

# Health Affairs

At the Intersection of Health, Health Care and Policy

Cite this article as:

William C. Hsiao, Anna Gosline Knight, Steven Kappel and Nicolae Done  
What Other States Can Learn From Vermont's Bold Experiment: Embracing A  
Single-Payer Health Care Financing System  
*Health Affairs*, 30, no.7 (2011):1232-1241

doi: 10.1377/hlthaff.2011.0515

The online version of this article, along with updated information and services, is available at:

<http://content.healthaffairs.org/content/30/7/1232.full.html>

**For Reprints, Links & Permissions:**

[http://healthaffairs.org/1340\\_reprints.php](http://healthaffairs.org/1340_reprints.php)

**E-mail Alerts :** <http://content.healthaffairs.org/subscriptions/etoc.dtl>

**To Subscribe:** <http://content.healthaffairs.org/subscriptions/online.shtml>

*Health Affairs* is published monthly by Project HOPE at 7500 Old Georgetown Road, Suite 600, Bethesda, MD 20814-6133. Copyright © 2011 by Project HOPE - The People-to-People Health Foundation. As provided by United States copyright law (Title 17, U.S. Code), no part of *Health Affairs* may be reproduced, displayed, or transmitted in any form or by any means, electronic or mechanical, including photocopying or by information storage or retrieval systems, without prior written permission from the Publisher. All rights reserved.

Not for commercial use or unauthorized distribution

By William C. Hsiao, Anna Gosline Knight, Steven Kappel, and Nicolae Done

DOI: 10.1377/hlthaff.2011.0515  
HEALTH AFFAIRS 30,  
NO. 7 (2011): 1232–1241  
©2011 Project HOPE—  
The People-to-People Health  
Foundation, Inc.

# What Other States Can Learn From Vermont's Bold Experiment: Embracing A Single-Payer Health Care Financing System

## William C. Hsiao

(hsiao@hsph.harvard.edu) is the K.T. Li Professor of Economics at the School of Public Health at Harvard University, in Cambridge, Massachusetts.

**Anna Gosline Knight** is the project manager for the study on Vermont's reforms, at the Harvard School of Public Health.

**Steven Kappel** is the founder of Policy Integrity, in Montpelier, Vermont.

**Nicolae Done** is a research analyst at the Harvard School of Public Health.

**ABSTRACT** Single-payer health care systems consist of publicly financed insurance that provides basic benefits for all citizens. The design is intended to achieve universal coverage and allow greater cost control. Many states have attempted to reform their systems around single-payer principles, but none succeeded until Vermont enacted a law in May 2011. In this article we describe how our team developed a viable single-payer proposal that served as the foundation of Vermont's law. According to our estimates, after the first full year of operation in 2015, our proposed single-payer system is expected to produce an annual savings of 25.3 percent when compared to current state health spending levels; cut employer and household health care spending by \$200 million; create 3,800 jobs; and boost the state's overall economic output by \$100 million. We describe how this plan was designed, and we discuss lessons for other states considering health system reform.

**O**n May 26, 2011, Vermont Governor Peter Shumlin signed House Bill 202 (H 202), the state's single-payer health care law. Vermont is the first US state to successfully enact single-payer legislation, although at least a dozen states have tried to do so in the past two decades as a way to solve the persistent problem of the uninsured and to slow the rise in health care costs.

How do single-payer health systems address these issues? The systems create one publicly financed insurance fund that provides basic benefits to all citizens and pays providers under uniform mechanisms and rates. Single-payer systems contrast with our familiar fragmented system, which is characterized by multiple payers (governments, employers, and individuals); various payment schedules and schemes; and varied benefit packages.

Because eligibility is based on residency, single-payer systems provide a natural mechanism for achieving universal coverage. By placing total

health spending in a global budget and by creating a uniform payment landscape that eliminates providers' ability to shift costs among payers, a single-payer system also has the means of controlling the escalation of health care costs. For example, Taiwan's single-payer system, which began in 1995, expanded insurance coverage from 57 percent to 96 percent of the population in less than two years but did not increase health spending.<sup>1</sup>

Vermont was able to enact H 202 for at least two important reasons. First, there was a political window of opportunity. Vermont has strong grassroots support for single-payer health care and a long-standing commitment to health reform and universal coverage. In 2011 both the House and the Senate in Vermont's legislature were controlled by Democrats. Moreover, the Democratic governor was elected on a platform of single-payer health care.

Second, there was a viable single-payer plan, which had been proposed by independent outside experts. As part of the process leading to the

new law, the Vermont legislature commissioned a study in 2010, and the resulting recommendation was for a single-payer design for the state.<sup>2</sup> The authors of the report were William C. Hsiao, a professor of economics at Harvard University and lead author of this article; Steven Kappel, of the consulting firm Policy Integrity and a coauthor of this article; Jonathan Gruber, a professor of economics at the Massachusetts Institute of Technology; and a team of health policy analysts.

In contrast to previous reports on state-based single-payer plans, in our design process we explicitly considered the political landscape and the fiscal, legal, and institutional constraints on reform. We concluded that the most effective way to achieve Vermont's stated reform goals of universal coverage and cost containment would be a program that retained the fundamental concepts of a single-payer system.

At the same time, we also concluded that the system would have to fit into the Vermont context if it were to gain support from all parties affected by the new law. We therefore proposed a public-private single-payer system that was financed through payroll taxes and governed by an independent board, and that offered a generous benefit package—while at the same time transforming the payment system and reforming the medical malpractice system.

H 202 adopted several of our design elements—notably, the benefit package and governance by an independent board—and left numerous other proposed features to future study and further legislation. For example, H 202 did not include a financing mechanism.

In this article we describe the process through which we arrived at our recommended design, including the various challenges—political, economic, legal, and institutional—that any single-payer proposal will face. We explain the estimated savings that such a system is expected to produce and how those funds could be used in part to achieve universal coverage, as well as passed along as savings to Vermont families and businesses. Last, we discuss what lessons other states can learn from Vermont and how they can adapt elements of our design to fit their own contexts.

## What Are The Hurdles?

**POLITICAL CONSTRAINTS** We first sought to understand the political constraints on reform in Vermont. We conducted semistructured interviews with more than sixty groups, including legislators; members of the executive branch; physicians; nurses; health care advocates; and representatives of hospitals, health insurance

companies, unions, small and large businesses, and business associations. Through these interviews, we gained valuable insight into the current positions, preferences, and ideologies of important stakeholders.

For example, businesses were wary of increased government control of health care, fearing that they would face ever-increasing taxes and the loss of flexibility over an important “cost center” in their businesses—namely, the provision of health insurance to their employees. Providers feared that health care budgets would be balanced through chronically low payment rates. Grassroots organizations demanded equitable, universal coverage and generous benefits. These fears and aspirations quickly come into conflict with one another, making it difficult to develop a system that will be acceptable to all.

**LEGAL CONSTRAINTS** State reforms also face several legal constraints. Federal rules governing Medicaid and Medicare limit state flexibility with regard to benefits, payments to providers, and claims administration. Any of these constraints could limit how a state reform law could achieve its objectives. Comprehensive state reform designs would require waivers from the federal government for both programs.

Vermont already operates under a unique Medicaid waiver that grants the state a great deal of flexibility in determining what benefits will be offered and which populations will be covered. The waiver also grants the state the ability to keep and reinvest savings generated from payment or delivery system reforms. There is less precedent for, although no legal barrier to, such flexibility in the Medicare program. Any comprehensive reform law would need to seek flexibility under Medicare that would be similar to what has been used more frequently under Medicaid.

State reforms must also contend with the Employee Retirement Income Security Act (ERISA). In practice, ERISA preempts state laws that would regulate benefit plans offered by self-insured employers—that is, employers that assume the full financial risk of their employees' health care, instead of contracting with an insurer or health plan to effectively assume that risk.

Because of the vague language in ERISA, much of what is known about the limitations imposed by the law comes from court decisions. There have been no cases regarding a tax-financed universal health system at the state level, so case law does not provide a sure guide to any legal challenges.

On the one hand, employers could argue that such a system violates ERISA because public benefits, even those financed through an income tax, would induce them to drop or modify their

plans or, in the case of a payroll tax, force them to “double pay” for both the tax and their existing benefits. On the other hand, legal experts on ERISA point out that taxation and health care financing are traditional areas of state authority, which could protect such a system from ERISA “preemption.”<sup>3</sup> Given the indirect nature of the effect on employer plans, there is some question as to whether ERISA is relevant at all.<sup>4</sup>

Regardless, uncertainty remains about how courts might rule should a suit be filed, which is why health care reformers have urged Congress to pass an ERISA waiver for states seeking to expand health insurance. Vermont’s single-payer law does not include financing. Instead, it proposes to study the issue of potential “double payments,” which highlights the immense difficulty of this issue.

The Affordable Care Act of 2010 presents another legal barrier to state reforms. A central element of the act is the requirement for all states to have a health insurance exchange by 2014. The exchange is to be a marketplace where individuals and employers can buy health insurance and also receive federal subsidies for premiums and cost sharing. For Vermont, having to run such an exchange alongside its own single-payer program would mean running two systems with similar goals but different administrative structures, which would not be economically feasible.

However, the Affordable Care Act gives states a way out of this conundrum. As of 2017 states will be allowed to apply for a waiver from the law’s terms if they can demonstrate that they are pursuing other ways to provide at least equal coverage and benefits to residents. In that instance, states will be able to receive a waiver and a lump sum equal to the funds that would have been paid as subsidies to individuals and small businesses.

Vermont’s law, as enacted, will not implement a single-payer system until the state receives a waiver in 2017. However, the economic analysis that we conducted before the law’s passage assumed that Vermont could receive a waiver in 2015 after one full year of exchange operations. This earlier waiver date seemed plausible because of support from Vermont’s congressional delegation as well as from President Barack Obama for an earlier waiver to promote state innovation.<sup>5</sup> Again, it is the starting point for our analysis of economic effects.

**FISCAL CONSTRAINTS** Vermont also faced fiscal realities that would constrain reform. In January 2011 Vermont’s current budget had a projected \$150 million shortfall.<sup>6</sup> Employers complained bitterly during our discussions that rising health care costs ate away at their bottom lines, forcing many of them to cut benefits and shift more costs onto their employees.

In turn, rising out-of-pocket expenses put immense strain on Vermont families. According to the 2009 Vermont Household Health Insurance Survey, a representative survey of Vermont’s population, about 25 percent of Vermonters live in families that had trouble paying a medical bill in the previous year.<sup>7</sup> We found that the state, businesses, and families are all unwilling to pay more for health care. This highlights the imperative of effective cost containment in any reform.

**CAPACITY AND INSTITUTIONAL CONSTRAINTS** Reforms would be constrained by human capacity factors. For example, the number of physicians in the state, especially primary care providers, could limit access to care as demand for care expands under universal coverage, as happened in Massachusetts after that state implemented its 2006 reform law.<sup>8</sup>

Other factors include existing institutional and operational capacity. Do state legislators and bureaucrats have the capacity to implement a new health system over time, and do providers have the capacity to accept new payment mechanisms and adapt to new organizational structures—such as accountable care organizations—in which health care has to be coordinated? Such limitations typically result in major reforms being implemented over a long period of time, rather than all at once.

For example, Vermont has taken major steps toward care coordination through its “medical home” pilot. The pilot enhances care management functions at primary care practices and links them to the community through health teams.<sup>9</sup> Although there are plans to extend the pilot to cover the entire state, the pilot currently covers only 10 percent of the population.

## A Viable Single-Payer System For Vermont

Given the set of complex and often conflicting constraints, we worked to craft a single-payer system capable of surmounting, or at least navigating, the many barriers to reform.

Broadly, we proposed a public-private single-payer system that would be financed through payroll taxes and would offer a generous standard benefit package. Benefits and financing for both Medicaid and Medicare would remain unchanged. However, both programs would be folded into the single claims administration and payment system, requiring waivers under both programs and creating a uniform payment scheme for providers. The single-payer system would be governed by an independent board, with some elements of the program’s administration run by private-sector organizations selected through competitive bidding.



We explain these elements in greater depth below. We also review the major turns our analysis took as we considered various interests, and how these adaptations shaped the elements of our final proposal.

**TOTAL HEALTH SPENDING** Our analysis of constraints made it clear that there was little support for any overall increase in spending under the reform. Thus, additional funds to cover the uninsured and underinsured would have to come from savings that could be generated through systemic reform. This constraint also meant that our recommended design sought to maximize savings and protect existing and potential federal revenues.

For example, we recommended that Vermont delay the implementation of its single-payer system until after it received a waiver under the Affordable Care Act. Such a delay would in effect protect the federal dollars that would flow to the state in the form of subsidies to assist individuals in obtaining coverage through the exchanges. These subsidies are estimated to amount to \$160 million in 2016. Although the recommendation for a delay is disappointing to some advocates, it also reflects our assessment of how long it might take to set up and implement a single-payer system in Vermont.

**BENEFITS AND COVERAGE** Balancing constraints in designing the benefit package was particularly difficult because the pressure for greater benefits tends to run counter to demands for cost control. In response to advocates' and unions' demands for generous benefits and coverage levels, we determined that, at a minimum, we would not reduce the average benefits or levels of coverage that Vermonters have now.

Using Vermont's all-payer claims database, the Vermont Uniform Health Care Reporting and Evaluation System, we found that private health insurance plans in Vermont paid on average 87 percent of the costs of covered benefits, with the remaining 13 percent paid out-of-pocket. This level of "actuarial value" of the benefits package approaches the highest or "platinum" standard of the Affordable Care Act's benefit levels. Although most single-payer advocates called for the elimination of cost sharing, recommending totally free care would have raised total spending considerably and was ideologically unacceptable to the business community, among other groups. Consistent with our goal, H 202 includes a benefit package of at least 87 percent of actuarial value in terms of coverage of the cost of covered benefits.

**FINANCING** H 202 included studies of potential financing plans but did not include a specific mechanism, which reflected the sensitive nature of this aspect of the reform. The law requires that

a financing plan be presented to the legislature by January 2013.

We recommended using a flat payroll tax on all Vermont wages—split 75 percent and 25 percent between employer and employee, respectively—with taxable wages capped at the Social Security level and with exemptions for wages earned in families whose income is below 200 percent of the federal poverty level. The exemption for low-wage workers also protects the most vulnerable small businesses in Vermont.

Although a payroll contribution is not as progressive as an income tax—which includes unearned income, uses progressive tax rates, and is the preferred source of financing by advocates of the single-payer system—it preserves the federal tax treatment of health benefits for employers because employer spending on state payroll taxes is deductible against federal income. This tax expenditure is worth some \$250 billion nationally,<sup>10</sup> which is equivalent to about \$500 million in Vermont and is important to employer support for reform.

**GOVERNANCE AND ADMINISTRATION** As in our proposal, H 202 creates a public-private single-payer system, in which the claims administration and provider relations functions are put out for competitive bid to the private sector. Maintaining competition creates continued incentives for innovation and efficiency—a dynamic that we expect to produce slightly greater administrative savings over time compared to a purely government-run system. Preserving a role for private insurance would also reduce opposition to the plan from this sector, especially because the dominant insurance company in the state, Blue Cross Blue Shield of Vermont, would be a natural contractor for the single-payer system.

We further recommended that annual benefit and payment update negotiations be delegated to an independent board representing both the "payers" of health care (employers, the state, and families) and the "beneficiaries" of a health system (patients and providers who receive payments). By insulating these negotiations from the direct political process, we expect a slightly lower increase in health care spending over time. The Affordable Care Act created the Medicare Independent Payment Advisory Board in the hope of achieving similar savings by removing decisions about Medicare payment policies from direct congressional control and special-interest influence. This governance structure was also designed to overcome ideological opposition and stakeholders' concerns over mounting government control.

**PHYSICIAN CONCERNS** In response to fears from providers about insufficient payment, we explicitly did not consider any savings generated

from lowering provider payments, although rates would reflect expected reductions in administrative costs. To ensure an adequate supply of primary care physicians, we included recruitment and retention schemes such as generous educational loan repayment programs, as well as improvements to community hospitals.

We also recommended that Vermont move to a “no-fault” system of medical malpractice, both to maximize savings and to strengthen physician support for the proposal. Under a no-fault system, compensation for medical injuries is awarded by an administrative body and based on standard award schedules—an approach that physicians prefer because it removes the threat of costly lawsuits. Awards are contingent on establishing a connection between treatment and injury, but not on the proof of negligence.<sup>11</sup>

The final single-payer law requires a plan for reforming medical malpractice that must consider a no-fault system, but the law left ample room for more modest reform. That is probably a reflection of the traditional opposition to malpractice reforms by trial lawyers, many of whom are leaders in Vermont’s legislature.

### Study Data And Methods

We developed methods and gathered data to estimate the savings, cost, and impacts of the design that we proposed to the state. We assumed that Vermont could receive a waiver from the Affordable Care Act to begin its single-payer system in 2015. All financial impacts were based on this implementation date. We summarize these methods below and provide full details in the online Appendix.<sup>12</sup>

**SAVINGS** We analyzed administrative savings from moving to a single-payer system, from reduced fraud and abuse, from reducing the practice of defensive medicine (that is, overtreatment aimed at avoiding litigation in response to per-

ceived negligence), from overhauling health care delivery through payment reform, and from the public-private governance and administrative structure.

To estimate administrative savings, we relied on financial statements from Vermont’s fourteen hospitals, annual statements of Vermont insurers, and national studies on the administrative costs of the US health system,<sup>13-17</sup> supplemented by our own survey of Vermont physicians.

To estimate potential savings from payment system reform, we analyzed variations in health care spending in the private market from the Vermont Uniform Health Care Reporting and Evaluation System. We reviewed the latest studies on fraud and abuse, as well as medical malpractice and defensive medicine costs in the United States, to estimate potential savings from these reforms.

We also estimated the effects of creating uniform payment rates by analyzing Vermont hospitals’ financial statements, the private all-payer claims database, the Medicare professional fee schedule for Vermont, and the state’s Medicaid claims data.

**COSTS** Extending coverage to the uninsured and increasing coverage for the underinsured were the major additional costs. Using data from the Vermont Uniform Health Care Reporting and Evaluation System, we calculated the cost for typical private coverage and estimated how costs would change when the population’s coverage levels were altered.

**IMPACTS** To estimate the impacts on employers and families, we used the Gruber Microsimulation Model, developed by Jonathan Gruber.<sup>18</sup> To estimate the macroeconomic impacts of the reform, we relied on a regional economic model known as REMI, which is used by the Vermont government in fiscal analyses. All impacts used the implementation of the Affordable Care Act as the baseline.

### Study Results

**SAVINGS** Generating savings was integral to both financing universal coverage and gaining support from employers struggling with the burden of providing health insurance.

We estimated that when the reforms are fully implemented after ten years, they would reduce health spending by 25.3 percent in that year compared to what spending would be without the reform (Exhibit 1; see the Appendix for more details).<sup>12</sup>

Our estimate of a 7.3 percent reduction in administrative costs arises from both the consolidation of insurance functions and reduced administrative costs for providers stemming from

**EXHIBIT 1**

**Projected Savings From Vermont’s Single-Payer Health Plan, 2015–24**

Source of savings	Amount (percent of total health spending)
Administrative expenses	7.3
Reduced fraud and abuse	5.0
Payment reform and integration of delivery system	10.0
Malpractice reform	2.0
Governance and administration	1.0
<b>Total</b>	<b>25.3</b>

**SOURCE** Authors’ analysis. **NOTES** Savings were estimated as a percentage of total health care costs and would be gradually realized over a ten-year period, so that total health spending by 2024 would be reduced by that amount.

## To lower cost growth over time, our strategy was to overhaul Vermont's payment system.

uniform claims administration. Such consolidation eliminates the need to understand and work with varied rules and myriad benefit packages offered by multiple insurers. The most time-consuming and costly activities include verifying cost-sharing and benefit limits for insured patients, seeking prior authorizations for treatment, dealing with formulary issues in selecting and covering prescription drugs, and submitting and then reworking rejected claims.<sup>15,19</sup>

A single-payer system also creates a comprehensive claims database that offers a heightened ability by insurers to detect fraud and abuse. The fragmentation of payers in the United States, each with only partial claims information, makes rooting out fraud and abuse much more difficult. We estimated that a single-payer system could save 5 percent of health spending from reduced fraud and abuse, which is consistent with estimates from the Federal Bureau of Investigation and experience in other countries.<sup>1,20</sup> Administrative simplification and a reduction in fraud and abuse represent one-time savings that will be largely realized in the first two years of operation.

In order to lower cost growth over time, the most attractive feature of reform to employers, our strategy was to overhaul Vermont's payment system. We recommended that Vermont transition away from its largely fee-for-service payment system—in which physicians have economic incentives to perform more care than might be needed—to risk-adjusted capitation payments paid to accountable care organizations, which would also receive bonuses for achieving quality standards.

Such a payment system would limit the amount of spending to what providers and payers agreed on in advance. At the same time, it would also limit the amount of financial risk borne by physicians, since their payments would be risk- or severity-adjusted based on various features of the populations that they served.

Running the payments through an accountable care organization, rather than individual

physicians, would create incentives to integrate the delivery of health care, improve outcomes, and reduce wasteful or inappropriate care. H 202 created a plan for pilot projects to test aggressive payment reforms, including the use of capitation payments, beginning in 2012, although it did not specify the payment mechanism to be eventually used by the single-payer system.

Analyses of variations in Medicare claims and outcomes suggest that up to 30 percent of all health spending is attributable to waste and duplication of services.<sup>21</sup> Our analysis of variations in total health spending in the private market suggested that Vermont could conservatively save 10 percent in current health spending over the next ten years (see the Appendix).<sup>12</sup>

Shifting to a no-fault system of medical malpractice would also generate savings. We assumed that the direct costs of running the system would stay relatively constant. But we estimated that such a change would result in a reduction in the practice of defensive medicine, translating into savings of 2 percent of total health spending—the most recent estimate of the total cost of defensive medicine in the United States.<sup>22</sup> We further estimated that competition for claims administration and the insulation of major spending decisions from the political process would produce additional savings of 1 percent.

Vermont would achieve additional savings of \$56 million in 2015, the first year of operation under single-payer reform, by leveling payment rates across all payers. If Vermont shifted to a uniform fee-for-service schedule on its way to capitation payments, this average level—holding total provider reimbursement constant—would be approximately 5–15 percent higher than Medicare's rates in the state and 32–37 percent higher than Medicaid rates, depending on the type of provider.

The State of Vermont would have to step in to pay the difference between existing Medicare rates and the new, higher rates. However, the increases in Medicaid rates would be shared between the state and federal government, up to certain limits. These additional federal Medicaid dollars would create a net savings to the state after the compensatory drop in payment rates for the population that had previously had private insurance (see the Appendix for more details).<sup>12</sup>

**APPLYING SAVINGS** Achieving universal coverage under the proposed benefit package would cost \$252 million in 2015. H 202 preserves our recommended level of benefits and, like our recommendation, leaves open the possibility of adding limited dental and vision benefits. As mentioned above, we recommended an additional \$62 million investment in 2015 to recruit providers and update facilities. H 202 also in-

cludes a major plan to expand and reshape the state's health care workforce, with the possibility of state appropriations for such investments.

We adopted a strategy to ensure the financial soundness of the reform by creating a wide margin between additional costs and expected savings. For example, the additional costs would be about two-thirds of the potential savings in the first year (Exhibit 2). This was done both to provide for uncertainties in the magnitude of savings and the speed with which savings could be realized and to assure fiscal conservatives that there is a large margin of safety.

**IMPACTS** Vermont's H 202 adopts several features and principles of our design. However, its impact cannot be analyzed largely because the total costs and financing are still to be determined. For illustrative purposes, we present our estimated impacts of the single-payer reform as proposed, which we assumed could be implemented in 2015.

Employer spending would drop by \$100 million by 2016, or \$260 per employee. Employers that don't offer health insurance—which tend to be smaller employers—would see their costs increase by about \$1,422 per employee. Employers that offer coverage—the majority of businesses in Vermont—would see a decrease in the cost of health benefits of about \$1,429 per employee.

In 2015 the total tax rate required to finance the system would be 14.2 percent of the adjusted payroll.<sup>23</sup> Employers would pay 10.6 percent, and employees would pay the remaining 3.6 percent. In contrast, our simulation of the implementation of the Affordable Care Act in Vermont found that employers would pay 12 percent of the payroll on their share of premiums in 2015.

The net benefit to households was estimated at \$100 million in 2016, or \$370 per household—a benefit that stems largely from the difference

between the old cost of health premiums and the new payroll tax rates. Households below 133 percent of the federal poverty level would see a net gain of about \$500 per household in 2016. Households with incomes between 133 percent and 400 percent of the poverty level would see gains of \$1,110 per household.

Higher-income households would have to pay more, as the more progressive payroll tax would lead to higher insurance costs for those with higher wages. On average, families earning more than 400 percent of the poverty level would pay \$550 more per household. Families with two high-wage earners would feel the strongest impacts of the switch from a premium-based system to a payroll tax-based system.

Economic modeling results show that the single-payer system would have a positive impact on Vermont's economy. Overall, about 3,800 new jobs would be created in the first year of implementation. The number of new jobs created annually would level off to about 2,900 by 2019. These jobs would be created mostly in the medical sector and its direct suppliers, largely driven by new health care spending resulting from covering the uninsured and underinsured. Although some jobs would probably be lost in health care administration, most of those would be out of state.

The reform would increase Vermont's gross state product, as more jobs would be created inside the state than outside it, on balance. Total economic output is projected to increase by more than \$100 million in 2015.

### Lessons For Other States

The enactment of Vermont House Bill 202, the first successful single-payer bill in the United States, reflects a unique condition in Vermont

#### EXHIBIT 2

Estimated Savings And Use Of The Savings In Vermont's Single-Payer System, Millions Of 2010 Dollars

	2015	2016	2017	2018	2019
<b>ESTIMATED SAVINGS</b>					
Total savings from systemwide reforms	\$580	\$770	\$880	\$990	\$1,100
Additional savings from moving to uniform payment rate	56	57	59	61	63
<b>USE OF THE SAVINGS</b>					
Covering the uninsured	\$220	\$227	\$234	\$242	\$250
Increasing benefits for the underinsured	32	33	34	35	36
Investing in primary care and community hospitals	62	64	66	68	70
Covering dental and vision benefits	124	128	132	136	141
<b>RESIDUAL SAVINGS</b>					
Residual savings accruing to households, employers, and state government	\$198	\$375	\$473	\$570	\$666

**SOURCE** Authors' analysis. **NOTE** Total savings from systemwide reforms reflect the percentage of realized savings for that year multiplied by the estimated total health spending for that year.



in 2011: first, the existence of a political window for comprehensive reform; and second, the availability of the single-payer design plan described above, which was credible to the public and could serve as a foundation for the legislation.

Although all states are grappling with the problems of the uninsured and rising health care costs, the system we recommended for Vermont might not be viable in other states today for political reasons. Nevertheless, Vermont's experience holds at least two important lessons for other states wishing to attempt reforms that stretch beyond the Affordable Care Act.

First, Vermont highlights the importance of having on hand a credible and convincing plan when fortuitous political windows appear. Furthermore, we found that by paying close attention to the varied constraints on reform, we could design a viable proposal that aided in the enactment of legislation.

The second major lesson is that several components of Vermont's single-payer plan could be adopted by other states even if political opposition to a single-payer system in those states is deemed insuperable. These components would improve the administrative efficiency of the system and reduce health care costs, while creating fewer and less serious legal and political barriers to implementation. However, they would not necessarily expand insurance coverage.

At a minimum, states could assemble a comprehensive all-payer claims database with records from all private payers, Medicare, and Medicaid. Such databases are operating at least partially in thirteen states.<sup>24</sup> Having a database of this sort would enable states to create a complete profile of each provider and patient and would greatly improve the state's ability to detect fraud and abuse. Paired with administrative agencies capable of analyzing data in real time and acting to recapture the payments made for fraudulent claims and gross abuse, this feature alone could save up to 5 percent of total health spending.

States could move one step further and create a so-called single-pipe system of payment, with uniform payment methods and rates, as well as uniform claims processing. An analysis conducted for us by a legal expert confirmed that states have the authority to construct a single-pipe system by requiring that all claims be processed centrally by a separate entity (personal communication from Patricia A. Butler, consultant, December 2010).

ERISA would exempt self-insured employers from being required to participate in the uniform claims processing, but it wouldn't prevent them from participating if they chose to do so. And states could make participation in the single-pipe system highly attractive by imposing steep surcharges on claims not submitted through the central or standardized system, via their authority to set provider payment rates for all payers—including self-insured employers. We estimated that such a single-pipe payment system alone could save 3.6 percent of total health spending in Vermont.

Equally important, a single-pipe system would greatly promote the establishment of accountable care organizations, a goal many states are moving toward as a way to reduce the escalation of health care costs. Creating accountable care organizations is certainly possible, although complications caused by the current multipayer system make it difficult to do so.

Standardizing payments would greatly increase the leverage available to states pursuing these reforms. When some insurers pay on a capitation basis and others pay on a fee-for-service basis, providers can exploit their relative market power and devote their efforts to "gaming" the rules and rates—that is, to maximizing revenues without necessarily changing the delivery of health care. For example, there is ample evidence that providers in Massachusetts are using their market power to extract higher prices, with no apparent increase in quality.<sup>25</sup>

Even a single-pipe system, however, will not achieve the level of administrative simplification or savings that would come with single-payer reform. What's more, such a system would still leave a measurable percentage of the population uninsured.

We have demonstrated in Vermont that the development of an evidence-based, viable, and practical single-payer system design can aid in the enactment of a law instituting such a system. We estimate that the system can generate large savings and bend the cost curve while achieving universal coverage with generous benefits and lowering the cost of health care to families, businesses, and the state. Other states can analyze their own political, fiscal, and institutional environments and design an appropriate plan that, if not a full-blown single-payer system, at least incorporates some components of Vermont's system to help reduce health care costs. ■

The authors thank Jonathan Gruber and Ian Perry for their work with the Gruber Microsimulation Model and Thomas Kavet and Nicolas Rockler for their work using the regional economic model REMI, as well as Robin Lunge, Jennifer

Carbee, Nolan Langweil, Jim Hester, and the many analysts from the Harvard School of Public Health, especially Ashley Fox and Nathan Blanchet, who contributed to the original report to the Vermont Legislature. This research was

supported by a contract with the Vermont legislature and by the Commonwealth Fund (Grants No. 20110108 and No. 20110109).

## NOTES

- 1 Lu JFR, Hsiao WC. Does universal health insurance make health care unaffordable? Lessons from Taiwan. *Health Aff (Millwood)*. 2003;22(3):77–88.
- 2 Hsiao WC, Kappel S, Gruber J. Act 128: health system reform design; achieving affordable universal health care in Vermont [Internet]. Montpelier (VT): Vermont Legislative Joint Fiscal Office; 2011 Feb 17 [cited 2011 Jun 9]. Available from: [http://www.leg.state.vt.us/jfo/healthcare/FINAL%20REPORT%20Hsiao%20Final%20Report%20%2017%20February%202011\\_3.pdf](http://www.leg.state.vt.us/jfo/healthcare/FINAL%20REPORT%20Hsiao%20Final%20Report%20%2017%20February%202011_3.pdf)
- 3 Borzi PC. There's "private" and then there's "private": ERISA, its impact, and options for reform. *J Law Med Ethics*. 2008;36(4):660–9.
- 4 Butler P. ERISA implications for state health care access initiatives: impact of the Maryland "Fair Share Act" court decision. Portland (ME): National Academy for State Health Policy; 2006.
- 5 Department of Health and Human Services [Internet]. Washington (DC): HHS. Press release, Obama administration takes new steps to support innovation, empower states; 2011 Mar 10 [cited 2011 Jun 9]. Available from: <http://www.hhs.gov/news/press/2011pres/03/20110310a.html>
- 6 Vermont Legislative Joint Fiscal Office. Budget gap chart: general fund budget gap picture—January 14, 2011 [Internet]. Montpelier (VT): The Office; 2010 Jan [cited 2011 Jun 9]. Available from: [http://www.leg.state.vt.us/jfo/chart\\_long\\_term\\_budget\\_gap.aspx](http://www.leg.state.vt.us/jfo/chart_long_term_budget_gap.aspx)
- 7 Robertson B, Maurice J, Madden P. Vermont household health insurance survey: comprehensive report. Montpelier (VT): Vermont Department of Banking, Insurance, Securities, and Health Care Administration; 2009.
- 8 Long SK, Masi PB. Access and affordability: an update on health reform in Massachusetts, fall 2008. *Health Aff (Millwood)*. 2009;28(4):w578–87. DOI: 10.1377/hlthaff.28.4.w578.
- 9 Bielaszka-DuVernay C. Vermont's blueprint for medical homes, community health teams, and better health at lower cost. *Health Aff (Millwood)*. 2011;30(3):383–6.
- 10 Gruber J. A win-win approach to financing health care reform. *N Engl J Med*. 2009;361(1):4–5.
- 11 Bismark M, Paterson R. No-fault compensation in New Zealand: harmonizing injury compensation, provider accountability, and patient safety. *Health Aff (Millwood)*. 2006;25(1):278–83.
- 12 To access the Appendix, click on the Appendix link in the box to the right of the article online.
- 13 Angrisano C, Farrell D, Kocher B, Laboissiere M, Parker S. Accounting for the costs of health care in the United States. San Francisco (CA): McKinsey Global Institute; 2007.
- 14 Blanchfield B, Heffernan J, Osgood B, Sheehan R, Meyer G. Saving billions of dollars—and physicians' pay—by streamlining billing practices. *Health Aff (Millwood)*. 2010;29(6):1248–54.
- 15 Casalino LP, Nicholson S, Gans DN, Hammons T, Morra D, Karrison T, et al. What does it cost physician practices to interact with health insurance plans? *Health Aff (Millwood)*. 2009;28(4):w533–43. DOI: 10.1377/hlthaff.28.4.w533.
- 16 Kahn JG, Kronick R, Kreger M, Gans DN. The cost of health insurance administration in California: estimates for insurers, physicians, and hospitals. *Health Aff (Millwood)*. 2005;24(6):1629–39.
- 17 McKay NL, Lemak CH. Analyzing administrative costs in hospitals. *Health Care Manage Rev*. 2006;31(4):347–54.
- 18 Gruber J. Tax policy for health insurance. In: Poterba J, editor. *Tax policy and the economy*. Cambridge (MA): MIT Press; 2005. p. 39–63.
- 19 Medical Group Management Association. Analyzing the cost of administrative complexity [Internet]. Englewood (CO): MGMA; 2004 Sep [cited 2011 Jun 9]. Available from: <http://www.mgma.com/about/default.aspx?id=280>
- 20 Federal Bureau of Investigation. Financial crimes report to the public 2007 [Internet]. Washington (DC): FBI; [cited 2011 Jun 9]. Available from: [http://www.fbi.gov/stats-services/publications/fcs\\_report2007](http://www.fbi.gov/stats-services/publications/fcs_report2007)
- 21 Fisher ES, Wennberg DE, Stukel TA, Gottlieb DJ, Lucas FL, Pinder EL. The implications of regional variations in Medicare spending. Part I: the content, quality, and accessibility of care. *Ann Intern Med*. 2003;138(4):273–87.
- 22 Mello MM, Chandra A, Gawande AA, Studdert DM. National costs of the medical liability system. *Health Aff (Millwood)*. 2010;29(9):1569–77.
- 23 We adjusted the total Vermont payroll down to account for the fact that workers who earn under 200 percent of the federal poverty level are exempted from paying the payroll tax and that wages are capped at the Social Security cap level.
- 24 Love D, Custer W, Miller P. All-payer claims databases: state initiatives to improve health care transparency. New York (NY): Commonwealth Fund; 2010.
- 25 Office of Massachusetts Attorney General Martha Coakley. Investigation of health care cost trends and cost drivers: preliminary report. Boston (MA): The Office; 2010.

## ABOUT THE AUTHORS: WILLIAM C. HSIAO, ANNA GOSLINE KNIGHT, STEVEN KAPPEL & NICOLAE DONE



**William C. Hsiao** is the K.T. Li Professor of Economics at the Harvard School of Public Health.

In this issue of *Health Affairs*, Harvard economist William Hsiao and his colleagues describe Vermont's single-payer health law, which Hsiao helped create and which is the first ever such law in the United States. The authors find that many of the circumstances that led to the law, which was enacted in May 2011, may be unique to Vermont. However, the state's experience is nonetheless instructive for other states.

For instance, the authors believe that states would be well served to do as Vermont has done and assemble an all-payer claims database along with uniform payment methods and uniform claims processing. These and other changes would reduce costs by improving administrative efficiency, they say.

Hsiao began to work on the Vermont plan at the request of state lawmakers who were aware of his two decades of work on health system reforms. He has helped design reforms for close to a dozen countries, including Taiwan, China, South Africa, and Poland. He hopes that Vermont's law will prompt other states to adopt single-payer plans.

Hsiao says that his research has persuaded him that the United States is considerably behind other advanced economies in the structure of its health care system. "We have put on so many Band-Aids that it has become an incoherent and incongruent system that causes much waste, inefficiencies, and poor quality of health care," he says.

Hsiao is the K.T. Li Professor of Economics at the Harvard School of Public Health. He serves as a consultant to the US Senate on Social Security, Medicare, Medicaid, and regulation of physician fees. He is a member of numerous advisory committees at the World Bank, International Monetary Fund, International Labor Organization, and World Health Organization. Hsiao earned both a master of public administration and a doctorate in economics from Harvard University.



**Anna Gosline Knight** is the project manager for the study on Vermont's reforms, at the Harvard School of Public Health.

Anna Gosline Knight is the project manager of Hsiao's study of Vermont's health system reforms. She was recently awarded a master's degree in health policy and management from the Harvard School of Public Health.



**Steven Kappel** is the founder and principal consultant of Policy Integrity.

Steven Kappel is the founder of Policy Integrity LLC, a consulting firm that assists clients with the development, presentation, and evaluation of policy alternatives in health care and related areas. He was awarded a master of public administration degree from the University of Vermont.



**Nicolae Done** is a research analyst at the Harvard School of Public Health.

Nicolae Done serves as the main research analyst on Hsiao's Vermont health reform research team. A former editor of the *Harvard Health Policy Review*, Done has a bachelor's degree in biochemical sciences from Harvard College.