Minnesota's Coordinated Care Clinic Evaluated by the Center for Medicaid and CHIP Services (CMCS)	$24,170 per patient over first year	PCMH	232 Medicaid patients	30 months

[7] This was also a statewide study. Updated 2014 information found in North Carolina Community Care Networks, Inc. Clinical Program Analysis, May 2015 at https://www.communitycarenc.org/media/files/roi-document-may-2015.pdf

Table 3. Primary Care Programs with Return on Investment: Private Sector and Non-Profit

Program	Cost savings	Focus	Size of Study	Timeframe
Intensive Outpatient Care Program by Boeing Study published by Bailit Health Purchasing, LLC in collaboration with the Robert Wood Johnson Foundation	A 20% decrease in spending per patient	High intensity primary care	740 Boeing employees	1 year
Proven Heath Navigator (PHN), a PCMH developed by Geisinger Health System Study by Maeng et al. (2012) in the *American Journal of Managed Care*	1.7 ROI	PCMH	Over 26,000 enrollees in a Medicare advantage plan	4 years
Group Health Medical Home Study by Reid, et al (2010) in *Health Affairs*	$10.30 per patient per month (est.)	PCMH	N/A	21 months

Table 4. Primary Care Programs with Return on Investment: Statewide Programs

Program	Cost savings	Focus	Size of Study	Timeframe
Pennsylvania Chronic Care Initiative Study by Friedberg, et al. (2015) published in *JAMA Internal Medicine*	N/A. Decreased use of services associated with higher costs was found (emergency care, specialty, and hospital use) while PC utilization and quality increased.	PCMH	17,386 in pilot and control groups	3 years
Vermont Blueprint for Health (case study page 7) Study by Jones, et al. (2015) in the journal *Population Health Management*	$482 per patient per year, $104.4 million in total	PCMH	123 participating practices, plus an unspecified number of control groups	6 years
Vermont Blueprint for Health (See Case Study, pg. 7) Study by Thompson, et al. (2015) in the journal *Population Health Management*	Costs increased while health care utilization decreased	PCMH	Samples of claims data taken from 104,160-150,846 people per year	5 years (2007-2011)
Support and Services at Home (SASH) Evaluated by the Assistant Secretary for Planning and Evaluation Office of Disability	$1,536 per beneficiary for those enrolled before April 2012	Home-based primary care, elements of PCMH	3,385 SASH enrollees plus controls	3 years
Vermont Chronic Care Initiative Evaluated by the Center for Medicaid and CHIP Services (CMCS)	$11 million in FY 2012	High-intensity primary care	N/A	2 years

Because the majority of the studies on statewide programs focused on Vermont's primary care interventions, we have included a brief case study to summarize the findings below.

Case Study: Vermont PCMHs

Jones, et al. (2015) compared costs, health care utilization, and quality outcomes for PCMHs in Vermont to non-PCMH primary care practices annually over six years. It was found that costs were reduced by $482 per patient (using a different-in-differences change methodology) for PCMHs compared to the non-PCMH group while achieving higher scores on 9 of 11 quality measures. If the cost savings are applied per patient, the total savings amounts to $104.4 million over six years. While 123 primary care practices participated as PCMHs, the article did not specify how many practices were included in the non-PCMH group.

Thompson, et al. (2015) arrived at different results using a different study design. This study analyzed claims data for all Vermonters with commercial insurance and Medicaid from 2007-2011, a period where PCMHs were growing and expanding across Vermont. The study analyzed inpatient costs, costs per discharge, and cost per inpatient day and found that *costs* increased despite a decrease in health care utilization due to external cost drivers.

The primary care interventions discussed above that produced cost savings used evidence-based methods relating to the following elements:

- Continuity of care
- Access to care
- Utilization of care
- Alternative payment models
- Electronic health records

Each element is discussed in greater detail below in order to provide a summary of how this element impacted the care of patients and why it might be associated with cost savings. Because more than one element may be present in an existing system or may be introduced as a new intervention, it is difficult to assess which interventions are successful over time. This is due to the methodological challenges of assessing more than one variable interacting in a complex system. In a randomized controlled trial, known as the gold standard of research design, often a single variable is introduced to two otherwise very similar groups. The studies in this topical area are observational studies in communities and health institutions. The likelihood for confounding factors, or unaccounted for factors that influence the study results, is much greater in observational studies such as these.

Continuity of Care

Continuity of care was generally defined as a longitudinal relationship between patients and their PCP's, but one study expanded the definition to include "informational continuity of care" which included having a patient's medical records easily transferable between providers [18]. A

2010 systematic literature review of primary care found that continuity of care was associated with improved preventative services, higher quality of care, decreased hospitalizations, and improved early diagnosis in four separate literature reviews [18]. Better-coordinated care has also been shown to be cost-effective in most circumstances [15, 18, 19].

Access to Care

A 2010 literature review of primary care found seven dimensions of access to primary care based on six separate, previous literature reviews. The results showed access to primary care was defined by availability (type and amount of services), geographic accessibility, accommodation (i.e. home visits, appointment hours), affordability, acceptability (patient satisfaction), utilization, and equality in access [18]. The evidence overwhelmingly showed that access to care was associated with fewer hospitalizations for ACSC's and better population health.

Bradley, et al. (2012) found cost savings associated with insuring a previously uninsured population of low-income adults in Virginia and providing them access to a community based primary care system. The results showed a 17% reduction in health care costs over a three-year period with a savings of $4,330 per patient as a result of decreased ER visits and inpatient hospitalizations [11].

Utilization of Care

Access to primary care and primary care utilization were analyzed separately in the literature, with the exception of one literature review that analyzed utilization under the umbrella of access to care. Findings in the US showed that an increase in primary care utilization was consistently correlated to positive health outcomes pertaining to blood pressure and glycemic index control, colorectal cancer, and lung cancer [20-22]. In other words, using more primary care services resulted in better control or early detection of certain conditions.

Alternative Financing Models

Two studies were found on how different financing models influence clinical decision-making. These studies do not offer conclusive evidence as to what kind of payment model is best, but they do highlight the important role that payment models make in influencing costs. One study found that there was no significant difference in clinical-decision making for life-saving care under fee-for-service (FFS) or capitated payments, but there was a difference in discretionary care [23]. The authors of this study, Shen et al. (2004) found that, "Physicians on average tended to conserve discretionary resources under capitated arrangements compared with traditional FFS" (p. 4). However, a 2013 academic review recommended a revised FFS model over capitated payments, arguing that capitated payments can lead to the underuse of necessary diagnostic testing and treatment [24].

Alternative Care Models

Patient-centered medical homes were the most widely cited alternative care models in the literature. This care model addresses patient-centered care, access to care, continuity of care,

electronic health records and other quality issues. The cost savings of PCMHs are documented under this key finding section (Tables 2-4) and in the case studies. Some studies showed less concrete success from PCMHs. Kern, et al. (2016) found that changes in utilization and quality for the PCMH were modest [25].

Electronic Health Records

The use of electronic health records has shown cost savings, however, results are inconclusive as health IT studies vary widely by study design and locale [26]. A systemic review of studies demonstrated an improvement in costs, quality, and efficiency attributable to electronic health records, citing an improvement in care delivery, a reduction in medical errors, better preventative health delivery, and a reduction in redundant care [27].

Evidence of Cost Increase

One article showed that primary care was associated with increased health care spending growth. Chernew, et al. (2009) analyzed ten years of Medicare data and found that regions with a ten percent higher than average number of primary care physicians also had a 1.8% higher health care growth spending rate. This study also found that higher numbers of primary care physicians was correlated with lower health care costs overall, consistent with many previous studies [28].

Considerations for Vermont

Cost Savings from Delivery and Payment Reforms

Since 2003, primary care in Vermont has been transforming under a state initiative called the Vermont Blueprint for Health. This program within the Department of Vermont Health Access (DVHA) focuses on delivery reform, as well as some payment reform efforts. The goal of the Blueprint is to improve quality, reduce costs, and improve population health through a series of primary care innovations. These innovations are centered on PCMH certification, community health teams, payment reforms, and community-led programs to improve health. The Blueprint started with two a two-practice pilot in 2008, grew to 18 sites in 2010, and then to 123 sites in 2013 [6]. Today, over 126 of Vermont's 140 primary care practices are enrolled in Blueprint [29]. The Blueprint also includes the Vermont Chronic Care Initiative, SASH, and Hub & Spoke programs.

Because Vermont has implemented a PCMH model with community health teams, the most relevant studies on cost savings related to these models are those about the Blueprint. This is important to note, as some cost savings related to care delivery may already be realized in Vermont.

Cost Savings from Access

A small but noteworthy percentage of Vermont's population remains uninsured. The National Center for Health Statistics estimated Vermont's uninsured rate at 2.7% for 2015 based on the results of the National Health Interview Survey. According to the 2014 Vermont Household Health Insurance survey, 3.7% Vermonters are uninsured, representing 23,231 people,

including 1,300 children. In addition, the Vermont Department of Health (VDH) estimates there to be approximately 5,000 people of foreign citizenship without legal documentation in Vermont lacking health insurance. Vermont also has a sizeable population of underinsured residents. According to the survey, the underinsured population includes 27% of people with private health insurance under the age of 65. Young adults represent the largest group within this demographic with 63% of people ages 18-24 underinsured. “Underinsurance” was defined in the survey as having a deductible that exceeds a family’s income by 5% and/ or having medical expenses that amount to over 5% or 10% of a family’s income depending if they’ve earned under or over 200% of the Federal Poverty Level (FPL).

One study indicated there would likely be a cost savings for insuring uninsured, low-income adults. Of the remaining 23,231 Vermonters without health insurance, 45% of the uninsured are within 1-199% FPL. The literature shows that cost savings from insuring people who were previously uninsured has cost savings, but the exact amount and time frame to realize cost savings are unclear. Furthermore, findings from other states may not be directly applicable to Vermont if uninsured and underinsured Vermonters currently have better access to primary care through federally qualified health centers, rural health clinics, free clinics, and other safety net providers throughout the state. If this were true, then cost savings attributable to primary care for UPC would likely be lower than in other states.

Cost was self-reported as the number one barrier to health insurance in the 2014 Vermont Household Health Insurance Survey. According to the survey, uninsured Vermonters were more likely to forgo preventative services, mental health services, and treating an illness due to the cost of care than insured Vermonters. Depending on how the program were funded, UPC could remove the cost barrier standing between the uninsured and access to routine and preventative care, ultimately improving health and saving costs. However, the transferability of these findings to Vermont hinges on several factors, including to what degree Vermont’s uninsured population currently receives free or low-cost care and if they would increase primary care utilization with UPC.

A further consideration for UPC, health disparities, and costs, is whether or not UPC would cover the estimated 5,000 people in Vermont without US citizenship or immigration documents [30]. No studies were found on the cost savings or health outcomes of providing health insurance to this population.

It may be reasonable to expect a modest reduction in overall trend in health care spending from expanding the Vermont Blueprint for Health to include currently uninsured Vermonters. Studies from other states indicate success with similar interventions, but should be applied with caution given state-to-state differences. It is impossible to say if UPC would further promote these cost savings as decisions are yet to be made as to how the UPC program would be structured.

The exception was a Vermont study showing costs increasing over time in PCMHs despite decreased health care utilization rates. This study highlighted the influence of factors outside of

the control of primary care to influence costs including labor costs, medical innovations (including prescription drug costs), cultural norms, macroeconomic conditions, population health, contracting with commercial insurance, and government rate setting among other cost drivers [16].

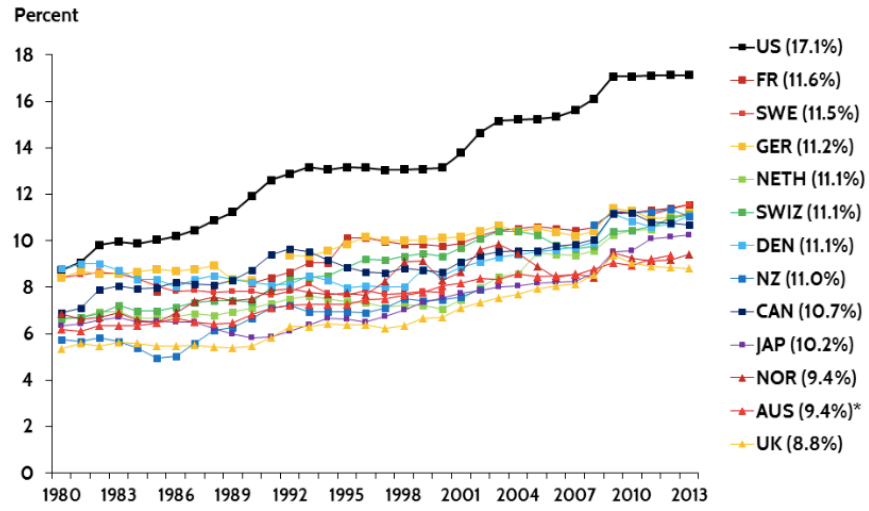
Overall, assuming that UPC is designed to increase access to health care for the uninsured, the studies attributable to increase access support cost savings for this population. In addition, expanding Blueprint for Health medical homes to the now uninsured could provide overall health care cost trend reductions as opposed to other types of delivery system interventions.

Key Finding 3: Many studies showed countries with a foundation in strong primary care systems had lower costs, greater health equity, and better population health than the US.

Summary of Findings

Despite spending significantly more than any other country on health care, the US ranks low compared to other wealthy countries when it comes to access to health care, health equity, and many leading health indicators[8] [31]. The US spends approximately 17.1% of GDP on health care compared among the second highest spenders, the Netherlands and Switzerland (Figure 3).

Figure 3: Health Care Spending as a Percentage of the GDP, 1980-2013 [32]



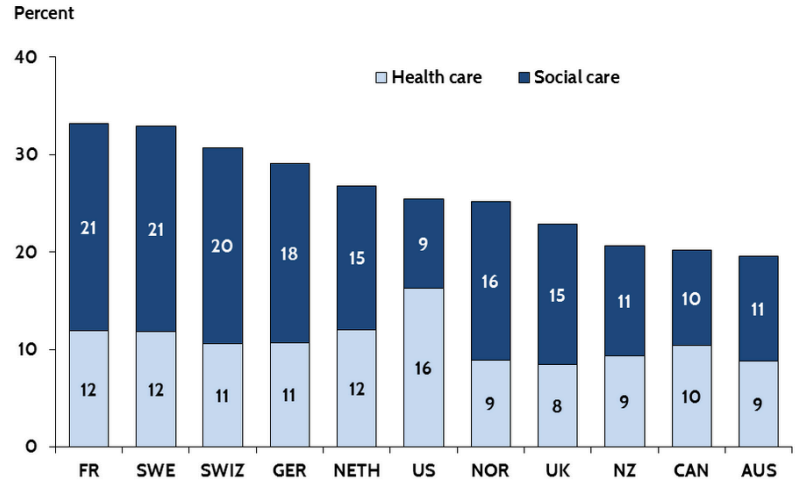
* 2012.
Notes: GDP refers to gross domestic product. Dutch and Swiss data are for current spending only, and exclude spending on capital formation of health care providers.
Source: OECD Health Data 2015.

In many countries with universal health care, including Canada, Spain, and United Kingdom, strong universal primary care systems serve as a foundation for universal health care. These countries define primary care as an "orientation of systems" where primary care is a robust

[8] http://www.commonwealthfund.org/publications/fund-reports/2014/jun/mirror-mirror

form of health care delivery for a region, and also as a specialty within medicine [33]. These countries also spend more on social services than the US [31] (Figure 4).

Figure 4: Percentage of GDP spent on health care and social care by country [32]



Notes: GDP refers to gross domestic product.
Source: E. H. Bradley and L. A. Taylor, *The American Health Care Paradox: Why Spending More Is Getting Us Less*, Public Affairs, 2013.

Reasons for how strong primary care systems can lead to lower health care spending:

- By reducing the number of services performed by specialists [33-36].
- By decreasing inpatient and outpatient hospital expenditures [6, 10, 11, 37, 38].
- By decreasing emergency department care, especially for ambulatory care sensitive conditions (ACSCs)[9] [9-11, 39].

Proposed explanations for why universal health care systems may lead to lower health care spending:

- By improving health equity and social cohesion [40].[10]
- By increasing earnings and tax revenues for healthier adults [11].
- By Improving modifiable risk behaviors that can lead to poor health outcomes [41, 42].

The following case studies are provided to give context to other countries systems.

[10] The WHO emphasizes social cohesion as an attribute of universal health care, framing the issue as building equity when many communities are feeling the adverse effects of income inequality and globalization. The WHO supports the notion that UPC could help improve well-being and health by strengthening the foundation of health necessary to engage in civic life and by building the equity necessary to establish trust and social support within communities.

Case Study: United Kingdom

The National Health Service, the publicly funded universal health care system in the UK, is built on Primary Care Trusts (PCT's). PCT's are entities that integrate health care services similar to the aims of Accountable Care Organizations (ACOs). According to Rice (2010), "U.K. residents enjoy universal coverage, live almost two years longer, have infant mortality rates that are 25% lower, rarely experience cost-related barriers to obtaining care, have lower medical-error rates, are less likely to be readmitted to hospital after surgery, and, based on surveys of patients and primary-care physicians, ranked second out of seven selected countries in overall quality, with the U.S. finishing last—and all of this at less than half of the cost per capita" (p.1). PCT's control 75% of the National Health Service's Budget, establishing a link between resources devoted to primary care and lower overall costs [43].

Case Study: Canada

Canada and the United States are similar in size and culture, but have a distinct difference when it comes to health care: Canada has publicly funded universal health care system and the US does not. According to the National Bureau of Economic Research, Canada spent only 10.4% of its GDP on healthcare while the United States spent 16% in 2013. Canada's health care spending per capita at that time was $4,569, compared to $9,086 in the US [32]. Despite spending less, Canadians have a more regular primary care doctor, fewer unmet health needs, and a smaller range of health outcomes between the poor and the wealthy [44].

Canada has a lower primary care-specialist ratio than the US. According to Shi (2012), there are only 10% more physicians are specialists than primary care physicians in Canada, while the US has over 50% more physicians are specialists.

Case Study: Spain

Beginning in 1978, Spain moved from a privatized health care system to universal health care, relying heavily on primary care teams strategically focusing on prevention, health promotion, treatment, and community care. As a result, health outcomes improved. In 2010, Spain spent 8.5% of its GDP on health care, compared to 16% in the United States [45]. Despite spending almost half of what the US does, life expectancy is higher in Spain and infant mortality rates are lower than in the US. Even with a strong emphasis on primary care, Spain faces challenges to its health care system due to immigration, population growth, an aging population, and insufficient primary care workforce. Even though universal health care exists, approximately 15% of Spaniards purchase secondary insurance [46].

Considerations for Vermont

Countries with strong primary care systems as a foundation for their universal health care system and higher spending on social services achieve better health outcomes and lower costs than the US. Implementing UPC would shift Vermont's practices closer to those practices showing results over time in other countries, but there is no evidence to show that universal primary care *alone* can achieve cost savings without universal health care or greater spending on social services. Furthermore, applying studies capturing trends in health outcomes and costs in other countries to Vermont due to structural and cultural differences and should be approached with caution.

The literature shows that health disparities may be influenced by universal health care policy. In Vermont, adults of racial or ethnic minority groups are more likely to be uninsured and 45% of the uninsured are within 1-199% FPL [30]. Of the uninsured, there is an unequal distribution of the population uninsured by county. The two counties with the highest uninsured rates were Essex (at 10%) and Caledonia (at 6.6%). Chittenden County had the highest number of uninsured overall at 3,868 persons. UPC would eliminate the disparity of being insured based on socioeconomic status or race/ethnicity, but other health disparities would likely persist due to access issues (i.e. transportation) and other social determinants of health[11].

Key Finding 4: Many studies showed cost sharing can decrease healthcare utilization and disproportionately impact the poor.

Summary of Findings

Cost sharing has been used selectively since the 1980s as a way to reduce health care costs. The theory behind cost sharing is that if health care consumers shoulder some of the costs through copays, deductibles, coinsurance, or a combination of methods, then they will forgo unnecessary care in favor of utilizing higher value care [47].

The landmark RAND Health Insurance Experiment (see case study) found that copayments decreased health care utilization without influencing health outcomes for the average consumer. For people who were poor and/or sick, however, copays were found to lead to less health care utilization and worse health outcomes. These findings have been replicated by more recent studies [47-49]. Trivedi, et al. (2010) conducted a study from 2001-2006 study on 899,060 Medicare beneficiaries and found that a rise in copayment costs was associated with a decrease in outpatient care and an increase in inpatient care. According to the authors, "The effects of increases in copayments for ambulatory care were magnified among enrollees living in areas of lower income and education and among enrollees who had hypertension, diabetes, or a history of myocardial infarction" (p. 1). This shows that cost sharing may save money in the short run on outpatient costs, but costs will be higher in the long-term due to greater use of inpatient services.

[11] According the World Health Organization, social determinants of health are defined as, "the conditions in which people are born, grow, live, work and age. These circumstances are shaped by the distribution of money, power and resources at global, national and local levels." http://www.who.int/social_determinants/sdh_definition/en/

The 2015 literature review that incorporated five previous literature reviews built a more nuanced theory of cost sharing for people of low-incomes. Key findings from the review are summarized below:

1. Cost sharing was a disincentive for new treatments and reduced the utilization of treatments for chronic diseases.
2. Cost sharing caused low-income families to choose between health care services and "other household necessities."
3. Study participants lacked understanding of how costs vary in different treatment scenarios (limiting their ability to discern between costs of services).
4. Many study participants lacked the knowledge to make informed decisions on the best type of care for their long-term benefit [48].

These findings further highlight the vulnerability of low-income persons to cost sharing and also highlights the role health literacy plays in health care utilization. Powell, et al. (2015) defines health literacy as "the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions" (p. 16).

To further complicate the efficacy of cost sharing, a study by Nilay et al. (2011) found that the removal of cost sharing had no influence on primary care utilization in a study of an unspecified number of Mayo Clinic employees over a six-year period. However, specialty care decreased amongst Mayo Clinic employees with the addition of $25 copays [47].

Case Study: RAND Health Insurance Experiment

The RAND Health Insurance Experiment randomly assigned approximately 5,800 people across the US to health insurance plans with different cost sharing scenarios: no cost-sharing (free care), 25% co-insurance, 50% co-insurance, 95% co-insurance, and a $600/individual and $1800 per family deductible (in 2005 dollars) and followed them for the course of years. The results showed *a decrease in healthcare utilization without a change in health outcomes for the average consumer, with exceptions for two demographics: people with low-incomes and poor health.* Looking at the average consumer, cost-sharing was a win for cost savings as it decreased care utilization without impacting quality, even though necessary care was foregone in equal amounts as unnecessary care. Looking at low-income consumers and those in poor health, cost sharing presented a barrier to care that was associated with a larger decrease in effective and necessary care and poorer health outcomes, including the risk of premature death. The risk increased for those consumers who were both low-income and in poorer health. The results also showed a decline in preventative services like immunizations for children and pap smears. Although the RAND Health Insurance Experiment is considered a landmark study for its comprehensiveness and rigor around measuring cost sharing, a major limitation is that the study was conducted in the mid-seventies in a very different health care environment from today.

Considerations for Vermont

Currently, there is an outstanding policy question of whether there would be cost sharing in a UPC program. This section provides considerations that may be useful to policymakers in deciding this question.

The evidence points to cost sharing as being beneficial to cost reduction at little cost to the health care consumer, unless the consumer is of a low-income demographic group or has health issues. All of the studies included in this cost-sharing portion of the literature review stated that cost sharing is an understudied field, comprised mostly of short-term studies that may not show the full effect of a decrease in necessary care on a patient's health over time. This inherently limits the applicability of cost sharing studies in the context of UPC. It is clear that cost sharing will likely harm vulnerable groups in terms of decreased health care utilization and health outcomes, but to what extent and under what threshold is uncertain.

Limitations

This literature review has several limitations. First, there are methodological issues and limitations inherent in all studies included in this report. Biases, confounding factors, and other methodological issues were not critically analyzed beyond a preliminary "pass/fail" assessment for inclusion. Second, studies comparing data across countries should be interpreted with caution, as they rely on aggregate data that may obscure more particular trends and patterns within a country. The potential for confounding factors is higher in observational studies like these and in observational studies where a single intervention is measured within the context of a complex system. Third, there was an absence of qualitative data to understand the monetary and other costs for individuals and families to be without access to primary care through a microeconomic lens. And fourth, this literature review was comprehensive and inclusive of all relevant articles yielded by the search methods, but was not systematic in the way of a peer-reviewed published literature review.

Conclusion

No studies directly exploring the cost savings attributable to universal access to primary care were found in the literature.

Many studies did demonstrate elements of primary care that produced cost savings and improved health outcomes. Four of these studies demonstrated cost savings attributable to Vermont Blueprint for Health, a primary care intervention that contributed to primary care payment and delivery reform in Vermont since 2003.

Other studies from around the US further demonstrated the evidence of primary care interventions to reduce costs through continuity of care, access to care, utilization of care, alternative payment models, and electronic health records. Around the world, countries with higher investment in primary care and social service spending had better health outcomes and lower health care costs. Policymakers should consider whether and how this would apply to UPC.

In addition, cost sharing was found to decrease health care utilization without adverse impacts on people's health, with the exception for the poor and the sick. This information should be considered when defining a cost sharing approach for UPC.

Part 2. Primary Care Models Created in All-Payer Model

Act 172 requires the Secretary of Administration to analyze the primary care payment models created through the development of the All-Payer Model in order to enable legislators to estimate appropriate reimbursement amounts for health care providers delivering primary services.

At the end of October, Vermont came to agreement with the federal government on the Vermont All-Payer Accountable Care Organization Model Agreement, commonly referred to as the All-Payer Model. Within this agreement, 2017 is designed to be a planning year for payers, providers, and the Green Mountain Care Board to ensure readiness and prepare for implementation. Although a specific primary care model is not available at the time of this report, primary care models will be developed as a requirement of ACO certification under Act 113. Legislators may have the opportunity to review these models prior to ACO certification.

Preliminary work on developing a capitated payment to primary care was provided in the *Cost Estimates for Universal Primary Care* report, submitted on December 16, 2015: http://hcr.vermont.gov/sites/hcr/files/pdfs/Universal%20Primary%20Care%20Study%20Act%2054%20Sec%2016-19%20Dec%2016%202015%20FINAL.pdf.

In addition, the Green Mountain Care Board's Accountable Care Organization work group developed a straw model for a capitated payment to primary care, which should form the basis of next steps on developing a new payment model:[12] http://gmcboard.vermont.gov/sites/gmcb/files/files/payment-reform/Primary-Care-Payment-Work-GroupReport.pdf.

[12] It is important to note that the ACO may develop and deploy multiple primary care payment models depending on the needs of their provider network, particularly the ability of practices to take on quality measurement and risk.

Part 3. Draft Implementation Timeline

Act 172 requires the Secretary of Administration to provide a potential implementation timeline for universal primary care, including the recommended timing for conducting cost analyses; developing financing options; projecting impacts on insurance markets, individuals, households, businesses, and others; and estimating one-time and ongoing administrative costs. The five-year detailed implementation timeline, provided as Appendix A, is structured around legislative sessions and provides a detailed roadmap for the implementation of the program. It includes both policy and operations development.

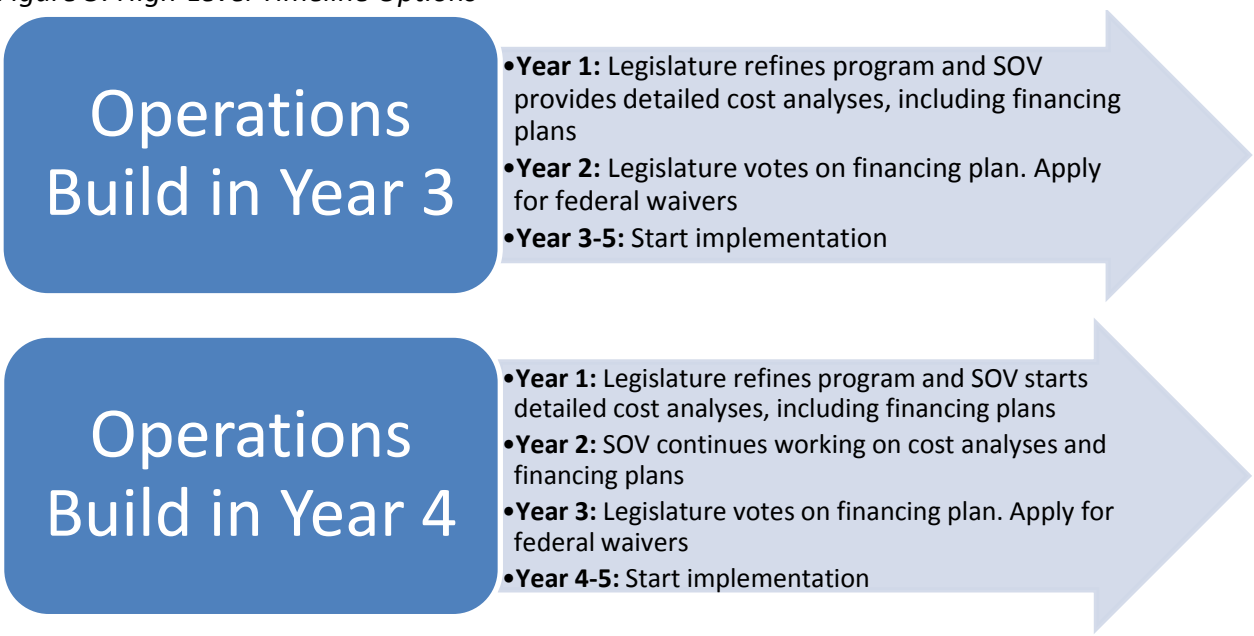
In order to implement universal primary care, the Legislature will need to provide guidance at two points in time: (1) immediately prior to starting the cost analyses to provide further details on eligibility, benefit design, invalidation of Health Savings Accounts, and provider reimbursements; and (2) selecting and passing a finance plan prior to the start of implementation.

More information about outstanding issues needing analysis was provided in the **Recommended Future Analysis** section of the *Cost Estimates for Universal Primary Care* report from December 2015: http://hcr.vermont.gov/sites/hcr/files/pdfs/Universal%20Primary%20Care%20Study%20Act%2054%20Sec%2016-19%20Dec%2016%202015%20FINAL.pdf. The study assumed that the Legislature would provide further details regarding eligibility, benefit design, invalidation of Health Savings Accounts[13], and provider reimbursements in Year 1.

Two fundamental choices for the Legislature are (a) whether to pass the financing plan in Year 2 or 3 and (b) whether to begin operations in Year 3 or Year 4. Figure 5 presents a broad overview of the two possible timelines.

[13] Page 31 of the *Cost Estimates* report discusses the Health Savings Account issue: "It should be noted that coverage by UPC will make Vermonters ineligible for Health Savings Accounts (HSAs). In order to be eligible for an HSA, federal law requires that the individual have a high deductible health plan and prohibits coverage under any additional health plan…Without further action from Congress or Treasury, however, Vermont's UPC program would likely make Vermonters ineligible for an HSA."

Figure 5: High-Level Timeline Options

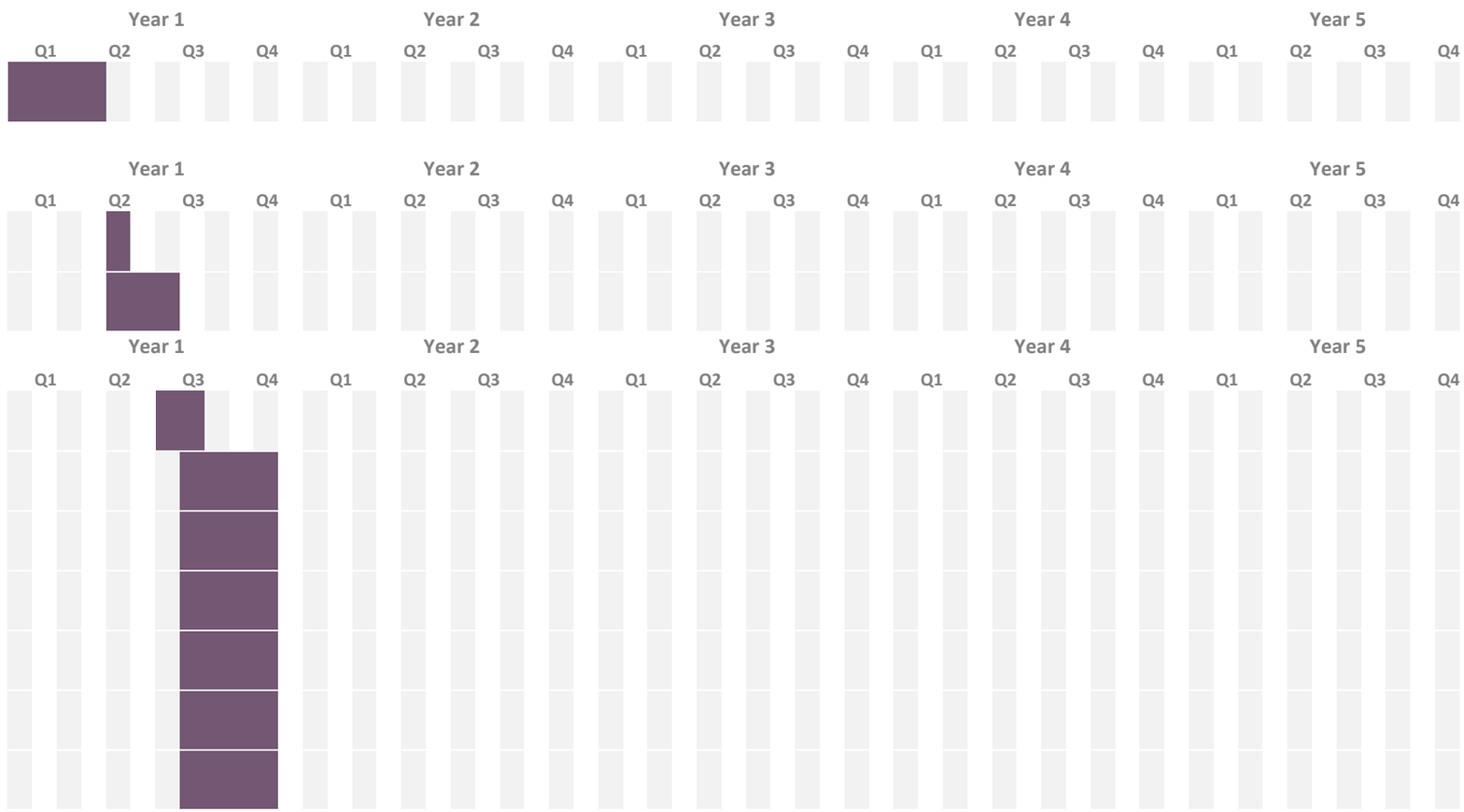


A key factor in making this timing decision will be whether the Legislature has its preferred level of information prior to passing a financing plan or whether additional study or consulting resources are needed. Another factor will be capacity of the legislature and a new administration to fully consider passage of this type of program in Year 1 or whether two years are needed. In addition, consideration should be given to allowing for sufficient time for implementation in order to ensure a smooth coverage transition of Vermont's population to this program. Since this program would shift the entire population, consideration should be given to a longer, phased-in approach, which argues for a longer implementation period.

Appendix A: Detailed, Five-Year Implementation Timeline

Universal Primary Care Implementation Timeline

ACTIVITY



Legislative input

Pass legislation addressing eligibility, benefit design, invalidation of HSAs and provider reimbursement

Engage contractors for cost analyses and financing plan

RFP for actuarial analysis and economic modeling

Contract negotiations and finalization

Cost analyses

Acquire needed data

Set baseline PMPM cost and trend to Year 1

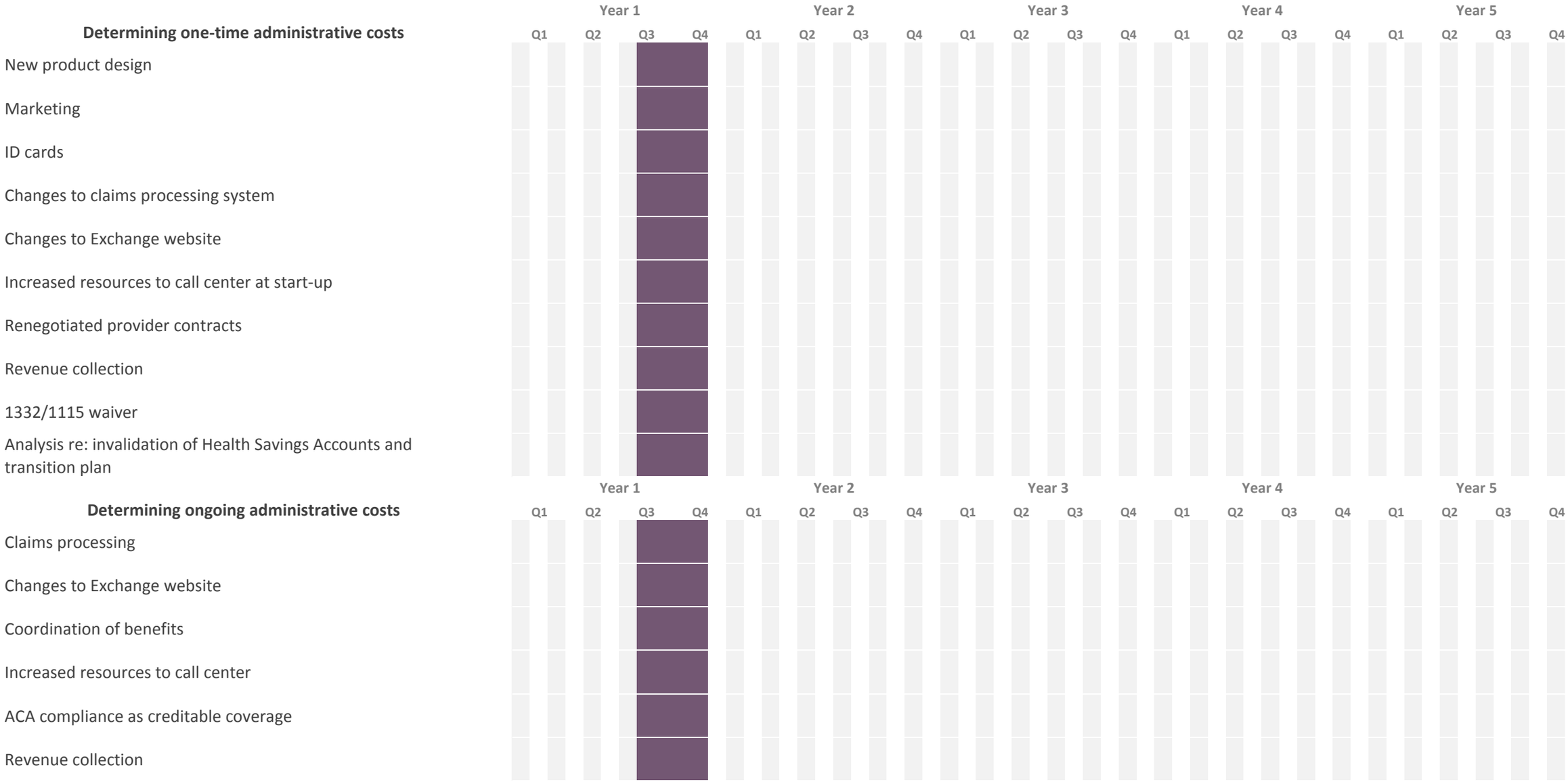
Determine reimbursement rate and trend to Year 1

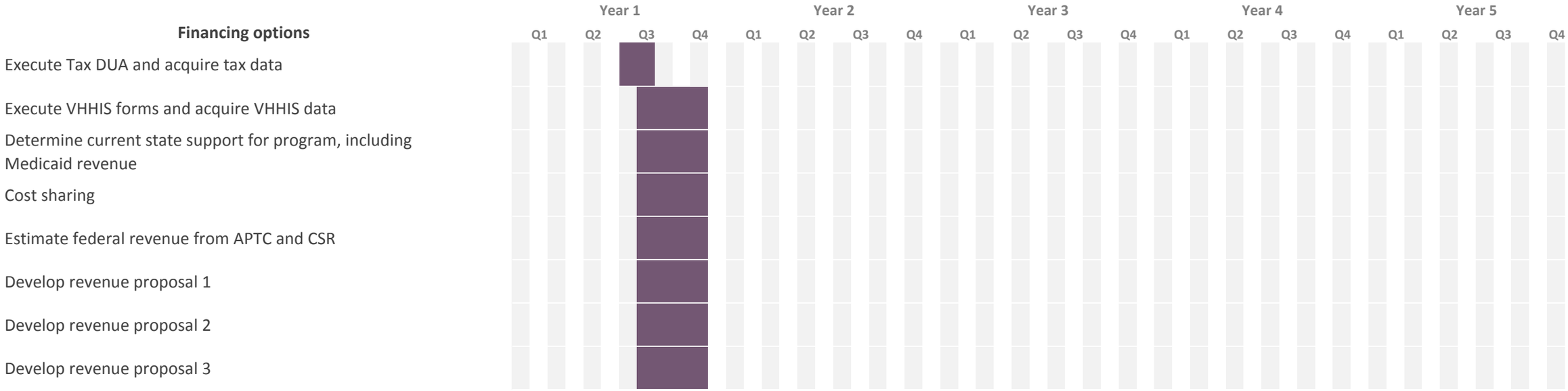
Set program trend

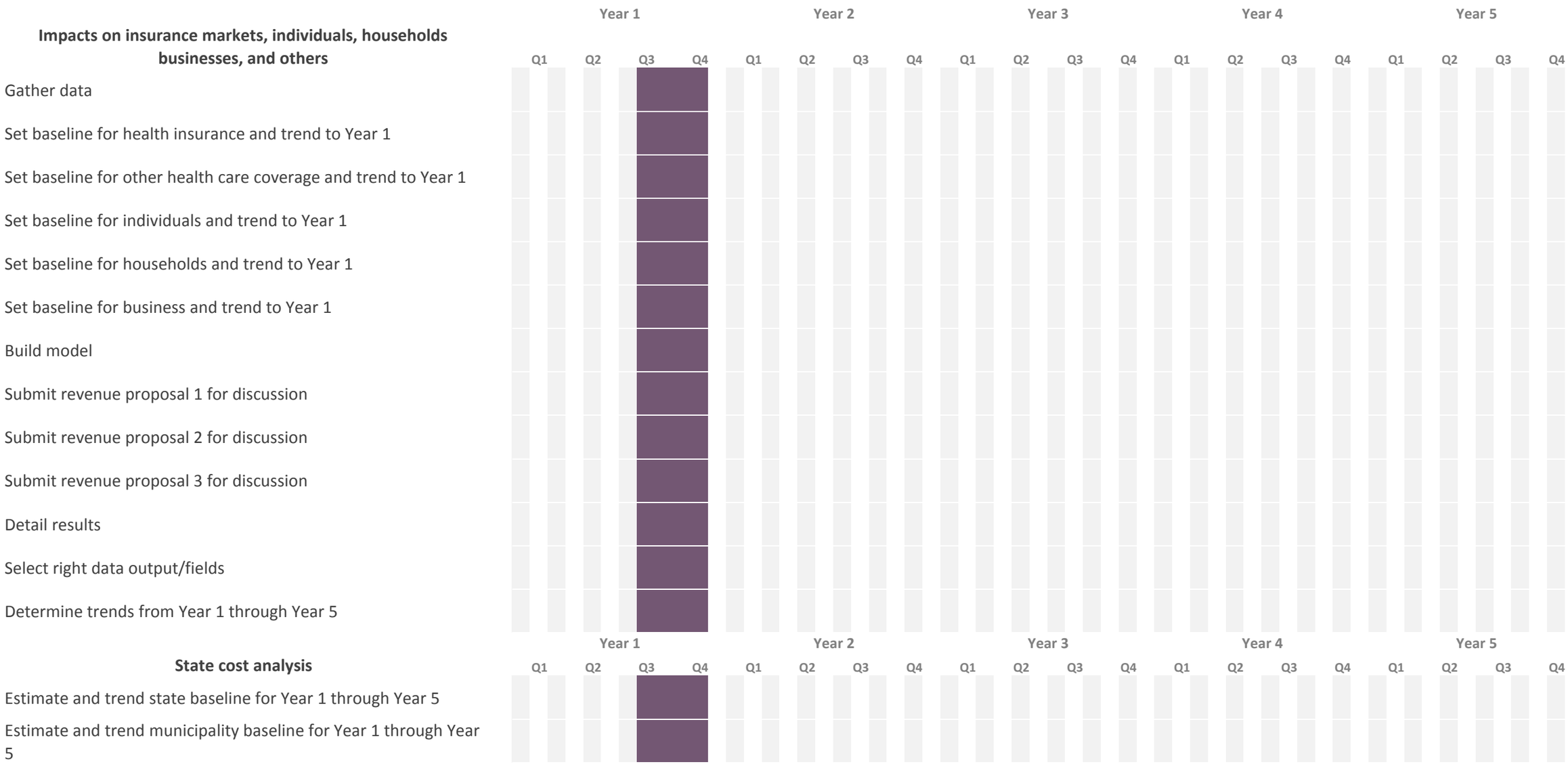
Determine covered population including immigrants and non-resident employees

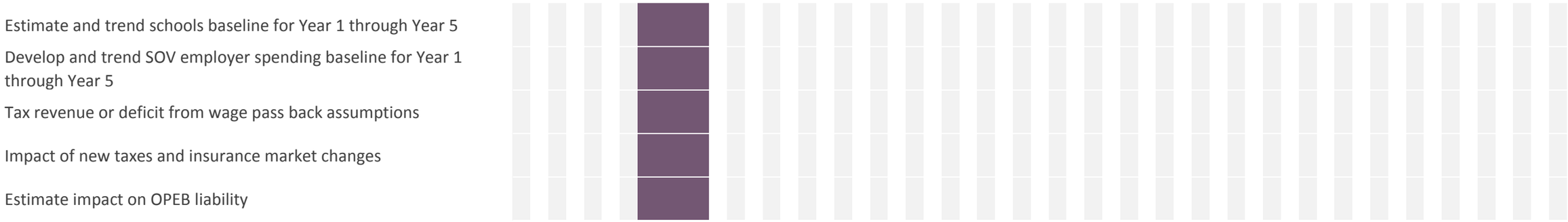
Estimate total population and trend to Year 1

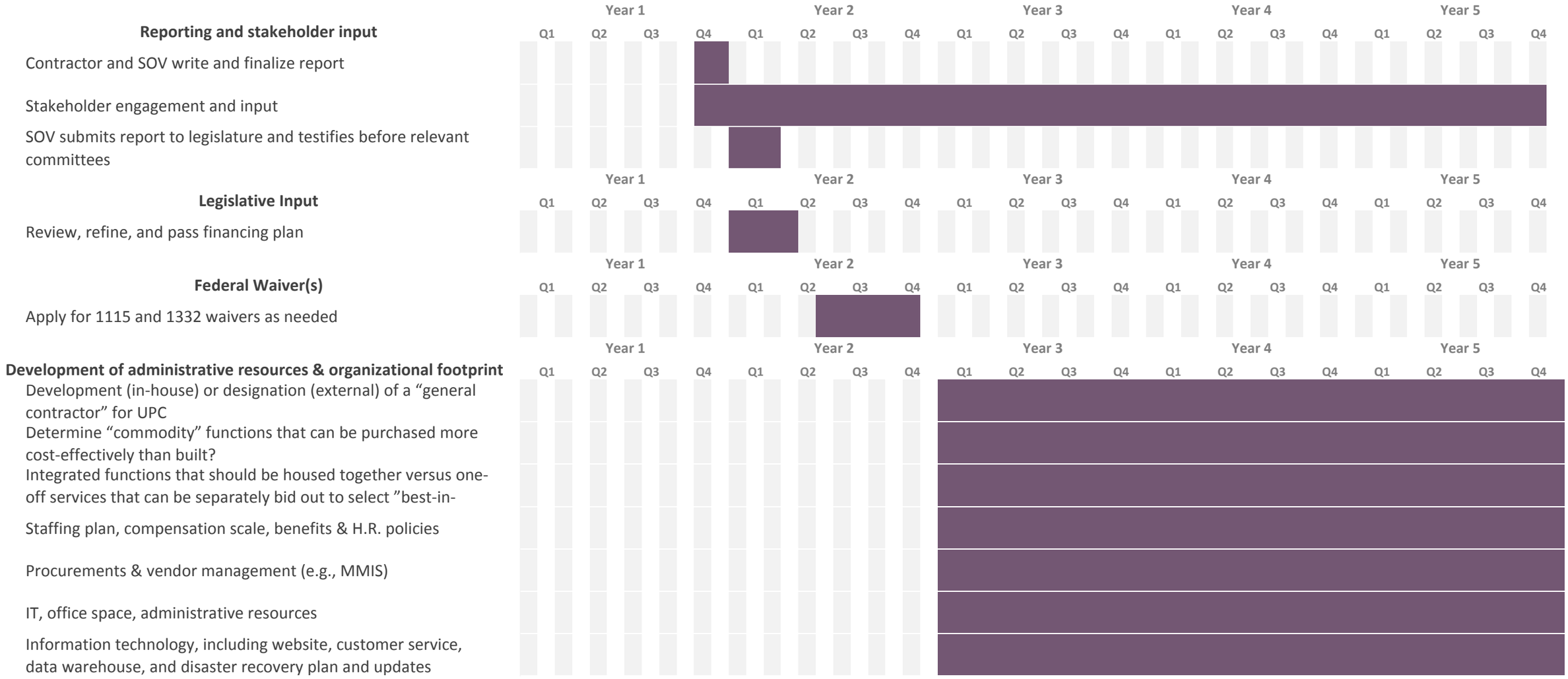
Risk management (reserves, reinsurance, or other)

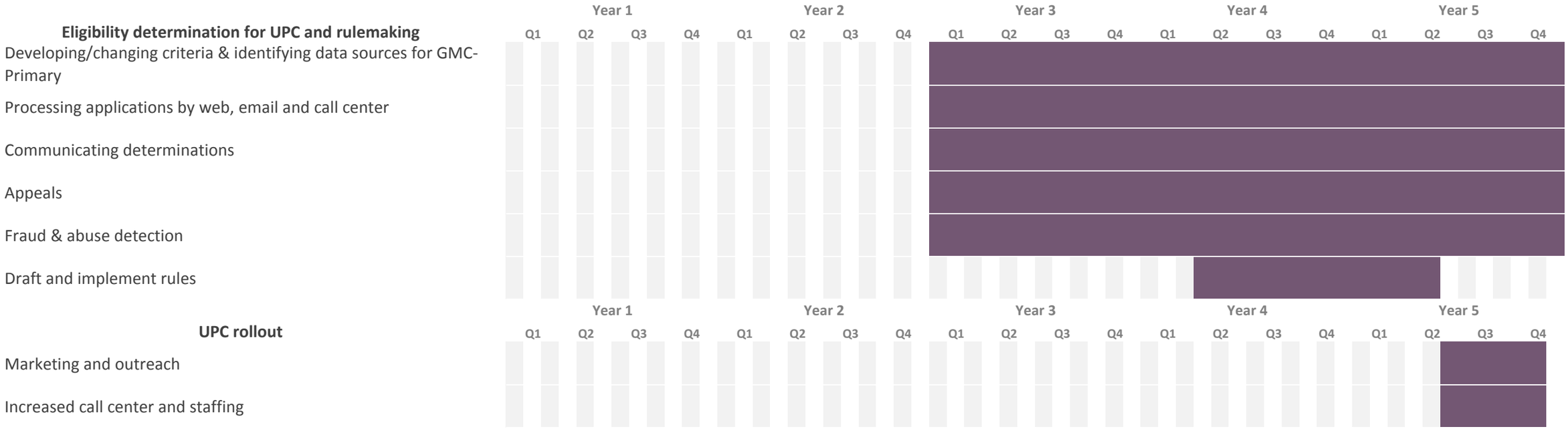

Year 1
Year 2
Year 3
Year 4
Year 5
Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4
Determining one-time administrative costs
New product design
Marketing
ID cards
Changes to claims processing system
Changes to Exchange website
Increased resources to call center at start-up
Renegotiated provider contracts
Revenue collection
1332/1115 waiver
Analysis re: invalidation of Health Savings Accounts and transition plan
Year 1
Year 2
Year 3
Year 4
Year 5
Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4
Determining ongoing administrative costs
Claims processing
Changes to Exchange website
Coordination of benefits
Increased resources to call center
ACA compliance as creditable coverage
Revenue collection


Financing options
Year 1
Year 2
Year 3
Year 4
Year 5
Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4
Execute Tax DUA and acquire tax data
Execute VHHIS forms and acquire VHHIS data
Determine current state support for program, including Medicaid revenue
Cost sharing
Estimate federal revenue from APTC and CSR
Develop revenue proposal 1
Develop revenue proposal 2
Develop revenue proposal 3


Year 1
Year 2
Year 3
Year 4
Year 5
Q1 Q2 Q3 Q4
Impacts on insurance markets, individuals, households businesses, and others
Gather data
Set baseline for health insurance and trend to Year 1
Set baseline for other health care coverage and trend to Year 1
Set baseline for individuals and trend to Year 1
Set baseline for households and trend to Year 1
Set baseline for business and trend to Year 1
Build model
Submit revenue proposal 1 for discussion
Submit revenue proposal 2 for discussion
Submit revenue proposal 3 for discussion
Detail results
Select right data output/fields
Determine trends from Year 1 through Year 5
State cost analysis
Estimate and trend state baseline for Year 1 through Year 5
Estimate and trend municipality baseline for Year 1 through Year 5


Estimate and trend schools baseline for Year 1 through Year 5
Develop and trend SOV employer spending baseline for Year 1 through Year 5
Tax revenue or deficit from wage pass back assumptions
Impact of new taxes and insurance market changes
Estimate impact on OPEB liability


Year 1
Year 2
Year 3
Year 4
Year 5
Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4
Reporting and stakeholder input
Contractor and SOV write and finalize report
Stakeholder engagement and input
SOV submits report to legislature and testifies before relevant committees
Legislative Input
Review, refine, and pass financing plan
Federal Waiver(s)
Apply for 1115 and 1332 waivers as needed
Development of administrative resources & organizational footprint
Development (in-house) or designation (external) of a “general contractor” for UPC
Determine “commodity” functions that can be purchased more cost-effectively than built?
Integrated functions that should be housed together versus one-off services that can be separately bid out to select ”best-in-
Staffing plan, compensation scale, benefits & H.R. policies
Procurements & vendor management (e.g., MMIS)
IT, office space, administrative resources
Information technology, including website, customer service, data warehouse, and disaster recovery plan and updates


Year 1
Year 2
Year 3
Year 4
Year 5
Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4
Eligibility determination for UPC and rulemaking
Developing/changing criteria & identifying data sources for GMC-Primary
Processing applications by web, email and call center
Communicating determinations
Appeals
Fraud & abuse detection
Draft and implement rules
Year 1
Year 2
Year 3
Year 4
Year 5
Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4
UPC rollout
Marketing and outreach
Increased call center and staffing

Appendix B: Summary of Articles in Literature Review

Summary: Key Literature Review Findings

Author(s)	Journal	*Title*	Methodology	Findings
Bertakis & Azari (2011)	Journal of the American Board of Family Medicine	*Patient-centered care is associated with decreased health care utilization*	509 patients were randomly assigned care by family physicians or general internists and a patient center practice style was measured. Outcomes were measured over one year and analyzed using multivariate analysis.	Health care utilization has been shown to decrease with patient-centered care.
Bradley, et al. (2012)	Health Affairs	*Lessons for coverage expansion: a Virginia primary care program for the uninsured reduced utilization and cut costs*	Cross-sectional study measuring costs and care for previously uninsured, low-income adults at a community-based primary care program after receiving insurance	ER utilization and inpatient hospitalizations decreased for this population after gaining insurance, primary care use and outpatient care increased; overall costs decreased
Chaudry, et al. (2006)	Annals of Internal Medicine	*Systematic review: impact of health information technology on quality, efficiency, and costs of medical care*	Systematic review of the literature from 1995-2005 that included 257 articles	HIT was shown to improve quality and efficiency, however, there was limited financial data surrounding costs.
Chernew et al. (2009)	Health Affairs	*Would having more primary care doctors cut health spending growth?*	Cross sectional study of Medicare over 10 years	Higher PCP prevalence was associated with lower health care costs. Unlike previous studies, higher PCP prevalence was also associated with higher spending growth rates
de Jonge, et al. (2014)	Journal of the American Geriatrics Society	*Effects of home-based primary care on Medicare costs in high-risk elders*	Case control study of HBPC vs. non-HBPC Medicare recipients	HBPC recipients had 17% lower Medicare costs than non-HBPC recipients over a two-year time period
Ferrante et al. (2013)	Annals of Internal Medicine	*Primary care utilization and colorectal cancer incidence and mortality among Medicare beneficiaries: a population-based, case-control study*	Case control study comparing the incidence of CRC for Medicare recipients based on number of primary care visits	Higher rates of primary care utilization correlated to reduced rates of colorectal cancer in Medicare recipients

Friedberg, et al. (2015)	JAMA Internal Medicine	*Effects of a Medical Home and Shared Savings Intervention on Quality and Utilization of Care*	Cross-sectional analysis of medical claims for 17, 363 patients for PCMH and non-PCMHs from 2007-2012	PCMHs had better performance for diabetes care and breast cancer screening, fewer hospitalizations & ED visits, fewer ACSC visits to specialists, higher rates of ACSC visits to primary care
Jones & Doebbeling (2007)	Journal of Clinical Oncology	*Beyond the traditional prognostic indicators: the impact of primary care utilization on cancer survival*	Prospective cohort study using of 323 male veterans with lung cancer	The risk of death was lower for patients who had one, two, or three PC visits within 6 months of cancer diagnosis
Jones, et al. (2015)	Population Health Management	*Vermont's community-oriented all-payer medical home model reduces expenditures and utilization while delivering high-quality care*	Sequential, cross-sectional review of annual cost, utilization, and quality outcomes over 6 years	Patients who used a PCMH had reduced costs of $482 compared to patients of non-PCMH PC practices
Kern (2016)	Annals of Internal Medicine	*The patient-centered medical home and associations with health care quality and utilization: a 5-years cohort study*	Prospective cohort study of claims outcomes for 136,480 patients from 2008-2012	Quality and utilization patterns were similar across PCMHs and control groups, except in the final year of the study.
Kringos, D.S., et al. (2010)	BMC Health Serv Res	*The breadth of primary care: a systematic literature review of its core dimensions*	Systematic review of primary care literature between 2003-2008	Primary care is a multidimensional system with structures (governance, economic conditions, and PC workforce development) and processes that can greatly impact public health.
Lake, et al (2013)	Journal of Comparative Effectiveness Research	*Paying more wisely: effects of payment reforms on evidence-based case clinical decision-making*	literature review of several payment reform options	The authors recommended a recalibrated fee FFS schedule
Maeng, et al. (2012)	The American Journal of Managed Care	*Reducing long-term cost by transforming primary care: evidence from Geisinger's medical home model*	Analysis of claims data from 43 PCP sites that were converted into PCMHs from 2006-2010	Longer periods of time as a PCMH were associated with lower costs.
Purdy, et al. (2010)	Public Health	*Ambulatory care sensitive conditions: terminology and disease coding need to be more specific to aid policy makers and clinicians*	Literature review	36 ACSCs were identified in the UK's NHS, ACSCs are used to evaluate primary care efficacy
Reid, et al. (2010)	Health Affairs	*The Group Health medical home at year two: cost savings, higher patient satisfaction, and less burnout for providers*	Compared patient experience, provider burnout, quality of care, and costs for PCMH vs. controls over 24 months	PCMH patients had 29% fewer ED visits & 6% fewer hospitalizations than control group. Total savings were estimated at $10.30 per patient per month, 21 months into the pilot

Shen, et al (2004)	Medical Care	*The effects of payment method on clinical decision-making: physician responses to clinical scenarios.*	Survey of clinical scenarios and "bother scores" for 601 physicians throughout US	Different clinical decisions were made on discretionary care, but not life-saving care based on fee for service or capitated payments; physicians were more bothered by capitated payments.
Smith, et al. (2015)	Journal of the American Board of Family Medicine	*The effect of regular primary care utilization on long-term glycemic and blood pressure control in adults with diabetes*	Case control study analyzing medical records of 2,138 adults in a ten-year time span	Regular primary care utilization correlated to better blood pressure and glycemic control for adults with diabetes.
Steiner, et al. (2008)	Annals of Family Medicine	*Community Care of North Carolina: improving care through community health networks*	N/A	Higher primary care utilization rates correlated with a 23% lower than projected rate of ER utilization and a 3-to-1 cost savings overall
Thompson, et al. (2015)	Population Health Management	*Evaluating Health Care Delivery Reform Initiatives in the Face of 'Cost Disease'*	Vermont All-Payer Claims data was analyzed between 2007-2011 for PCMH's	A decrease in utilization did not always demonstrate a decrease in costs and many factors driving cost are outside the control of providers,
Wang, et al. (2003)	American Journal of Medicine	*A cost-benefit analysis of electronic medical records in primary care*	Data was collected from their institution to measure the cost savings of electronic medical records for primary care physicians over a 5-year period	The cost-benefit model estimated a savings of $86,400 per provider. Savings came from drug expenditures, decreased radiology utilization, decreased billing errors, and improvement in charge capture. Benefits decrease over time.

Literature Review References

1. *Agency of Administration Health Care Reform*. 2016 [cited 2016 May 31, 2016].

2. *An act relating to making appropriations for the support of government*. 2016: http://www.leg.state.vt.us/jfo/appropriations/fy_2017/H_875_Rept_of_Comm_of_Conf_.pdf.

3. *2014 Vermont Health Care Expenditure Analysis* M. Davis, Perry, Lori, Editor. 2016, Green Mountain Care Board: http://gmcboard.vermont.gov/sites/gmcboard/files/Meetings/2014_EA_2.pdf.

4. *Cost Estimates for Universal Primary Care*. 2015, Office of Health Care Reform, Agency of Administration: http://www.leg.state.vt.us/jfo/healthcare/Health Reform Oversight Committee/2015 Interim Reports/Universal Primary Care Study Act 54 Sec 16-19 Dec 16 2015.pdf.

5. No. 54 An act relating to health care. 2015.

6. Jones, C., et al., Vermont's Community-Oriented All-Payer Medical Home Model Reduces Expenditures and Utilization While Delivering High-Quality Care. Popul Health Manag, 2015.

7. *Payment Matters: The ROI for High-Intensity Primary Care Payment*. 2013, Bailit Health Purchasing, LLC: https://www.pcpcc.org/resource/payment-matters-roi-high-intensity-primary-care-payment.

8. Purdy, S., et al., Ambulatory care sensitive conditions: terminology and disease coding need to be more specific to aid policy makers and clinicians. Public Health, 2009. **123**(2): p. 169-173.

9. Steiner, B.D., et al., Community care of North Carolina: improving care through community health networks. Annals Of Family Medicine, 2008. **6**(4): p. 361-367.

10. *Evaluation of the Multi-Payer Advanced Primary Care Practice (MAPCP) Demonstration* in *Third Annual Report*. 2016, Centers for Medicare & Medicaid Services: http://dvha.vermont.gov/for-providers/cms-informational-bulletin.pdf. p. 325.

11. Bradley, C.J., et al., Lessons for coverage expansion: a Virginia primary care program for the uninsured reduced utilization and cut costs. Health Affairs (Project Hope), 2012. **31**(2): p. 350-359.

12. High-Intensity Primary Care Delivers a 2-to-1 Return on Investment Best Practice News 2016 [cited 2016 June 6, 2016].

13. De Jonge, K.E., et al., *Effects of home-based primary care on Medicare costs in high-risk elders.* Journal Of The American Geriatrics Society, 2014. **62**(10): p. 1825-1831.

14. Reid, R.J., et al., The Group Health medical home at year two: cost savings, higher patient satisfaction, and less burnout for providers. Health Affairs (Project Hope), 2010. **29**(5): p. 835-843.

15. Maeng, D.D., et al., Reducing long-term cost by transforming primary care: evidence from Geisinger's medical home model. The American Journal Of Managed Care, 2012. **18**(3): p. 149-155.

16. Thompson, S., et al., *Evaluating Health Care Delivery Reform Initiatives in the Face of 'Cost Disease'.* Population Health Management, 2015. **18**(1): p. 6-14 9p.

17. Friedberg, M.W., et al., Effects of a Medical Home and Shared Savings Intervention on Quality and Utilization of Care. JAMA Internal Medicine, 2015. **175**(8): p. 1362-1368 7p.

18. Kringos, D.S., et al., The breadth of primary care: a systematic literature review of its core dimensions. BMC Health Serv Res, 2010. **10**: p. 65.

19. Bertakis, K.D. and R. Azari, *Patient-centered care is associated with decreased health care utilization.* Journal Of The American Board Of Family Medicine: JABFM, 2011. **24**(3): p. 229-239.

20. Smith, J.J., et al., The effect of regular primary care utilization on long-term glycemic and blood pressure control in adults with diabetes. Journal of the American Board of Family Medicine, 2015. **28**(1): p. 28-37 10p.

21. Ferrante, J.M., et al., Primary care utilization and colorectal cancer incidence and mortality among Medicare beneficiaries: a population-based, case-control study. Annals of Internal Medicine, 2013. **159**(7): p. 437-446 10p.

22. Jones, L.E. and C.C. Doebbeling, Beyond the traditional prognostic indicators: the impact of primary care utilization on cancer survival. Journal of Clinical Oncology, 2007. **25**(36): p. 5793-5799 7p.

23. Shen, J., et al., The effects of payment method on clinical decision-making: physician responses to clinical scenarios. Medical Care, 2004. **42**(3): p. 297-302.

24. Lake, T.K., et al., *Paying more wisely: effects of payment reforms on evidence-based clinical decision-making.* Journal Of Comparative Effectiveness Research, 2013. **2**(3): p. 249-259.

25. Kern, L.M., A. Edwards, and R. Kaushal, The Patient-Centered Medical Home and Associations With Health Care Quality and Utilization: A 5-Year Cohort Study. Annals Of Internal Medicine, 2016. **164**(6): p. 395-405.

26. Wang, S.J., et al., *A cost-benefit analysis of electronic medical records in primary care.* The American Journal Of Medicine, 2003. **114**(5): p. 397-403.

27. Chaudhry, B., et al., Systematic review: impact of health information technology on quality, efficiency, and costs of medical care. Annals Of Internal Medicine, 2006. **144**(10): p. 742-752.

28. Chernew, M.E., et al., *Would having more primary care doctors cut health spending growth?* Health Affairs (Project Hope), 2009. **28**(5): p. 1327-1335.

29. *Vermont Blueprint for Health 2015 Annual Report*. 2016, Department of Vermont Health Access: http://blueprintforhealth.vermont.gov/sites/blueprint/files/BlueprintPDF/AnnualReports/Vermont-Blueprint-for-Health-2015-Annual-Report-FINAL-1-27-16.pdf.

30. *Healthy Vermonters 2020*. 2012, Vermont Department of Health: <Healthy_Vermonters_2020.pdf>.

31. US Health System Ranks Last Among Eleven Countries on Measures of Access, Equity, Quality, Efficiency, and Healthy Lives. 2014 [cited 2016 May 31, 2016].

32. US Health Care from a Global Perspective, in Issue Brief 2015, The Commonwealth Institute

33. Friedberg, M.W., P.S. Hussey, and E.C. Schneider, *Primary care: a critical review of the evidence on quality and costs of health care.* Health Affairs (Project Hope), 2010. **29**(5): p. 766-772.

34. Bates, D.W., *Primary Care and the US Health Care System: What Needs to Change?* . Journal Of General Internal Medicine, 2010. **25**(10): p. 998-9.

35. Shi, L., *The impact of primary care: a focused review.* Scientifica (Cairo), 2012. **2012**: p. 432892.

36. Valderas, J.M., et al., *Ambulatory care provided by office-based specialists in the United States.* Annals of Family Medicine, 2009. **7**(2): p. 104-111 8p.

37. van Loenen, T., et al., Organizational aspects of primary care related to avoidable hospitalization: a systematic review. Family Practice, 2014. **31**(5): p. 502-516.

38. Casanova, C. and B. Starfield, *Hospitalizations of children and access to primary care: a cross-national comparison.* International Journal Of Health Services: Planning, Administration, Evaluation, 1995. **25**(2): p. 283-294.

39. White, R.O., et al., *Leveling the field: addressing health disparities through diabetes disease management.* The American Journal Of Managed Care, 2010. **16**(1): p. 42-48.

40. *The World Health Report 2008: Primary Health Care- Now More Than Ever*, W.V.L. Tim Evans, Editor. 2008, World Health Organization: http://www.who.int/whr/2008/whr08_en.pdf. p. 119.

41. Pronk, N.P., et al., Relationship between modifiable health risks and short-term health care charges. JAMA, 1999. **282**(23): p. 2235-2239.

42. Anderson, D.R., et al., The relationship between modifiable health risks and group-level health care expenditures. Health Enhancement Research Organization (HERO) Research Committee. American Journal Of Health Promotion: AJHP, 2000. **15**(1): p. 45-52.

43. Rice, T., Lessons from across the pond. U.K.'s NHS gets better outcomes at less cost by emphasizing primary-care docs. Modern Healthcare, 2010. **40**(37): p. 17-17.

44. Lasser, K.E., D.U. Himmelstein, and S. Woolhandler, Access to care, health status, and health disparities in the United States and Canada: results of a cross-national population-based survey. Am J Public Health, 2006. **96**(7): p. 1300-7.

45. Borkan, J., et al., *Renewing primary care: lessons learned from the Spanish health care system.* Health Affairs (Project Hope), 2010. **29**(8): p. 1432-1441.

46. Gravelle, H., S. Morris, and M. Sutton, *Are family physicians good for you? Endogenous doctor supply and individual health.* Health Services Research, 2008. **43**(4): p. 1128-1144.

47. Shah, N.D., et al., Mayo Clinic employees responded to new requirements for cost sharing by reducing possibly unneeded health services use. Health Affairs (Project Hope), 2011. **30**(11): p. 2134-2141.

48. Powell, V., B. Saloner, and L.M. Sabik, *Cost Sharing in Medicaid: Assumptions, Evidence, and Future Directions.* Medical Care Research And Review: MCRR, 2015.

49. Trivedi, A.N., H. Moloo, and V. Mor, *Increased ambulatory care copayments and hospitalizations among the elderly.* The New England Journal Of Medicine, 2010. **362**(4): p. 320-328.

Appendix C: Universal Primary Care Study Presentation

Universal Primary Care Study
Act 54 of 2015, Sections 16-19

Robin Lunge, Director of Health Care Reform
Marisa Melamed, Health Care Reform Policy and Planning Coordinator
Agency of Administration
January 21, 2016

VERMONT
HEALTH CARE REFORM

Statutory Charge

- **Examine the cost of providing primary care to all Vermont residents starting January 1, 2017**
  - Provide cost estimates of primary care without universal primary care reform, i.e. **status quo**
  - Provide cost estimates of universal primary care, **with cost-sharing**
  - Provide cost estimates of universal primary care, with **no cost-sharing**

What is Universal Primary Care?

- Definition of primary care
- Coverage Assumptions
- Payment Assumptions

First Step – Define Primary Care

- Primary care definition in Act 54, Section 17 (statutory language found on resource slide #19)
- Translate statutory language into an operational definition
  - Current Procedural Terminology (CPT) codes
  - Provider types
- Consulted with:
  - Wakely Consulting, actuarial analysis
  - Policy Integrity, health care data analyst
  - GMCB primary care payment work group, providers, Blueprint, Bi-State, carriers, Dr. Richter

Definition of Primary Care (CPT categories)

Universal Primary Care Service Categories

- New or Established Patient Office or Other Outpatient Visit
- Initial New or Established Patient Preventive Medicine Evaluation
- Other Preventive Services
- Patient Office Consultation
- Administration of Vaccine
- Prolonged Patient Service or Office or Other Outpatient Service
- Prolonged Physician Service
- Initial or Subsequent Nursing Facility Visit
- Other Nursing Facility
- New or Established Patient Home Visit
- New or Established Patient Assited Living Visit
- Other Home or Assisted Living Facility
- Alcohol, Smoking , or Substance Abuse Screening or Counseling
- All-Inclusive Clinic Visit (FQHCs/RHCs)
- Behavioral Health

Universal Primary Care Specialty Types

- Family Medicine MD
- Registered Nurse
- Internal Medicine MD
- Pediatrician MD
- Physician Assistant/Nurse Practitioner
- Psychiatrist
- OB/GYN MD
- Naturopath
- Geriatric
- Registered Nurse - Psychiatric/Mental Health
- Social Worker
- Psychologist
- Counselor
- Counselor - Addiction

Definition of Primary Care

Examples of universal primary care services:

- Office visits
- Annual wellness exams
- Gynecological exams and breast exams
- FQHC all-inclusive clinic visits
- Administration of vaccines
- Alcohol/smoking/substance abuse screening and counseling
- Psychotherapy
- Visits from a primary care doctor to a nursing facility, assisted living facility, or home visits
- Blueprint payments to medical homes

Coverage Assumptions: Who is covered?

- All Vermont residents would be covered by universal primary care, except TRICARE due to federal restrictions

- Medicare recipients would have universal primary care as secondary coverage for primary care services

- Legislative changes, a 1332 waiver, and other waiver alignment are required to reduce duplication of primary care coverage for other populations

VERMONT HEALTH CARE REFORM

Cost Estimates

How much $ will need to be publicly financed?

	Costs (2017)	UPC with Cost-Sharing	UPC with No Cost-Sharing
A	Medical Claims (netting out Medicaid $)	$113 million	$175 million
B	Administrative Cost Estimate (7%-15%)	$8-$26 million	$12-$35 million
	TOTAL BASE COST (Claims + Admin)	**$121-$139 million**	**$187-$210 million**
C	Provider Reimbursement Increases (modeled 10%-50% increases as possible options)	$25-$135 million additional	
D	Other costs	Identified by AOA and JFO for further study if moving forward	

How much $ will need to be publicly financed?

- **Decision points:**
  1. Plan design
  2. Plan administration
  3. Finance plan
  4. Provider reimbursement increases

How much $ will need to be publicly financed?

- **Decision points:**

1. Plan design
2. Plan administration

→ plan design and plan administration decisions will enable a more concrete administrative cost estimate

3. Finance plan
4. Provider reimbursement increases

VERMONT HEALTH CARE REFORM

Decision Point: Plan Design

- **Cost-sharing or no cost-sharing?**
  - How much?
  - What kind?

Decision Point: Plan Administration

- **Legal and Waiver Analysis**
  - 1332 waiver and alignment with current waivers
  - ERISA analysis
- **Operational Plan**
  - Transitional and start-up costs
  - Program administration, including coordination of benefits
  - Capitated rate setting and provider payment

Decision Point: Public Financing

- **Public Financing Plan**
  - Finalize other costs
  - Determine trend
  - Determine taxes and/or fees
- **Economic Analysis of Financing Plan**
  - Micro-simulation and macroeconomic modeling

VERMONT HEALTH CARE REFORM

Decision Point: Provider reimbursement increases

Provider Reimbursement Increases at 10%, 25%, and 50% above Status Quo

Provider Reimbursement Increases	Status Quo	UPC With Cost-Sharing	UPC Without Cost-Sharing
10 % increase	$25,164,000	$24,838,000	$26,941,000
25% increase	$62,709,000	$62,097,000	$67,353,000
50% increase	$125,285,000	$124,193,000	$134,705,000

Market Impact

- Vet impact of universal primary care on other insurance, benefit plans, and premiums
- Universal primary care will make Vermonters ineligible for HSAs under federal law

Questions?

Appendix: Resource Slides

- Act 54 Statutory Definition of Primary Care
- Coverage Assumptions
- 2017 Estimated Total Claim Cost of the Program
- Summary of PMPM Rates
- JFO Independent Review 1/6/16

Statutory Definition of Primary Care

Act 54, Section 17:

As used in Secs. 16 through 19 of this act, "primary care" means health services provided by health care professionals who are specifically trained for and skilled in first-contact and continuing care for individuals with signs, symptoms, or health concerns, not limited by problem origin, organ system, or diagnosis, and includes pediatrics, internal and family medicine, gynecology, primary mental health services, and other health services commonly provided at federally qualified health centers. Primary care does not include dental services.

Coverage Assumptions

Coverage Type	Primary Coverage	Secondary Coverage	Considerations
Medicare	Medicare	Universal Primary Care, then Medicare supplemental insurance	Medicare benefits would remain the same. Medicare Supplemental Insurance would remain available.
Military/ TRICARE	Military/ TRICARE	None while on TRICARE	UPC would be available as soon as the individual drops or is no longer eligible for TRICARE coverage. Individuals who are eligible for enhanced benefits from Medicaid would maintain those benefits.
No coverage – uninsured	Universal Primary Care	None	Some uninsured residents may be eligible for Medicaid.
Medicaid/Dr Dynasaur	Universal Primary Care	Medicaid/Dr Dynasaur covers other health services	Alignment with current Medicaid waiver required.
Vermont Health Connect (individuals)	Universal Primary Care	QHP covers other health services	ACA Section 1332 waiver required to carve out and replace primary care services in these plans with UPC.
Employer Sponsored Insurance (ESI, commercial)	Universal Primary Care	ESI plan covers other health services	An ACA Section 1332 waiver is required to replace primary care services in these plans. Large employer coverage through UPC requires a state mandate that these benefits be carved out of plans.
Employer Sponsored Insurance (ESI, self-insured)	Universal Primary Care	ESI plan covers other health services	Employers could choose to carve out primary care from their plans. Members may have duplicative coverage. Requires coordination of benefits with UPC.
Public employees	Universal Primary Care	Public employee plan covers other health services and depends on bargaining agreement	For the purposes of this study we made the assumption to provide primary coverage to all public employees because it was most consistent with the intent of universal coverage.
Retirees	Universal Primary Care (unless on Medicare)	Retiree plan covers other health services	

2017 Estimated Total Claim Cost of the Program

			2017 Estimated Total Claim Cost of Program		
Market	Estimated Members	Universal Primary Care Coverage	Status Quo	Universal Primary Care with Cost Sharing	Universal Primary Care without Cost Sharing
Commercial	296,400	Primary	$103,944,000	$102,464,000	$150,040,000
Military	14,400	Excluded	$0	$0	$0
Federal	14,400	Primary	$4,905,000	$4,905,000	$6,215,000
Medicaid	150,500	Primary	$107,371,000	$107,371,000	$107,371,000
Medicare	140,800	Secondary	$0	$0	$11,382,000
Uninsured	13,100	Primary	$5,527,000	$5,496,000	$6,921,000
Total	**629,600**		**$221,747,000**	**$220,236,000**	**$281,929,000**
Compared to Status Quo				**($1,511,000)**	**$60,182,000**

Summary of PMPM Rates (claims only) for UPC in 2017, With and Without Cost-Sharing

PMPM	Status Quo	UPC With Cost-Sharing	UPC Without Cost-Sharing
Paid by Plan	$35.14	$34.94	$44.01
Paid by Member	$5.30	$5.24	$0.00
Total Paid PMPM	$40.44	$40.19	$44.01
% Covered by the Payer, on average	87%	87%	100%

JFO Independent Review 1/6/16

1. The report needs more clarity regarding additional amounts to be publicly financed and potential savings to the private sector.
2. Additional administrative costs would arise from a new system of primary care.
3. As was the case with the State's efforts on single-payer health care and recent experience with Vermont Health Connect, transition costs and issues will be critical.
4. The base case should reflect the updated Medicaid population number.
5. Future health cost trends could mean substantially higher costs in future years.
6. More thought is needed concerning integration with the health care reform initiatives such as the all-payer model.