

**Study of Rhode Island's  
Uninsured: Current Costs and  
Future Opportunities**

Final Report

March 11, 2010

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Allison Barrett  
Thomas Bell



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## **ACKNOWLEDGMENTS**

We gratefully acknowledge the many contributions of Deb Faulkner to the development and completion of this study. Her creative input and attention to detail are reflected throughout the report.

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## EXECUTIVE SUMMARY

In Rhode Island, as in other states, the high and rising cost of health insurance is driving growth in the number of residents who are uninsured. By 2008, the average cost of employer-based family coverage in Rhode Island was \$8,023 per year, roughly 24 percent of average Rhode Island wages. It is therefore not surprising that from 2001 to 2008, the share of Rhode Islanders under age 65 with employer-sponsored insurance dropped from 73 percent to 67 percent, while the number of uninsured Rhode Islanders under age 65 increased to nearly 12 percent of the population.

Near-term efforts to address these trends are constrained by fiscal challenges. Budget gaps in 2009 and 2010 have required substantial cuts in all aspects areas of Rhode Island state government. Medicaid reform was a critical element of proposed savings, targeting over \$100 million in program savings each year.

This report is intended to help policy makers and stakeholder understand the number of uninsured in Rhode Island, current health care spending by and for the uninsured, and the change in health care spending that would occur if they became insured. Specifically:

- We estimate the number of uninsured in Rhode Island under age 65 in 2010, and expenditures for and by uninsured Rhode Islanders.
- We identify sources of financing for care they do not pay out of pocket, in order to understand how much funding might be reallocated to finance a more cost-effective model of coverage versus direct care delivery.
- Finally, we estimate the change in health care expenditures that would occur if all uninsured Rhode Islanders became insured.

The principal research questions and findings of this report are summarized below.

**How many Rhode Islanders are uninsured?** In part related to Rhode Island's current high rate of unemployment, the proportion of Rhode Islanders who are uninsured in 2010 is likely to be much greater than in the past. We estimate that nearly 140,000 Rhode Islanders, 16 percent of the population under age 65, will be uninsured in March 2010. However, many more Rhode Islanders—187,000 adults and children, or more than 21 percent of the population under age 65—are projected to be uninsured at some time during the year (Table ES.1). Ten percent are projected to be uninsured all year.

**How much is spent on care for the uninsured today?** While 10 percent of Rhode Islanders are uninsured all year, they account for less than 5 percent of medical spending—about \$204 million in 2010, equal to \$2,304 per person. This amount is less than half the amount per capita (\$5,340) that full-year insured Rhode Islanders spend. Rhode Islanders who are uninsured part of the year incur 90 percent of their total medical spending while insured.

**Table ES.1. How Many Are Uninsured? Rhode Island Population under Age 65 by Coverage Status, Total Medical Spending Per Capita, and Out-of-Pocket Spending, Projected 2010**

	Population under age 65		Total medical spending		Out-of-pocket spending	
	Number (thousands)	Percent	Total in millions)	Percent of total spending	Total (in millions)	Percent of total spending
Total	889.1	100.0%	\$4,348.8	100.0%	\$775.9	17.8%
Full-year insured	701.3	78.9%	\$3,744.5	86.1%	\$635.8	17.0%
Part-year uninsured <sup>a</sup>	99.2	11.2%	\$400.1	9.2%	\$79.1	19.8%
Full-year uninsured	88.6	10.0%	\$204.2	4.7%	\$61.0	29.9%

Source: Mathematica Policy Research.

<sup>a</sup> Estimates include spending while insured or uninsured.

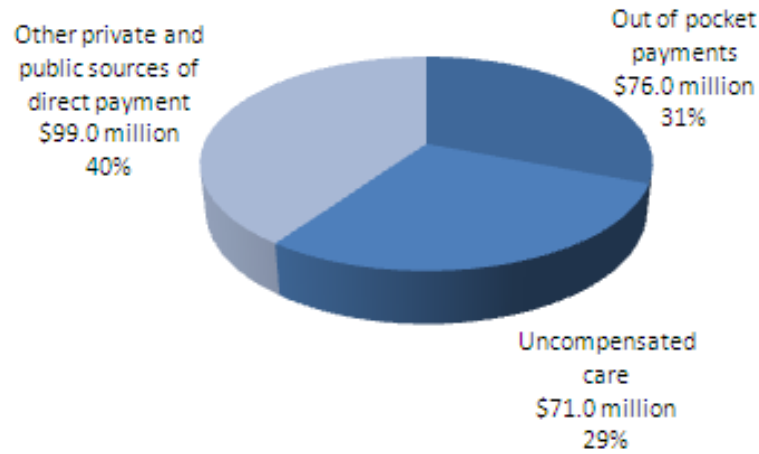
**How much do the uninsured pay out of pocket?** Rhode Islanders who are uninsured all year spend less than half the amount for care as full-year insured Rhode Islanders, but pay a much larger share out of pocket. Overall, uninsured Rhode Islanders who are uninsured all year (typically on much lower incomes than the insured) pay \$688 per person out of pocket (30 percent of their cost of care), compared with \$907 per person (17 percent of their cost of care) among Rhode Islanders who are insured all year.

**Who pays for the care of the uninsured?** In addition to the substantial amount that uninsured Rhode Islanders pay out of pocket for their care, they incur approximately \$170 million for care financed through a combination of public and private funds and programs (Figure ES.1). Uncompensated care (measured as the difference between what providers would have received if the uninsured person had been privately insured and what the provider actually received from identifiable sources) accounts for an estimated 29 percent of all care for uninsured Rhode Islanders.

Alternative estimates (based on administrative data and trends) indicate that federal, state, and local governments, as well as private sources, will pay \$180 million in 2010 for care obtained by uninsured Rhode Islanders (Table ES.2). Of this amount, the federal government will pay an estimated \$100.6 million—most of their costs net of the amount they pay out of pocket. Federal spending for the uninsured includes both direct payments for care and indirect payments for uncompensated care. Private sources are the next largest source of payment—an estimated \$60.0 million in 2010.



**Figure ES.1. Who Pays? Sources of Funds for Uninsured Rhode Islanders' Care, Projected 2010 Population-Based Estimates**



Source: Mathematica Policy Research.

Notes: Estimates include all health care spending for full- and part-year uninsured persons, while uninsured. Other private sources of funds include any type of private 3rd-party payer such as automobile insurance, accident, or home owners' insurance; employers; or other private sources other than health insurance. Other public sources of funds include the Veterans Administration and workers compensation, as well as the AIDS Drug Assistance Program and other programs that pay for care, drugs, or medical equipment.

**Table ES.2. Who Pays? Sources of Funds for Uninsured Rhode Islanders' Care Net of Out-of-Pocket Payments, Projected 2010 Administrative Estimates**

	Total	Federal government	State/local government	Private
Total spending net of patient out-of-pocket (\$millions)	\$180.0	\$100.6	\$19.5	\$60.0
Hospitals	\$117.5	\$48.7	\$11.1	\$57.7
Community providers and direct care programs	\$61.1	\$51.9	\$8.4	\$0.9
Private physicians	\$1.4	\$0.0	\$0.0	\$1.4
Percent of total spending net of patient out-of-pocket	100.0%	55.9%	10.8%	33.3%
Hospitals	100.0%	41.4%	9.4%	49.1%
Community providers and direct care programs	100.0%	84.8%	13.7%	1.5%
Private physicians	100.0%	0.0%	0.0%	100.0%

Source: Mathematica Policy Research.

Note: Because this total uncompensated care estimate (\$180 million) is built up from administrative data, it does not precisely match the estimate (\$170 million) derived from population survey data.

**How much more would it cost to cover all Rhode Islanders?** If uninsured Rhode Islanders were insured all year, they would incur additional health care costs. This is because they would be less likely to delay care and more likely to find a usual source of care. In addition, care would be more affordable to them: the amount they would be required pay out of pocket would fall to levels consistent with the currently insured population. We estimate that, if insured, they would spend an additional \$138 million for health care—23 percent more than they do currently. That is (recalculated as current spending per projected spending), at least 81 percent of the cost of their care is already embedded in the system in the form of high out-of-pocket spending, private insurance, other public and private direct payments for care, and uncompensated care. In turn, uncompensated care is funded from various public sources and private sources, potentially including higher charges for care obtained by insured Rhode Islanders.

While the net cost of covering the uninsured is perhaps surprisingly small, the prospect of reconfiguring the public and private streams of funds that currently pay for their care is a significant challenge. The precedent set in Massachusetts, which reconfigured substantial federal and state funds to subsidize coverage for the low-income uninsured, may offer some guidance to Rhode Island. However, Rhode Island’s task may be different from that which Massachusetts faced—especially with respect to the potential for retaining the significant private spending that now supports care for the uninsured. This report is intended to help inform public discussion about the potential to reconfigure funding for the uninsured in Rhode Island.

## A. The Context for This Report

In Rhode Island, as in other states, the high and rising cost of health insurance is driving growth in the number of residents who are uninsured. From 2001 to 2008, the average employee contribution for single or family coverage increased 61 percent and 67 percent, respectively—while wages increased less than 30 percent (Table 1). By 2008, the average cost of employer-based family coverage in Rhode Island was \$8,023 per year, roughly 24 percent of average Rhode Island wages. It is therefore not surprising that from 2001 to 2008, the share of Rhode Islanders under age 65 with employer-sponsored insurance dropped from 73 percent to 67 percent, while the number of uninsured Rhode Islanders under age 65 grew to nearly 12 percent of the population.

**Table 1. Percent Change in Premiums, Wages, and Health Insurance Coverage in the US and Rhode Island, 2001–2008**

	United States	Rhode Island
Percent change in premiums per member per month		
Single coverage		
Average premium	51.8%	61.0%
Average employee contribution	77.1%	84.9%
Family coverage		
Average premium	63.8%	66.6%
Average employee contribution	95.1%	73.8%
Percent change in average wage	16.7%	29.2%
Health insurance coverage		
Percent with employer-sponsored insurance under age 65		
2001	65.6%	72.9%
2008	61.8%	66.8%
Percent uninsured under age 65		
2001	16.5%	9.0%
2008	17.5%	11.8%

Sources: Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey–Insurance Component (premiums); Bureau of Labor Statistics, US Department of Labor (wages); Employee Benefit Research Institute (insurance coverage).

Note: Premiums are unadjusted for changes in benefits or cost sharing.

Although the uninsured generally obtain much less care than the insured population, they nevertheless incur a significant level of health care spending as well as significant social cost. Nationally and probably also in Rhode Island, the care that the uninsured receive is often delayed and fragmented, leading to poorer health outcomes, greater rates of disability and premature death, and higher social costs associated with unmet health care needs.<sup>1</sup>

<sup>1</sup> A large body of research literature links lack of health insurance to poor health outcomes and substantial social and economic costs. For example, see: D. Baker et al., “Loss of Health Insurance and the Risk for Decline in Self-Reported Health and Physical Functioning.” *Medical Care*, vol. 40, no. 11, 2002, pp. 1126–1131; Institute of Medicine, *Care Without Coverage: Too Little Too Late*, Washington, DC: National Academy Press, 2002; and S. Dorn, “Updating the Institute of Medicine Analysis on the Impact of Uninsurance on Mortality,” Washington, DC: Urban Institute, 2008.

A number of states are working to combine public coverage expansions and private sector reforms to address downward trends in coverage. In the past five years, Vermont, Maine, and Massachusetts each enacted comprehensive reforms intended to achieve near-universal health insurance coverage. Massachusetts' reforms—which combine individual and employer mandates, expansions of subsidized coverage, and a “Health Insurance Connector” to facilitate individual and small group purchasing—have become a model for leading national reform proposals. Many other states have enacted more incremental reforms.

In Rhode Island as in other states, near-term efforts to address these trends are constrained by fiscal challenges. Budget gaps in 2009 and 2010 have required substantial cuts in all aspects areas of Rhode Island state government. Medicaid reform was a critical element of proposed savings, targeting over \$100 million in program savings each year.

This report is intended to help policy makers and stakeholders understand the value of moving forward to stabilize and expand coverage in a resource-constrained environment, as well as the cost of not moving forward. We estimate the number of uninsured in Rhode Island under age 65 in 2010, and expenditures for and by uninsured Rhode Islanders. We identify sources of financing for care they do not pay out of pocket, in order to understand how much funding might be reallocated to finance a more cost-effective model of coverage versus direct care delivery. Finally, we estimate the change in health care expenditures that would occur if all uninsured Rhode Islanders became insured.

Medical spending is estimated in two alternative ways, producing very consistent results. First, we estimate spending on a population basis, based on national expenditure survey data rebased to the Rhode Island population and total medical spending among insured Rhode Islanders. We then use available administrative data to build up an estimate of medical spending by source of funding. Finally, we estimate the change in health care expenditures that would occur if all uninsured Rhode Islanders became insured.

## **B. The Uninsured in Rhode Island**

Historically, Rhode Island has relied on estimates of the uninsured based on household sample. Due to small sample size, the state has tracked a 3-year moving average, the mean of the most recent survey year and the prior two years. This method offers reasonable estimates of the uninsured when underlying employment patterns are relatively stable. However, when underlying employment patterns change markedly—as they have since 2007—it is likely to substantially misrepresent the number and rate of uninsured Rhode Islanders.

We estimated the number of uninsured Rhode Islanders in 2010 based on a statistical model that considers unemployment as a determinant of coverage status. Based on this model, we project that approximately 140,000 Rhode Islanders will be uninsured in 2010—nearly 16 percent of the population under age 65—at any given point in time (Table 2). This projection may be conservative, in that it assumes 12 percent average unemployment in 2010—less than the 12.3 percent of Rhode Islanders who reported being jobless and looking for work in December 2009.<sup>2</sup> However, it also

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<sup>2</sup> In November 2009, 12.7 percent of workers over age 16 in Rhode Island were unemployed (preliminary estimate; see: <http://www.bls.gov/web/laumstrk.htm>).

reflects the State’s own projection of Medicaid enrollment as of mid-2009, which if ultimately greater than was projected, would reduce the number of uninsured.

**Table 2. Historic Average Annual Estimates of Uninsured Rhode Islanders and Projection to 2010**

	1999– 2001	2000– 2002	2001– 2003	2002– 2004	2003– 2005	2004– 2006	2005– 2007	2006– 2008	Projected 2010Q1
Number of uninsured	71.0	82.7	92.7	103.3	110.7	106.3	107.3	107.3	140.1
Percent of population	8.1%	9.3%	10.3%	11.3%	12.0%	11.5%	11.6%	11.7%	15.8%
<i>Unemployment rate</i>	4.1%	5.1%	5.4%	5.2%	5.1%	5.0%	5.2%	7.8%	12.0%

Sources: US Census Bureau, Current Population Survey (historic rate of uninsured); Mathematica Policy Research (projected 2010 estimates); Bureau of Labor Statistics, US Department of Labor (historic unemployment rates).

Note: The reported historic unemployment rates are for the final year of each 3-year period.

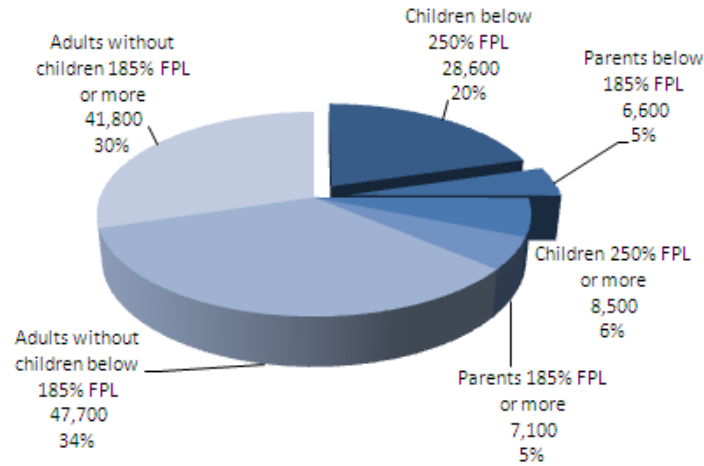
Nearly two-thirds (64 percent) of uninsured are adults without children and, therefore, ineligible for Medicaid in Rhode Island. More than half of these adults have income below 185 percent of the federal poverty level (FPL), the level of income relative to family size that would qualify parents for Medicaid. Rhode Islanders who are potentially Medicaid-eligible (children with income below 250 percent FPL and parents with income below 185 percent FPL) constitute about 25 percent of the projected uninsured (Figure 1).<sup>3</sup>

In part because they generally are ineligible for Medicaid, low-income adults without children are much more likely to be uninsured than similarly low-income parents and children. In 2010, more than half (53 percent) of adults without children below 185 percent FPL are projected to be uninsured (Table 3). Among parents with income below 185 percent FPL (and therefore potentially eligible for Medicaid), just 15 percent are uninsured. Among children below 250 percent FPL (and therefore potentially eligible for Medicaid), 21 percent are uninsured.

The estimates presented are projections of Rhode Islanders’ coverage status at a point in time. For the purpose of comparability to the Census-based figures that Rhode Island and many other states use to understand how many residents are uninsured, we projected to a single month in 2010. However, many more Rhode Islanders are uninsured at any point during the year. We project the number of Rhode Islanders who would be uninsured at any time during the year would be 34 percent greater than the number who are uninsured in any one month—reflecting Rhode Islanders who are uninsured part of the year, as well as those who are uninsured all year.

<sup>3</sup> Additional detail describing the Rhode Islanders projected to be uninsured in 2010 is provided in the Appendix.

**Figure 1. Number and Percent of Uninsured Rhode Islanders by Family Status and Income, Projected 2010**



Source: Mathematica Policy Research.

Notes: Estimates reflect projected insurance status at a point in time (March 2010), and therefore are less than the number of persons projected to be uninsured all or part of the year. All estimates exclude Medicare enrollees.

**Table 3. Rhode Island Population under Age 65 by Source of Coverage, Projected 2010**

	Total	Private Insurance <sup>a</sup>	Medicaid	Uninsured
<b>Number (in thousands)</b>				
Total	889.1	598.6	150.4	140.2
Children aged 0–19	259.3	137.5	84.8	37.0
Below 250% FPL	135.1	34.8	71.7	28.6
250% FPL or more	124.3	102.8	13.1	8.5
Parents aged 20–64	219.4	158.6	47.1	13.7
Below 185% FPL	45.6	11.8	27.2	6.6
185% FPL or more	173.8	146.7	20.0	7.1
Adults aged 20–64, without children	410.4	302.5	18.5	89.4
Below 185% FPL	89.5	24.2	17.6	47.7
185% FPL or more	320.9	278.2	0.9	41.8
<b>Percent</b>				
Total	100.0%	67.3%	16.9%	15.8%
Children aged 0–19	100.0%	53.0%	32.7%	14.3%
Below 250% FPL	100.0%	25.7%	53.1%	21.1%
250% FPL or more	100.0%	82.7%	10.5%	6.8%
Parents aged 20–64	100.0%	72.3%	21.5%	6.3%
Below 185% FPL	100.0%	26.0%	59.5%	14.5%
185% FPL or more	100.0%	84.4%	11.5%	4.1%
Adults aged 20–64, without children	100.0%	73.7%	4.5%	21.8%
Below 185% FPL	100.0%	27.1%	19.6%	53.3%
185% FPL or more	100.0%	86.7%	0.3%	13.0%

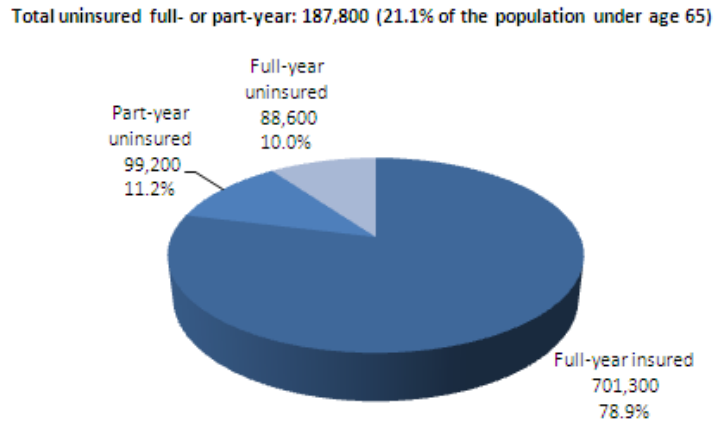
Source: Mathematica Policy Research.

Notes: Estimates reflect projected insurance status in March 2010, and are therefore less than the number of persons projected to be uninsured during all or part of the year. All estimates exclude Medicare enrollees.

<sup>a</sup> Estimates include residents enrolled in RiteShare.

In total, we project that 21 percent of Rhode Islanders under age 65—about 188,000 people—will be uninsured either part-year or all year in 2010 (Figure 2). Of this population, nearly half (88,600) are uninsured all year; 99,200 are uninsured part of the year.

**Figure 2. Total Uninsured in Rhode Island All or Part of the Year, Projected 2010**



Source: Mathematica Policy Research.

The following sections present projections of medical spending for this larger population of uninsured Rhode Islanders, during the months in 2010 when they are uninsured. We present spending estimates separately for those who are uninsured full-year compared with those who are uninsured part-year. However, among those who are uninsured part-year, we find that nearly all of their spending occurs during months when they are insured, not when they are uninsured.

## C. Medical Care Spending For Uninsured Rhode Islanders

### 1. Population-Based Estimates of Medical Spending for the Uninsured

We estimated health services use and expenditures among uninsured Rhode Islanders by adjusting national health services use and expenditure data to the characteristics of the Rhode Island population, projected to 2010. These estimates indicate that the uninsured in Rhode Island spend less on health care than the full-year insured, but out-of-pocket spending represents a substantially greater share of uninsured spending.

**Full- and part-year uninsured Rhode Islanders.** The full-year uninsured are projected to spend approximately \$204 million in 2010, equal to \$2,304 per person. Per capita, the uninsured spend less than half (43 percent) what the full-year insured spend for health care (Table 4). Not surprisingly, they pay a much greater share of expenditures out-of-pocket (30 percent, versus 17 percent among full-year insured), averaging \$688 per person among the uninsured, versus \$907 among the full-year insured.

**Table 4. Medical Spending by Non-Elderly Rhode Islanders: Projected 2010**

	Full-Year Insured		Part-Year Uninsured				Full-Year Uninsured	
	Dollars	Percent	Insured Spending		Uninsured Spending		Dollars	Percent
			Dollars	Percent	Dollars	Percent		
Total spending (\$ millions)	\$3,744.5	100.0%	\$358.3	100.0%	\$41.9	100.0%	\$204.2	100.0%
Out-of-pocket	\$635.8	17.0%	\$64.1	17.9%	\$15.0	35.8%	\$61.0	29.9%
Spending net of out-of-pocket	\$3,108.6	83.0%	\$294.2	82.1%	\$26.9	64.2%	\$143.1	70.1%
Private insurance	\$2,198.1	58.7%	\$115.5	32.2%	\$0.0	0.0%	\$0.0	0.0%
Medicaid	\$754.9	20.2%	\$134.6	37.6%	\$0.0	0.0%	\$0.0	0.0%
Other public <sup>a</sup>	\$112.6	3.0%	\$37.0	10.3%	\$7.2	17.1%	\$38.7	18.9%
Other private <sup>b</sup>	\$43.1	1.1%	\$7.0	2.0%	\$5.3	12.7%	\$47.9	23.5%
Uncompensated care	\$0.0	0.0%	\$0.0	0.0%	\$14.4	34.5%	\$56.6	27.7%
Per capita spending (\$)	\$5,340	100.0%	\$3,611	100.0%	\$422	100.0%	\$2,304	100.0%
Out-of-pocket	\$907	17.0%	\$646	17.9%	\$151	35.8%	\$688	29.9%
Spending net of out-of-pocket	\$4,433	83.0%	\$2,965	82.1%	\$271	64.2%	\$1,616	70.1%
Private insurance	\$3,134	58.7%	\$1,164	32.2%	\$0	0.0%	\$0	0.0%
Medicaid	\$1,076	20.2%	\$1,357	37.6%	\$0	0.0%	\$0	0.0%
Other public <sup>a</sup>	\$161	3.0%	\$373	10.3%	\$72	17.1%	\$436	18.9%
Other private <sup>b</sup>	\$61	1.1%	\$71	2.0%	\$53	12.7%	\$541	23.5%
Uncompensated care	\$0	0.0%	\$0	0.0%	\$146	34.5%	\$638	27.7%

Source: Mathematica Policy Research.

<sup>a</sup> Includes the Veterans Administration and workers compensation, as well as the AIDS Drug Assistance Program or other programs that pay for care, drugs, or medical equipment.

<sup>b</sup> Includes any type of private 3rd-party payer such as automobile insurance, accident, or home owners' insurance; employers; or other private sources other than health insurance.

Rhode Islanders who are uninsured part of the year spend about \$42 million while uninsured, just \$422 per capita. Instead, nearly 90 percent of their spending (\$3,611 per capita) occurs during months when they are insured, a pattern that suggests interruptions in care that for some may contribute to cost while insured. While uninsured, part-year uninsured Rhode Islanders pay nearly 36 percent of their care out of pocket.

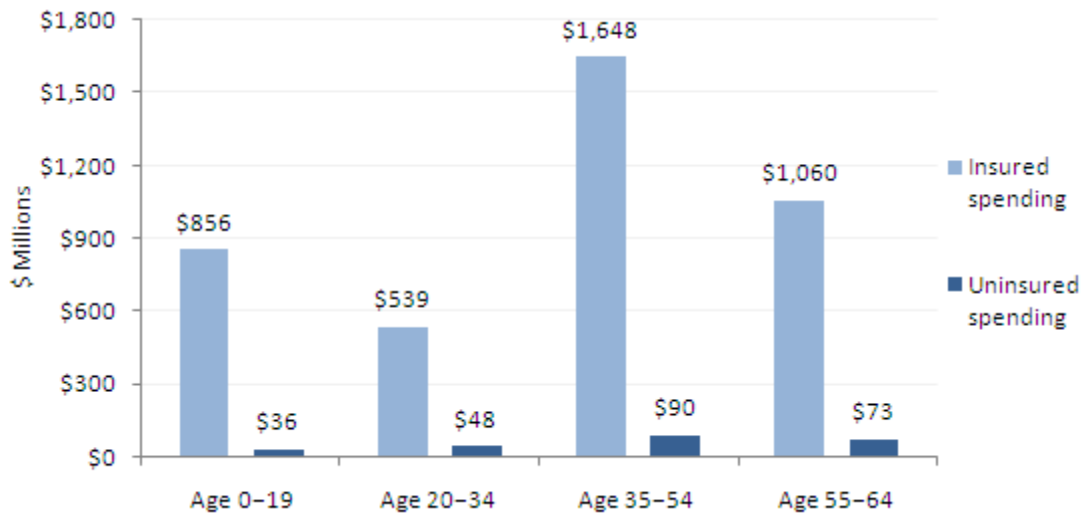
Other public and private sources of direct payment for care finance 32 percent of the cost of care for Rhode Islanders when they are uninsured full-year and 42 percent when they are uninsured part-year. In addition, the uninsured receive care for which providers are not directly compensated. This uncompensated care represents implicit subsidies that finance an estimated 28 percent of care



for full-year uninsured Rhode Islanders and 35 percent of care for part-year uninsured Rhode Islanders.<sup>4</sup>

**Uninsured adults and children.** Adults between the ages of 35 and 54 account for more insured spending (\$1.6 million) and also more uninsured spending (\$90 million) than any other age group (Figure 3). Together with younger adults aged 20-34, uninsured adults account for 85 percent of all uninsured spending in Rhode Island. Per capita, adults in Rhode Island obtain care \$1,548 of care per year when uninsured, either part-year or full-year (Table 5). In contrast, uninsured children obtain less than half this amount, \$690 per child.

**Figure 3. Total Medical Spending While Insured or Uninsured, by Age Group: Projected 2010**



Source: Mathematica Policy Research.

Notes: Total spending among Rhode Islanders when insured is estimated as the sum of total spending among all-year insured Rhode Islanders (\$3.7 billion) and spending while insured among part-year uninsured Rhode Islanders (\$358 million). Similarly, total spending when uninsured is estimated as the sum of total spending among all-year uninsured Rhode Islanders (\$202 million) and spending while uninsured among part-year uninsured Rhode Islanders (\$42 million).

<sup>4</sup> The Medical Expenditure Panel Survey (MEPS) does not report implicit subsidies. Following Hadley et al. (2008), we measure implicit subsidies as the difference between what providers would have received if the uninsured person had been privately insured and what the provider actually received from identifiable sources—including out-of-pocket payments, other private sources, and various public programs. See: Jack Hadley, John Holahan, Teresa Coughlin, and Dawn Miller (August 2008), “Covering the Uninsured in 2008: A Detailed Examination of Current Costs and Sources of Payment, and Incremental Costs of Expanding Coverage.” Washington, DC: Kaiser Commission on Medicaid and the Uninsured.

**Table 5. Sources of Spending for Full- or Part-Year Uninsured Adults and Children in Rhode Island While Uninsured, Projected 2010**

	Total population under age 65		Adults aged 20–64		Children aged 0–19	
	Dollars	Percent	Dollars	Percent	Dollars	Percent
Total spending (\$ millions)	\$246.0	100.0%	\$210.1	100.0%	\$35.9	100.0%
Out of pocket	\$76.0	30.9%	\$64.5	30.7%	\$11.5	32.1%
Spending net of out of pocket	\$170.0	69.1%	\$145.6	69.3%	\$24.4	67.9%
Private insurance	--	--	--	--	--	--
Medicaid	--	--	--	--	--	--
Other public <sup>a</sup>	\$45.8	18.6%	\$44.1	21.0%	\$1.8	4.9%
Other private <sup>b</sup>	\$53.2	21.6%	\$43.8	20.9%	\$9.4	26.1%
Uncompensated care	\$71.0	28.9%	\$57.8	27.5%	\$13.2	36.9%
Per capita spending (\$)	\$1,310	100.0%	\$1,548	100.0%	\$690	100.0%
Out of pocket	\$405	30.9%	\$475	30.7%	\$221	32.1%
Spending net of out of pocket	\$905	69.1%	\$1,073	69.3%	\$469	67.9%
Private insurance	--	--	--	--	--	--
Medicaid	--	--	--	--	--	--
Other public <sup>a</sup>	\$244	18.6%	\$325	21.0%	\$34	4.9%
Other private <sup>b</sup>	\$283	21.6%	\$323	20.9%	\$180	26.1%
Uncompensated care	\$378	28.9%	\$426	27.5%	\$254	36.9%

Source: Mathematica Policy Research.

Notes: Estimates exclude Medicare enrollees. Per capita estimates of insured spending are for all individuals who were insured for at least one month during the year. Per capita estimates of uninsured spending are for all individuals who were uninsured for at least one month during the year.

<sup>a</sup> Includes the Veterans Administration and workers compensation, as well as the AIDS Drug Assistance Program and other programs that pay for care, drugs, or medical equipment.

<sup>b</sup> Includes any type of private 3rd-party payer such as automobile insurance, accident, or home owners' insurance; employers; or other private sources other than health insurance.

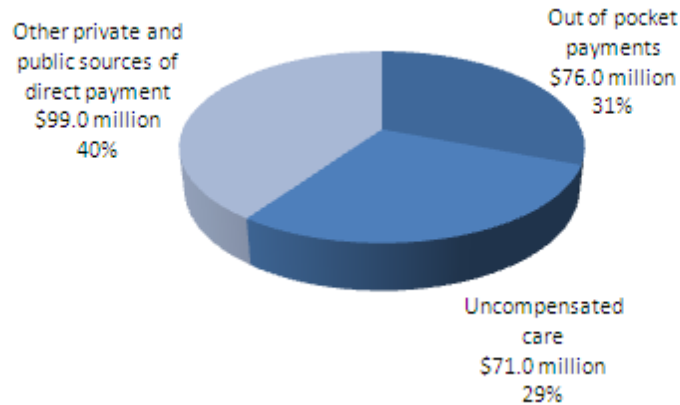
In light of their much greater use of health care overall, it is not surprising that uninsured adults account for greater public and private (noninsurance) medical spending than children, as well as greater uncompensated care. Uninsured adults are projected to obtain about \$78 million in care financed by various public and private sources of direct payment, and another \$58 million in uncompensated care in 2010. In contrast, children obtain just \$11 million in public and private sources of direct payment, and \$13 million in uncompensated care.

**Uncompensated care and other sources of payment.**<sup>5</sup> Uncompensated care and other public and private direct payments for care are important sources of financing for the uninsured. In

<sup>5</sup> Our methods strictly followed those developed by Hadley et al. (2008), which defines “uncompensated care” as all care for the uninsured that is not paid either by comprehensive private insurance or out of pocket. Thus, the definition of uncompensated care adopted by Hadley et al. includes care for which there is a direct payer (e.g., the Veterans Administration, workers compensation, and TriCare among military dependents), as well as care for which no payer is identified. In this report, we adopt the usual definition of uncompensated

Rhode Island, projected spending from these combined sources is \$170 million in 2010, financing 69 percent of the care obtained by uninsured Rhode Islanders (Figure 4). While public and private sources of direct payment account for more than half of this amount (\$99.0 million), uncompensated care accounts for \$71.0 million.

**Figure 4. Out-of-Pocket Spending, Uncompensated Care, and Public and Private Spending for the Uninsured in Rhode Island, Projected 2010**



Source: Mathematica Policy Research.

Notes: Uninsured spending includes spending for full-year uninsured and for part-year uninsured, while uninsured. Other private sources of funds include any type of private 3rd-party payer such as automobile insurance, accident, or home owners' insurance; employers; or other private sources other than health insurance. Other public sources of funds include the Veterans Administration and workers compensation, as well as the AIDS Drug Assistance Program and other programs that pay for care, drugs, or medical equipment.

Payments by various private and public sources finance 40 percent of the care that uninsured Rhode Islanders receive. These payments are much greater for full-year uninsured Rhode Islanders than for those who are uninsured part-year (consistent with their low use of care when uninsured), and eight times greater for uninsured adults (\$88 million) than for uninsured children (\$11 million) (Table 6).

The projected dollar amount of uncompensated care also is much greater for the full-year uninsured than for those who are uninsured just part of the year, and greater for adults than for children. Full-year uninsured Rhode Islanders are projected to receive \$57 million of uncompensated care in 2010, compared with \$14 million for part-year uninsured Rhode Islanders. Uninsured adults are projected to receive \$58 million in uncompensated care, compared with \$13 for uninsured children.

As described in the next section, uncompensated care is financed from an array of public sources such as federal and state disproportionate share (DSH) payments and direct provision of

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*(continued)*

care (that is, care for which no direct payer is identified), distinct from other private and public sources of direct payment.

care. Providers may also finance uncompensated care privately from non-operating revenues or higher charges to insured patients. Other sources of public and private payment are similarly diffuse—including federal and state programs that pay for care, as well as hospitals’ private endowments. Restructuring these sources of payment could finance much of the care that uninsured Rhode Islanders might use if insured.

**Table 6. Who Pays? Sources of Funds for Full- or Part-Year Uninsured Adults and Children in Rhode Island Net of Out-of-Pocket Payments, Projected 2010 Population-Based Estimates**

	All Uninsured		Full-Year Uninsured		Part-Year Uninsured		Full- or Part-Year Uninsured Adults Aged 20-64		Full- or Part-Year Uninsured Children Aged 0-19	
	Dollars	Percent	Dollars	Percent	Dollars	Percent	Dollars	Percent	Dollars	Percent
Total (\$ millions)	\$170.0	100%	\$143.1	100%	\$26.9	100%	\$145.7	100%	\$24.4	100%
Public <sup>a</sup>	\$45.8	27%	\$38.7	27%	\$7.2	27%	\$44.1	30%	\$1.8	7%
Private <sup>b</sup>	\$53.2	31%	\$47.9	33%	\$5.3	20%	\$43.8	30%	\$9.4	39%
Uncompensated care	\$71.0	42%	\$56.6	40%	\$14.4	54%	\$57.8	40%	\$13.2	54%
Per capita (\$)	\$905	100%	\$1,616	100%	\$271	100%	\$1,073	100%	\$468	100%
Public <sup>a</sup>	\$244	27%	\$436	27%	\$72	27%	\$325	30%	\$34	7%
Private <sup>b</sup>	\$283	31%	\$541	33%	\$53	20%	\$323	30%	\$180	39%
Uncompensated care	\$378	42%	\$638	40%	\$146	54%	\$426	40%	\$254	54%

Source: Mathematica Policy Research.

Note: Estimates exclude Medicare enrollees.

<sup>a</sup> Includes the Veterans Administration and workers compensation, as well as the AIDS Drug Assistance Program and other programs that pay for care, drugs, or medical equipment.

<sup>b</sup> Includes any type of private 3rd-party payer such as automobile insurance, accident, or home owners’ insurance; employers; or other private sources other than health insurance.

## 2. Sources of Funds: Administrative Estimates of Medical Spending for the Uninsured

To corroborate the population-based estimates of uninsured spending presented above and to identify the various sources of implicit subsidies in Rhode Island, we conducted a separate analysis of administrative data on medical spending for uninsured Rhode Island. These data were gathered from hospitals, physicians, and government sources (Table 7). Estimated from administrative data and projected to 2010, uncompensated care in 2010 (\$180 million) is very similar to our estimate produced on a population basis (\$170 million). In the following sections, we describe the amount and sources of financing for care provided to uninsured Rhode Islanders by major type of provider.

### Hospitals

Since 2007, Rhode Island has required hospitals (as a condition of licensure) to provide charity care to uninsured individuals below 200 percent of the poverty line, and to charge sliding scale discounted amounts to individuals between 200 and 300 percent of poverty. In part as a consequence of this requirement, hospitals provide 65 percent of the uncompensated care in Rhode

Island associated with uninsured patients—an estimated \$117.5 million in 2010. This amount includes \$62.0 million in charity care and \$55.5 million in bad debt (data not shown).<sup>6</sup>

**Table 7. Who Pays? Sources of Funds for Uninsured Rhode Islanders' Care Net of Out-of-Pocket Payments by Type of Provider, Projected 2010 Administrative Estimates**

	Total		Federal Sources		State/Local Sources		Private Sources	
	\$millions	Percent	\$millions	Percent	\$millions	Percent	\$millions	Percent
Total	\$180.0	100.0%	\$100.6	100.0%	\$19.5	100.0%	\$60.0	100.0%
Hospitals	\$117.5	65.3%	48.7	48.4%	\$11.1	56.9%	\$57.7	96.2%
Net Medicaid DSH	\$23.4	13.0%	12.3	12.2%	\$11.1	56.9%	--	--
Medicare DSH	\$17.1	9.5%	17.1	17.0%	--	--	--	--
Medicare IME	\$19.3	10.7%	19.3	19.2%	--	--	--	--
Hospital endowments for charity care	\$3.3	1.8%	--	--	--	--	\$3.3	5.5%
Profits and other private sources	\$54.5	30.3%	--	--	--	--	\$54.5	90.8%
Private physicians	\$1.4	0.8%	--	--	--	--	\$1.4	2.3%
Rhode Island Free Clinic	\$1.4	0.8%	--	--	--	--	\$1.4	2.3%
Direct care	\$61.1	33.9%	\$51.9	51.6%	\$8.4	43.1%	\$0.9	1.5%
Veterans Administration	\$45.4	25.2%	\$45.4	45.1%	--	--	--	--
Community Health Centers	\$7.2	4.0%	\$3.8	3.8%	\$3.0	15.4%	\$0.4	0.7%
Ryan White Care Act	\$3.4	1.9%	\$1.6	1.6%	\$1.3	6.7%	\$0.5	0.8%
Indian Health Service	\$1.0	0.6%	\$1.0	1.0%	--	--	--	--
Maternal and Child Health Bureau	\$0.1	0.1%	\$0.0	0.0%	\$0.1	0.5%	--	--
Other state programs	\$3.9	2.2%	--	--	\$3.9	20.0%	--	--

Source: Mathematica Policy Research analysis of administrative data. All financing is projected to 2010 levels.

Notes: All sources of funding are adjusted to represent only the amount available for uncompensated care for the uninsured net of other designated uses of funds. For example, the amount of net DSH funds available to serve the uninsured is calculated as total DSH payments minus (a) hospital licensing fees and (b) estimated Medicaid underpayments. Estimated Medicaid underpayments are calculated in the same manner as in: Rhode Island Department of Health, RI Uncompensated Hospital Care (2007) [<http://www.health.ri.gov/publications/financialreports/UncompensatedHospitalCare.pdf>, accessed 3/3/2010].

The financing for hospital uncompensated care comes from public and private funds in roughly equal parts. Recognizing that hospitals are typically the largest provider of uncompensated care, those that serve many low-income patients are eligible for public payments to help offset the costs of uncompensated care. (Physicians and most other health care providers generally do not qualify for these payments.) In 2010, public-sector funds are expected to finance more than half of hospitals' uncompensated care (\$59.8 million). Private funds—including hospital charity

<sup>6</sup> To estimate the amount of uncompensated care provided by hospitals, we projected forward the cost of charity care and non-Medicare bad debt reported by each hospital in the 2007 Rhode Island Uncompensated Hospital Care Report (UHCR). Bad debt excludes the portion attributed to Medicare beneficiaries. Bad debt was projected forward using the growth rate of non-Medicare bad debt between 2005 and 2007. The amount of reported charity care increased rapidly between 2005 and 2007, due in part to the regulation change in 2007 mandating charity care for low-income individuals. Since this rapid growth is unlikely to continue in future years, the amount of charity care provided in 2007 was projected forward to 2010 using the growth rate for overall bad debt.

endowments, hospital operating and non-operating revenues, and other private sources—finance the remaining 49 percent (\$57.7 million).

**Public financing.** The Medicaid disproportionate share hospital (DSH) program allows states to direct Medicaid payments not tied to specific services to hospitals that serve a large number of low-income individuals. While a portion of these funds is intended to cover shortfalls between actual costs of treating Medicaid beneficiaries and the amount that Medicaid pays, the balance is intended to help cover the costs of uncompensated care for the uninsured.<sup>7</sup> In 2010, this program is projected to finance 20 percent (\$23.4 million) of the cost of hospital uncompensated care in Rhode Island. Like all Medicaid spending, the state and by the federal government jointly finance the DSH program. In Rhode Island, the federal government covers about 53 percent of Medicaid DSH payments.

Medicare also provides public funding for uncompensated hospital care through its DSH and Indirect Medical Education (IME) programs. The DSH program increases standard Medicare payments to hospitals that serve many low-income individuals, while the IME program increases standard Medicare payments to teaching hospitals.<sup>8</sup> The federal government fully funds both programs.

**Private financing.** Our estimates of private financing assume that all interest and dividends on hospital charity care endowments are fully available to finance uncompensated care for the uninsured. In 2010, this funding stream is projected to be \$3.3 million.<sup>9</sup> Hospitals finance the remaining gap between the total cost of uncompensated care and all other sources of public and private financing through revenue margins on privately insured patients or other unidentified sources of revenue. This gap is projected to be \$54.5 million in 2010, equal to 46 percent of the total cost of uncompensated hospital care.

### **Direct Care Programs**

Programs that provide medical care directly to uninsured Rhode Islanders are a large source of financing for uncompensated care also, second only to hospitals. Many of these programs are targeted to specific populations, not all uninsured individuals. Nevertheless, they are projected to provide \$61.1 million in uncompensated care in 2010. The federal government provides about 85 percent of the funds for these direct care programs (\$51.9 million in 2010), while state and local

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<sup>7</sup> Not all Medicaid DSH funding is available to cover the costs of uncompensated care. Following the methodology used by the 2007 RI UHCR, the amount of DSH funds available to each hospital after subtracting hospital licensing fees was proportionally allocated to bad debt, charity care, and Medicaid shortfalls. Only the portion of net DSH funds allocated to bad debt and charity care are assumed to be available to cover the cost of uncompensated care. The 2007 level of net DSH funding was projected forward to 2010 using the CPI-U, which is the method used by the Centers for Medicare & Medicaid Services to increase yearly DSH allotments.

<sup>8</sup> Following a similar analysis (Hadley et al. 2008), we assume that half of Medicare DSH funding and one-third of IME are available to hospitals to cover uncompensated care for the uninsured.

<sup>9</sup> To produce this estimate, we projected the interest and dividends on charity care endowments reported by each hospital in the 2007 RI UHCR forward to 2010, based on their respective average annual growth rates between 2005 and 2007.

governments provide 14 percent (\$8.4 million) and private sources provide about 1 percent (less than \$1.0 million).

**Veterans Administration.** The acute inpatient and outpatient medical care provided in VA hospitals is the largest direct-care program for the uninsured in Rhode Island. VA hospitals are projected to spend \$45.4 million treating uninsured Rhode Island residents in 2010, all paid by the federal government.<sup>10</sup>

**Community health centers.** Community health centers (CHCs) are one of the few direct care programs that offer care to all low-income and uninsured individuals. In 2010, CHCs are projected to spend \$7.2 million on uncompensated medical care for the uninsured.<sup>11</sup> Federal, state, and local governments as well as private grants fund these services.

**Ryan White CARE Act funding.** The Ryan White CARE Act provides financial assistance for medical care and prescription medications for individuals living with HIV/AIDS. Ryan White funds are projected to finance \$3.4 million in uncompensated care for uninsured Rhode Islanders in 2010. The AIDS Drug Assistance Program (ADAP) provides nearly all of that funding (\$3.3 million); about \$70,000 is dedicated to providing non-ADAP core medical services.<sup>12</sup> The federal and state governments, and private sources (primarily drug rebates from pharmaceutical manufacturers) fund both ADAP and non-ADAP services.

**Indian Health Service.** The IHS, which provides health services to members of federally-recognized American Indian and Alaskan Native tribes, is projected to spend \$1.0 million on health care services for uninsured Rhode Islanders in 2010.<sup>13</sup> The federal government funds all IHS services.

**Maternal and Child Health Bureau.** The MCHB provides block grants to states that are used to provide health and other supportive services to pregnant women, mothers, infants, and children. In 2010, the MCHB is projected to spend \$112,000 on medical care for the uninsured. The state and federal governments fund MCHB services about equally.<sup>14</sup>

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<sup>10</sup> The estimate of VA spending is based on Rhode Island's share of the FY 2010 budget for VA medical services, multiplied by the percentage of VA users who were uninsured in 2004 (42 percent).

<sup>11</sup> The estimate of CHC spending is based on the 2007 reported medical costs for the seven CHCs in Rhode Island, multiplied by the percentage of users who were uninsured (20.6 percent) and less their out-of-pocket payments, inflated to 2010. The proportion of total costs covered by federal, state, and private sources is assumed to be unchanged from 2007.

<sup>12</sup> The estimates of spending on ADAP and non-ADAP programs is based on total 2007 federal and state funding for each, multiplied by the percentage of each programs' population that is uninsured in Rhode Island (72 and 15 percent, respectively), inflated up to 2010. The proportion of total costs covered by federal, state, and private sources is assumed to be unchanged from 2007.

<sup>13</sup> The estimate of spending was created by calculating a per-user cost for health services based on the FY 2010 budget for IHS direct medical services, less the expected collections from Medicare and Medicaid, and applying it to the fewer than 700 users of IHS services in Rhode Island.

<sup>14</sup> The estimate of spending is based on 2007 HRSA grantee information for Rhode Island, inflated to 2010.

**Other state programs.** The General Public Assistance (GPA) program finances some of the cost of primary care and medications for low-income uninsured Rhode Islanders between the ages of 19 and 64 who are otherwise ineligible for Medicaid or other state programs. This program is projected to spend \$3.9 million in 2010, all of which the state funds.

## **Physicians**

In 2010, physicians are projected to provide \$1.4 million worth of uncompensated care to the uninsured through the Rhode Island Free Clinic. Most physicians provide some amount of charity care to the uninsured.<sup>15</sup> However, the aggregate net cost of this care is probably low, as uninsured individuals generally pay higher prices than insured individuals for comparable services.<sup>16</sup> Consequently, we would expect no net revenue gain to physicians if the uninsured were fully covered.

## **D. The Additional Cost of Covering the Uninsured**

When uninsured individuals gain coverage, their medical expenses typically rise as they attend to medical needs that were left undiagnosed and/or untreated when they were uninsured. That is, they would be less likely to delay care and more likely to find a usual source of care. In addition, care would be more affordable to them: the amount they would be required pay out of pocket would fall to levels consistent with the currently insured population. In this section, we report the estimated net cost of insuring currently-uninsured Rhode Islanders for the entire year, based on an econometric analysis of insured adults and children in Rhode Island with personal and family characteristics that are otherwise comparable to those of the uninsured.<sup>17</sup>

We estimate that providing full coverage to all Rhode Islanders would generate an additional \$138 million in health care spending among those who are currently uninsured. This is 23-percent more than the \$604 million that will be spent on care for the uninsured in 2010 (Table 8). On a per capita basis, spending for care for the average uninsured person in Rhode Island would increase

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<sup>15</sup> The value of charity care provided by physicians in Rhode Island is substantial. Projecting current trends in the provision of charity care forward to 2010, we estimate that 60.8 percent of physicians will provide charity care in 2010, and those that do provide an average of 10.6 hours per month. Valuing this charity care at the average wage for family and general practitioners in the state, the cost of charity care in 2010 may be as large as \$27.9 million.

<sup>16</sup> For example, one recent study found that the net cost to physicians of treating the uninsured is close to zero. See: Jonathan Gruber and David Rodriguez (2007), "How much uncompensated care do doctors provide?" *Journal of Health Economics* 26: 1151-1169.

<sup>17</sup> Following Hadley et al. (2008), we estimated econometric models that predict an individual's level of health care spending as determined by individual characteristics such as family income, employment status, age, gender, health status, and, most importantly, the percent of the year that the individual has insurance coverage. We then used the models to estimate each uninsured's medical spending under the assumption that the individual became fully insured. The difference between this "full-coverage estimate" and the uninsured person's actual spending is the incremental cost of coverage.



\$735, including an increase of \$1,122 per full-year uninsured resident and \$388 per the part-year uninsured resident.<sup>18</sup>

**Table 8. Estimated Additional Cost of Insuring Uninsured Rhode Islanders, Projected 2010**

	Projected spending for the uninsured	Projected spending if full-year insured	Change in spending	
			Dollars	Percent
<b>Total spending (in millions)</b>				
All uninsured under age 65	\$604.3	\$742.3	\$138.0	23%
Full-year uninsured	\$204.2	\$303.6	\$99.5	49%
Part-year uninsured	\$400.1	\$438.7	\$38.5	10%
Adults aged 20–64	\$513.2	\$603.9	\$90.7	18%
Full-year uninsured	\$175.0	\$248.2	\$73.1	42%
Part-year uninsured	\$338.1	\$355.7	\$17.6	5%
Children aged 0–19	\$91.1	\$138.4	\$47.2	52%
Full-year uninsured	\$29.1	\$55.4	\$26.3	90%
Part-year uninsured	\$62.0	\$82.9	\$20.9	34%
<b>Per capita spending (in dollars)</b>				
All uninsured under age 65	\$3,217	\$3,952	\$735	23%
Full-year uninsured	\$2,304	\$3,426	\$1,122	49%
Part-year uninsured	\$4,033	\$4,421	\$388	10%
Adults aged 20–64	\$3,780	\$4,449	\$668	18%
Full-year uninsured	\$2,591	\$3,674	\$1,083	42%
Part-year uninsured	\$4,958	\$5,216	\$258	5%
Children aged 0–19	\$1,750	\$2,657	\$907	52%
Full-year uninsured	\$1,383	\$2,633	\$1,250	90%
Part-year uninsured	\$1,999	\$2,673	\$674	34%

Source: Mathematica Policy Research.

Note: Estimates include full- and part-year uninsured adults and children.

Adults who are full-year uninsured would spend substantially less per capita (\$3,426) when insured than adults who are now full-year insured spend (\$5,340, Table 3). In general, this reflects the younger average age of adults who are uninsured all year and their better health status, as well as their lower incomes and response to cost sharing when insured. Adults who are currently part-year uninsured would spend approximately as much (\$5,216) as full-year insured adults do currently.

Most children require relatively little medical care and, therefore, are in general less expensive to insure than adults. However, we project a percentage increase in spending for children who are currently uninsured that is substantially larger than the increase in spending for currently uninsured adults. Spending on the typical uninsured child would rise by approximately 50 percent (from \$1,750

<sup>18</sup> Using national data, Hadley et al. (2008) estimate a substantially larger increase in spending among adults nationally than we estimate among adults in Rhode Island. The Rhode Island estimate is smaller for two reasons. First, this analysis does not include expenditures by the uninsured elderly, which would have resulted in much higher spending when fully insured. Second, because of Rhode Island’s generous safety net—for example, mandating that hospitals provide charity care to low-income patients—service utilization and expenditures in Rhode Island are likely higher than the national average.

to \$2,657), compared with an 18-percent increase (from \$3,780 to \$4,449) for uninsured adults. The steeper increase in spending for care among uninsured children in part reflects a small number of children who are likely to require expensive care but may not receive that care when uninsured.

## E. Discussion and Implications for Policy

While Rhode Islanders who are currently uninsured would spend more for care if insured, the additional cost they would incur is relatively small, just 23 percent. That is (recalculated as current spending per projected spending), at least 81 percent of the cost of their care is already embedded in the system in the form of high out-of-pocket spending (\$140 million), private insurance (\$116 million), other public and private direct payments for care (\$143 million), and uncompensated care (\$71 million) (Table 9). In turn, uncompensated care is funded from various public sources and private sources, potentially including higher charges for care obtained by insured Rhode Islanders.

**Table 9. Current Spending for Full- or Part-Year Uninsured Rhode Islanders by Source of Funds, and as a Percent of Projected Spending if Full-Year Insured, Projected 2010**

	Current Spending (in millions)	Current Spending as a Percent of Projected Spending if Full-Year Insured
Total	\$604.3	81%
Out-of-pocket payments	\$140.1	19%
Private insurance (part-year insured)	\$115.5	16%
Medicaid (part-year insured)	\$134.6	18%
Other public and private direct payments	\$143.1	19%
Uncompensated care	\$71.0	10%

Source: Mathematica Policy Research.

Note: Estimates include full- and part-year uninsured adults and children.

While the net cost of covering the uninsured is perhaps surprisingly small, the prospect of reconfiguring the public and private funding streams that currently pay for their care is a significant challenge. Net of out of pocket spending, about half of the cost of care for Rhode Islanders when uninsured (56 percent) is federally financed via Medicaid DSH payments and Medicare DSH and IME (both directed to hospitals), and other programs and direct care. Another 33 percent of this care (and fully half of the care provided by hospitals) is paid from private sources. Just 11 percent are state and local funds in Rhode Island.

The precedent set in Massachusetts, which reconfigured substantial federal and state funds to subsidize coverage for the low-income uninsured, may offer some guidance to Rhode Island. However, Rhode Island’s task may be different from that which Massachusetts faced—especially with respect to the potential for retaining the significant private spending that now supports care for uninsured Rhode Islanders.

## APPENDIX: PROJECTION METHODS

Mathematica’s estimates of Rhode Island’s uninsured population in 2010 are based on the Northeast regional sample of a national household survey, the Household Component of the Medical Expenditure Panel Survey (MEPS-HC). This sample was reweighted to reflect the demographic, employment, industry, and family income characteristics of Rhode Island’s population projected to *(calendar year) 2010, as described below*.

**Demographic characteristics.** The population was projected (by gender and 5-year age categories) using Census estimates for Rhode Island, adjusted to produce estimates of the non-military, non-institutionalized population.<sup>19</sup> The race/ethnicity distribution of Rhode Island’s population was extrapolated from 2005-2007 trends reported in the American Community Survey (ACS).

**Unemployment.** Unemployment and employment totals were projected using data from the Rhode Island Department of Labor and Training on labor force size and the unemployment rate in March 2008 and March 2009. The projections assume that: (1) the unemployment rate will rise to 12.0 percent in 2010 (Moody 2009), and (2) that the labor force will change in the same proportion to a change in unemployment rate as was observed from 2009 through 2010.<sup>20</sup>

**Employment by industry.** The distribution of employment by industry was projected based on 2006 data and 2016 projections from the Rhode Island Department of Labor and Training. Projections of the proportion of workers working in each industry in 2010 were calculated assuming a constant annual rate of employment growth in each industry from 2006 to 2016.

**Family income.** The distribution of income was projected based on analysis of ten years of data (1999–2008) reported by Rhode Island households in the Current Population Survey (CPS). An ordered Probit model for adults aged 20 to 64 was estimated to predict family income relative to the poverty level as a function of employment status (employed or not), a time trend, and the time trend squared. We estimated a separate model for children (under 20 years old), attributing their parent’s income and employment status to children living with a parent.

**Health insurance coverage.** Health insurance coverage for adults aged 20 to 64 was also projected using CPS data. A multinomial Logit model was estimated to predict person-level health insurance coverage status (private, Medicaid, or uninsured) as a function of industry of employment or unemployed status (with not-in-labor-force status as an omitted category), income category, gender, and a time trend. Insurance coverage for children (under age 20) was estimated separately using the same specification but with an added covariate indicating the absence of any parent.

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<sup>19</sup> Persons over age 85 were projected as a single category.

<sup>20</sup> This assumption accounts for “discouraged workers” leaving the labor force with unemployment growth. From March 2008 to March 2009, the unemployment rate in Rhode Island increased by 54.4 percent, to 10.5 percent of the labor force. Over the same period, the number of workers (employed or unemployed) in the labor force declined 0.8 percent.

Detailed estimates of the projected uninsured population in Rhode Island in 2010, projected as described above, are presented in Table A.1.

**Table A.1. Number and Percent of Uninsured Rhode Islanders by Selected Economic and Demographic Characteristics: Projected March 2010**

	Number uninsured	Percent uninsured
<b>Total uninsured, aged 0-64</b>	140,200	15.8%
Family income as a percent of poverty		
Less than 100 percent FPL	47,800	41.3%
100-199 percent FPL	35,100	26.8%
200-399 percent FPL	28,700	10.8%
400 percent FPL or more	28,800	7.7%
Age		
0-19	37,000	14.6%
20-64	103,200	16.3%
Employment status, aged 20-64		
Employed	49,600	11.1%
Unemployed	22,000	40.2%
Not Employed	31,800	24.7%
Industry of employment, aged 20-64		
Natural Resources	200	32.8%
Mining	-	-
Construction	3,600	15.9%
Manufacturing	2,900	5.9%
Wholesale and Retail	8,200	13.6%
Transportation/Utilities	1,000	8.3%
Information	500	4.0%
Financial	2,400	7.3%
Professional and Business	4,100	13.4%
Education, Health, Social	8,900	7.4%
Leisure/Hospitality	8,700	24.6%
Other Services	8,000	18.3%
Public Administration	1,200	3.6%
Unknown	500	18.1%

Source: Mathematica Policy Research.

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