

medicaid
and the uninsured

**Covering the Uninsured in 2008:
A Detailed Examination of Current Costs
and Sources of Payment, and Incremental
Costs of Expanding Coverage**

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**Prepared for the Kaiser Commission
on Medicaid and the Uninsured,
Henry J. Kaiser Family Foundation**

August 2008

kaiser commission medicaid and the uninsured

The Kaiser Commission on Medicaid and the Uninsured provides information and analysis on health care coverage and access for the low-income population, with a special focus on Medicaid's role and coverage of the uninsured. Begun in 1991 and based in the Kaiser Family Foundation's Washington, DC office, the Commission is the largest operating program of the Foundation. The Commission's work is conducted by Foundation staff under the guidance of a bipartisan group of national leaders and experts in health care and public policy.

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I. Introduction

Expanding insurance coverage to the approximately 47 million uninsured Americans will be a major issue in the 2008 presidential campaign. Many questions will be asked about candidates' proposals. For example, how many of the uninsured will be covered? Will people be able to choose among different insurance plans? Will coverage be optional or mandatory? What roles will private insurance and government programs play? Perhaps paramount, how much will it cost and who will pay? How much money that is currently being spent on the uninsured could be reallocated to help pay for new coverage?

A recent newspaper column stated, without citation or reference, that it will cost more than \$100 billion annually to cover the 47 million uninsured (K. Freking, "Healthcare: It's Hard to Figure Out Voters," MiamiHerald.com, Dec. 11, 2007). Competing proposals will undoubtedly produce their own cost estimates, and will also undoubtedly produce considerable confusion because of differences in how they define costs, as well as differences in their structure and scope. In sorting through competing cost estimates, it is particularly important to distinguish between plans' incremental resource costs, their transfer costs, and their sources of financing or payment.

This study focuses on estimating the amount that is currently spent on the uninsured, defined as people lacking coverage for either the full year or any part of the year. This report provides a more detailed discussion of the data, methods

and findings presented in “Covering the Uninsured in 2008: Current Costs, Sources of Payment, and Incremental Costs,” *Health Affairs*, August 25, 2008.¹

We use household survey data to estimate how much the uninsured spend themselves as well as the amount of uncompensated care they receive. We validate the estimate of the amount of uncompensated care by comparing it to an independent estimate of uncompensated care derived from medical provider and government sources. We also use the provider and government information to illuminate the sources of funding that underwrite the cost of uncompensated care. This information is useful for identifying potential funding streams that might be redirected to help pay for care received by the newly insured under a health reform plan. As part of this analysis, we also address the extent of cost shifting, charging more to the privately insured in order to cover the cost of care delivered to the uninsured, as a source of financing for uncompensated care.

After estimating the current cost of care received by the uninsured, we derive statistical models to estimate the incremental resource costs of covering the entire uninsured population. The central question we pose in this study is, compared to their current medical care use, how much more care will the uninsured receive if they obtain coverage? Increased medical care use resulting from expanded coverage will draw more resources into the health care sector. This represents the true incremental resource cost to society of expanding coverage. Incremental resource cost is a key component of any cost-

¹ J. Hadley, J. Holahan, T. Coughlin, and D. Miller “Covering the Uninsured in 2008: Current Costs, Sources of Payment, and Incremental Costs, *Health Affairs* Web Exclusive, Aug. 25, 2008, available online at <http://content.healthaffairs.org/cgi/content/abstract/hlthaff.27.5.w399>.

effectiveness calculation that might be made to assess whether the improved health outcomes that would accrue from expanded coverage are worth the cost.²

Incremental resource cost must be distinguished from “transfer” costs, defined as costs absorbed by a health reform proposal when people switch from their current insurance coverage to the new plan (sometimes referred to as “crowd out”). Transfer costs represent added expenditures that might be borne by government (and/or by employers and/or individuals if a plan imposes private mandates), but they are presumably offset by lower spending for private insurance and do not necessarily increase the resource costs associated with expanded insurance coverage.

Two Approaches to Estimating Costs. As in our previous reports on the costs and financing of care currently received by the uninsured, we use two distinct and independent methodologies to develop our estimates.³ Because any methodology requires making numerous assumptions, using two independent methods offers a way of cross-checking the estimates generated by each approach. The two approaches also provide different information about medical care for the uninsured, with one focusing on the people who actually receive the

² See, for example, W. Miller, E. Vigdor and W. Manning, “Covering the Uninsured: What Is It Worth?” *Health Affairs* 23 (2004): w157-w167 (published online March 31, 2004; 10.1377/hlthaff.w4.157).

³ J. Hadley and J. Holahan, “How Much Medical Care Do the Uninsured Use and Who Pays for It?” *Health Affairs* Web Exclusive, February 12, 2003; J. Hadley and J. Holahan, “Covering the Uninsured: How Much Would It Cost?” *Health Affairs* Web Exclusive, June 4, 2003; J. Hadley and J. Holahan, “The Cost of Care for the Uninsured: What Do We Spend, Who Pays, and What Would Full Coverage Add to Medical Spending,” Kaiser Family Foundation, Washington DC: May 10, 2004 (<http://www.kff.org/uninsured/7084.cfm>).

care and the other on the providers and their funding sources that deliver and finance that care.

The first approach uses household survey data collected by the 2002-2004 Medical Expenditure Panel Surveys (MEPS). MEPS is a nationally representative, ongoing household survey that uses a rotating panel design to collect detailed information on people's insurance coverage and medical care use and spending over a two year period. MEPS measures insurance coverage on a monthly basis for each individual in the household and records the specific dates when those individuals received medical care. This allows us to identify precisely the amount of care received by people when they were uninsured. MEPS also surveys medical providers to verify service use and collect information on medical charges and payments received from various insurance and non-insurance sources. The MEPS data are also the source for estimating the statistical models of medical spending that we use to simulate how much more care the uninsured would receive if they were covered by insurance.

The second approach develops estimates based on budgetary information from government sources and health care providers (hospitals, clinics, and office-based physicians). Estimates of hospitals' amounts of uncompensated care come from data collected by the 2007 American Hospital Association (AHA) Annual Survey of Hospitals. We use budget and program data from multiple government sources to obtain cost estimates for the amount of care provided to the uninsured by the Veterans Health Administration, the Indian Health Service, community health centers, Maternal and Child Health clinics, the Ryan White

CARE program, the National Health Service Corps, and the Centers for Medicare and Medicaid Service (for aggregate data on state and local government medical care spending by public assistance programs). Finally, we estimate the value of charity care provided by office-based physicians.

II. Estimates from Household Survey (MEPS) Data

A. Methods

1. MEPS Design and Structure

The MEPS is a nationally representative household survey of the civilian, non-institutionalized population.⁴ First fielded in 1996, it uses a rotating panel design that conducts five in-person interviews over a two-and-a-half year period. Over 102,000 people were interviewed in the 2002-2004 annual surveys, which were pooled in order to increase the number of observations of uninsured people. The MEPS collects information on insurance coverage by month and medical care use by date of service, and also obtains information on out-of-pocket spending for each medical service used. It then conducts follow-up medical provider surveys for all inpatient hospital stays, all home health agency care, and samples of other medical care providers. The medical provider surveys collect data on the amounts charged for the care, and the amounts paid by various types of insurance and other non-insurance sources of payment, both public and private.

⁴ See <http://www.meps.ahrq.gov/mepsweb/> for detailed information on the design and structure of the MEPS.

2. *Adjusting the MEPS Data*

We make several adjustments to the MEPS data in order to make projections for 2008 and to calibrate the spending estimates to the National Health Expenditure Accounts (NHEA). The Statistical Appendix describes these adjustments in detail. Briefly, we used NHEA projections of personal health care spending per capita to calculate inflation factors for expressing the 2002-2004 spending data in 2008 dollars. We used data from the 2004 and 2006 Current Population Surveys to project rates of growth in the numbers of insured and uninsured people by age group (children, non-elderly adults, and elderly adults).

The MEPS spending data were adjusted on a payer-specific basis in order to calibrate to the NHEA, which is the accepted standard for measuring national health expenditures. However, it differs in significant ways from the MEPS because of differences in populations covered, design, and basic methodology. These adjustments were based on information provided by Sing et al.⁵, who conducted a detailed reconciliation of the differences between the MEPS and the NHEA, which reduced the initial difference between the two surveys' estimates of total health spending from more than 60% to just over 13%.⁶

One of the key differences between the MEPS and the NHEA is that the MEPS does not measure indirect payments to providers, whether from public or private sources, that may subsidize the cost of care provided to uninsured

⁵ M. Sing et al., "Reconciling Medical Expenditure Estimates from the MEPS and NHEA, 2002," *Health Care Financing Review* 28 (1): pp. 25-40, Fall 2006.

⁶ Using payer-specific adjustment factors to calibrate the MEPS to the NHEA differs from the approach used in our prior analyses, which applied a single adjustment factor of 1.25 to all MEPS spending data. As will be noted below, this change in methodology does affect the estimates of uncompensated and implicitly subsidized care. However, we believe that the payer-specific approach is more accurate.

people. This care, which we refer to as “implicitly subsidized care,” represents care that is received by the uninsured but not paid for by an identifiable source of payment directly linked to the individual patient. Care that is implicitly subsidized by, for example, Medicare and Medicaid disproportionate share (DSH) payments, tax appropriations, public and private grant programs, and providers’ profits from care to privately insured patients, falls into this category. As described in detail in the Statistical Appendix, calculating the amount of implicitly subsidized care requires separating care received by people who are uninsured for part of the year into insured and uninsured amounts of care, estimating the payments that providers would expect to receive on average for uninsured care if the person was covered by private insurance, and then comparing the expected payments to actual payments from uninsured people from private sources (out-of-pocket, other private sources, and other unidentified sources).⁷

3. Statistical Models for Estimating the Uninsured’s Incremental Medical Care Received

After adjusting the MEPS data and adding the amount of implicitly subsidized care to the care directly observed and measured by MEPS, we specify and estimate two-part models of total and out-of-pocket medical care spending for children and adults. The two-part models consist of a logistic regression model for whether the person has any medical spending and a conditional model of the amount of medical spending for people who received

⁷ Payments from government sources such as the VHA, workers compensation, and identifiable government programs that make payments for individual patients are excluded from these calculations.

any care.⁸ We also estimate models of out-of-pocket spending in order to analyze how expanding insurance coverage might affect the uninsured's out-of-pocket spending.

The samples for these models consist of all people who were uninsured for any portion of the year plus low- and lower-middle-income people with incomes less than 400% of the federal poverty level who were covered by insurance for the full year. The insured sample is restricted in this way because their behavior is more likely to reflect how uninsured people would use medical care if they were insured. Medical care use by higher-income people presumably reflects the effects of their higher incomes as well as the effects of insurance coverage.

The key independent variable in these models measures the percentage of the year the person is insured. As a methodological improvement over our prior estimates, we allow the effect of insurance coverage to vary with a person's self-reported general health status. Its coefficients indicate how the probability of using any care and the amount of care received increase as a person's insurance status varies from being uninsured all year (value = 0) to being fully insured (value = 1). Since we do not measure the specific type of insurance a person has, this variable essentially captures the average experience of people with different types of coverage (Medicaid, employer sponsored, or self-purchased; HMOs or PPOs; high or low deductibles and cost sharing; broad or

⁸ The conditional model is estimated by a gamma function with a log-link. (W. Manning and J. Mullahy, "Estimating Log Models: To Transform or Not to Transform?" *Journal of Health Economics* 20 (4): pp. 461-494, 2001; M. Buntin and A. Zaslavsky, "Too Much Ado about Two-Part Models and Transformation?" *Journal of Health Economics* 23 (3): pp. 525-542, May 2004.

narrow benefit packages). In effect, our simulations assume that the coverage offered to uninsured people would be broadly similar to the range of coverage currently held by low- and lower-middle-income people.

Other independent variables control for differences in medical care use associated with demographic characteristics (age, gender, and race/ethnicity); socio-economic characteristics (education, marital status, family income relative to the federal poverty level, metropolitan residence, and census region); and self-reported health characteristics (general health status, measures of various types of limitations, indicators of specific health conditions, and an indicator of whether the person died or was institutionalized during the year).

B. Results from the MEPS Analysis

1. How Much Medical Care Do the Uninsured Receive?

Tables 1a-1c show the per capita estimates of medical spending by age for all non-elderly people (1a), children (1b), and non-elderly adults (1c), by insurance status and source of payment projected to 2008 from the 2002-2004 MEPS.⁹ Non-elderly people with full-year insurance coverage are divided into groups based on the type of coverage they have: private-only (employer sponsored and self-purchased), Medicaid-only, and any combination of private, Medicare, and Medicaid coverage. Spending for people who are not insured for an entire year is divided into insured and uninsured portions. Uninsured

⁹ Appendix tables show similar breakdowns for the elderly and for the entire population, including the elderly. However, since only about 1% of the elderly are uninsured, the estimates of spending by the uninsured for the entire population differ only slightly from those for the non-elderly population. Elderly uninsured are included in subsequent tables with non-elderly adults.

spending for the part-year insured is estimated from data on individual medical events that occurred during months the person was uninsured and had no payments from a private or public insurance source.

Sources of payment are divided into out-of-pocket, private insurance (employer-sponsored and self-purchased), public insurance (Medicare, Medicaid), other public sources, other private sources, and implicitly subsidized care. Implicitly subsidized care measures the difference between any payments received from or on behalf of the uninsured and the “value” of the care received, defined as the payment amount that would be expected from a privately insured person. (The detailed methodology is described in the Statistical Appendix.)

Other public spending includes payments from the Veterans Health Administration (VHA), Champus-Tricare (for civilian dependents of military personnel), workers compensation, and other federal, state, and local public programs that pay directly for care received by an individual patient. Other public payments include costs imputed (by MEPS) for uninsured people who receive care from a public hospital or a public clinic, and care paid for by state-only or local insurance programs for the indigent, and payments received from Medicaid for people who do not have Medicaid coverage, e.g., emergency Medicaid or pre-natal care for low-income uninsured women. The Other Private category includes payments from accident, automobile, indemnity, and single-service insurance policies that are not considered general health insurance according to the MEPS definition of health insurance. Private philanthropy and cash

payments by non-family members or employers are also included in the Other Private category.

Among all non-elderly (Table 1a), approximately 15.5% reported being uninsured all year and another 13.5% were uninsured for at least one month during the year.¹⁰ Compared to people with full-year private insurance coverage, the full-year uninsured receive less than half as much care (\$1,686 compared to \$3,915), but pay for a larger share of their care out-of-pocket (\$583, or 35%, compared to \$681, or 17% for the privately insured). Implicitly subsidized care, which is a measure of the amount of care they receive that is not paid for by an explicit identifiable source, amounts to another \$536 per capita for the full year uninsured and care provided by other public and private sources adds another \$567 per capita. The total amount of uncompensated care, which is all care not paid for out-of-pocket by the uninsured, comes to \$1,103 per person (uninsured for the full-year).

The part-year uninsured also receive less care than the privately insured, by 31% (\$2,983 compared to \$3,915). However, the great majority of their care (\$2,601 or 87%) is received during months they report having some type of insurance coverage. Private insurance (\$1,126) and Medicaid (\$859) account for

¹⁰ The MEPS provides a larger estimate of the number of uninsured in the U.S. than the Current Population Survey. (See State Health Access Data Assistance Center, "Comparing Federal Government Surveys that Count Uninsured People in America." (Princeton, NJ: Robert Wood Johnson Foundation, August 2007).) This is due to various methodological differences. The CPS, however, is the much more commonly used source for estimates of the number of uninsured in the U.S. This paper relies heavily on the MEPS because of its comprehensive data on utilization and expenditures. We estimate that if the CPS number of uninsured had been used, our estimates of the number of uninsured would be on the order of 10 percent lower. Thus the amount of uncompensated care would be lower as would be the incremental cost of expanding coverage to all of the uninsured.

Exhibit 1a: Medical Spending Per Capita by Insurance Status and Source of Payment: All Non-Elderly (Projected 2008\$\$s)

	Full Year Insured			Part-Year Insured			Full-Year Uninsured
	All	Private Only	Medicaid Only	Other ^d	All Spending	Insured Spending	
n	63,612	45,566	14,763	3,283	11,942		15,501
2008 Population (estimated)	188,186,419	156,230,252	24,220,209	7,735,958	35,757,579		41,128,621
Expenditures (\$)	4,463	3,915	4,813	14,439	2,983	2,601	1,686
By source of payment (\$)							
Out-of-pocket	654	681	175	1,611	550	394	583
Private Insurance	2,677	2,976	462	3,573	1,126	1,126	0
Medicare	205	17	59	4,463	45	45	0
Medicaid	681	25	3,880	3,908	859	859	0
Other Public ^a	193	183	141	555	161	115	233
Other Private ^b	53	32	96	328	99	63	334
Implicitly Subsidized ^c	0	0	0	0	145	0	536

a. Includes Veterans Health Administration, TriCare, Other Federal, Other State & Local, Other Public, and Workers Compensation

b. Includes Other Private and Other Sources

c. Implicitly subsidized care is care received by the uninsured that is subsidized by indirect revenue sources not measured by the MEPS. See Appendix I.E for details of the imputation methodology (available at www.kff.org)

d. Includes Medicare only, Medicare plus Medicaid, and other combinations of full-year coverage

e. Uninsured spending is for care received during months when the person is uninsured.

Source: Authors' tabulations from the 2002-2004 Medical Expenditure Panel Surveys.

most of the third-party payments, with relatively small amounts paid for by Medicare, other public, and other private sources. Care received while uninsured is \$382 per person, with out-of-pocket payments and implicitly subsidized care responsible for very similar amounts (\$156 and \$145 per person, respectively). Adding payments from other public (\$46) and other private (\$36) sources brings total uncompensated care per person for the part-year insured to \$227.

Summing these per capita amounts over all people uninsured for any part of the year shows that the uninsured receive \$176.4 billion in total medical care, divided between \$84.3 billion in uninsured care and \$92.1 billion received during the portion of the year some people have coverage. The total amount of uninsured care, \$84.3 billion, consists of \$30 billion the uninsured pay out-of-pocket and \$54.3 billion in uncompensated care.

Among people with full-year insurance coverage, those with private insurance spend the least (\$3,915), Medicaid beneficiaries spend about 23% more, and those with Medicare-only or various combinations of coverage use the most care (\$14,439). However, these differences primarily reflect differences in health conditions among the three groups, especially for the “other” category which includes people with end-stage renal disease (ESRD) or disabilities who are covered by Medicare.¹¹ Medicare is the largest source of payment in the “other” group, followed by Medicaid and private insurance. The effect of Medicaid coverage on out-of-pocket payments is also apparent, with Medicaid

¹¹ See J. Hadley and J. Holahan, “Is Health Care Spending Higher under Medicaid or Private Insurance?” *Inquiry* Vol. 40, No. 3, pp. 323-342, Winter 2003/2004, for an analysis of the effects of differences in health and other characteristics on spending by the privately insured and Medicaid beneficiaries.

beneficiaries spending only \$175 (3.6%) out-of-pocket. Other public and other private sources pay for similar amounts of care for the privately insured and Medicaid beneficiaries.

Tables 1b (children) and 1c (non-elderly adults) indicate that there are substantial differences between children and adults in the percentages who are uninsured for the full year and show significant differences in total spending between the full-year uninsured and the privately insured. These differences probably reflect both the much greater role that Medicaid plays in providing health insurance for children and the smaller health discrepancies between insured and uninsured children than between insured and uninsured adults.

Full-year uninsured children receive \$1,076 in care, compared to \$1,890 for full-year privately insured children, and spend \$317 out-of-pocket. Although this is less than the privately insured pay out-of-pocket (\$410), it represents a bigger share of their spending, 30% compared to 21% for the privately insured. Uncompensated care for full-year uninsured children is \$759, of which \$305 is implicitly subsidized care. Most of the remainder (\$409) comes from other private sources. Children insured for part of the year receive 50% more care (\$1,556) than children who are without coverage the entire year, but this is 21% less than for children insured all year, even though most of the care is received while insured. Among children insured all year, those with Medicaid only spend the most (\$2,406), while those with combinations of coverage, mostly Medicaid and private insurance, spend about the same as children with only private coverage. However, out-of-pocket payments are less than half of what privately

Table 1b: Medical Spending Per Capita by Insurance Status and Source of Payment: Children (0-18) (Projected 2008\$\$)

	Full Year Insured			Part-Year Insured		Full-Year Uninsured	
	All	Private Only	Medicaid Only	Other ^d	All Spending		Insured Part
n	25,181	13,349	10,803	1,029	4,380		2,988
2008 Population (estimated)	61,255,037	42,190,081	17,063,301	2,001,656	11,648,822		7,816,937
Expenditures Unadjusted (\$)	2,035	1,890	2,406	1,938	1,556	1,352	204
By source of payment (\$)							
Out-of-pocket	310	410	77	190	284	203	81
Private Insurance	1,024	1,370	182	923	494	494	0
Medicare	5	2	3	85	2	2	0
Medicaid	604	17	2,050	642	622	622	0
Other Public ^a	59	70	36	35	24	15	9
Other Private ^b	32	21	57	64	40	15	25
Implicitly Subsidized ^c	0	0	0	0	89	0	89

a. Includes Veterans Health Administration, TriCare, Other Federal, Other State & Local, Other Public, and Workers Compensation

b. Includes Other Private and Other Sources

c. Implicitly subsidized care is care received by the uninsured that is subsidized by indirect revenue sources not measured by the MEPS. See Appendix I.E for details of the imputation methodology (available at www.kff.org)

d. Includes Medicare only, Medicare plus Medicaid, and other combinations of full-year coverage

e. Uninsured spending is for care received during months when the person is uninsured.

Source: Authors' tabulations from the 2002-2004 Medical Expenditure Panel Surveys.

Table 1c: Medical Spending Per Capita by Insurance Status and Source of Payment: Non-Elderly Adults (19-64) (Projected 2008\$\$)

	Full Year Insured			Part-Year Insured			Full-Year Uninsured
	All	Private Only	Medicaid Only	Other ^d	All Spending	Insured Part	
n	38,431	32,217	3,960	2,254	7,562		12,513
2008 Population (estimated)	131,547,262	117,872,223	7,750,987	5,924,052	24,985,827		34,320,496
Expenditures Unadjusted (\$)	5,593	4,639	10,113	18,664	3,649	3,183	1,825
By source of payment (\$)							
Out-of-pocket	814	777	391	2,092	673	482	644
Private Insurance	3,447	3,551	1,077	4,468	1,420	1,420	0
Medicare	299	23	182	5,943	65	65	0
Medicaid	717	28	7,906	5,012	969	969	0
Other Public ^a	256	224	373	731	224	161	276
Other Private ^b	62	36	183	418	126	85	317
Implicitly Subsidized ^c	0	0	0	0	171	0	171

a. Includes Veterans Health Administration, TriCare, Other Federal, Other State & Local, Other Public, and Workers Compensation

b. Includes Other Private and Other Sources

c. Implicitly subsidized care is care received by the uninsured that is subsidized by indirect revenue sources not measured by the MEPS. See Appendix I.E for details of the imputation methodology (available at www.kff.org)

d. Includes Medicare only, Medicare plus Medicaid, and other combinations of full-year coverage

e. Uninsured spending is for care received during months when the person is uninsured.

Source: Authors' tabulations from the 2002-2004 Medical Expenditure Panel Surveys.

insured children spend, while children covered by Medicaid spend only \$77 out-of-pocket. Full-year uninsured adults receive \$1,825 in care, which is only 40% of the \$4,639 the privately insured spend (Table 1c). Adults who were full year uninsured spend \$644 out of pocket, which covers 35% of their care. The remaining 65% is split almost equally between implicitly subsidized care (\$589) and care paid for by other public and other private sources (\$593). Most of the other public payments come from the VHA and workers compensation.

Adults insured for only part of the year spend \$3,649, twice as much as the full-year uninsured, but 27% less than the full-year privately insured. Uninsured care costs \$466 (13% of their total care), with slightly more paid for out-of-pocket than received as implicitly subsidized care. Other sources pay for the remaining 22% of the uninsured care received by people insured for only part of the year.

Among non-elderly adults insured year-round, those with only Medicaid or combinations of private insurance, Medicaid, and Medicare spend much more than people with only private coverage. Unlike children, a substantial portion of Medicaid coverage and all Medicare coverage among non-elderly adults is due to disability and/or ESRD. Thus, it is not surprising that spending for people with only Medicaid or other combinations of insurance coverage is so much higher than for people with private coverage only. Medicare (\$5,943) and Medicaid (\$5,012) are the two largest payment sources for people with combination coverage, followed by private insurance (\$4,468) and out-of-pocket payments

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(\$2,092). Out-of-pocket payments are much lower for people with private-only (\$777) or Medicaid-only (\$391) coverage.

2. How Much of Their Care is Uncompensated?

Table 2 reports the total amount of uncompensated care received by the uninsured. Uncompensated care is defined as the value of care received by the uninsured that is not paid for out-of-pocket. (By construction, there are no payments from private or public insurance sources for uninsured care.) Total uncompensated care is estimated to be \$54.3 billion, 51% of which (\$27.8 billion)

Table 2: Uncompensated Care received by The Uninsured, by Sources of Payment (Projected 2008\$s)

Population	Total	Other Public	Other Private	Donated Care ^b
<i>Per Capita Spending (\$s)</i>				
All Uninsured	701	147	195	395
Children	378	23	179	176
Adults ^a	806	187	200	418
Full-Year Uninsured	1,114	236	332	546
Part-Year Uninsured	228	46	37	145
<i>Total Population Spending (\$billions)</i>				
All Uninsured	54.3	11.4	15.1	27.8
Children	7.2	0.4	3.4	3.3
Adults ^a	47.2	11.0	11.7	24.5
Full-Year Uninsured	46.1	9.8	13.8	22.6
Part-Year Uninsured	8.2	1.7	1.4	5.2

Notes:

a. Includes elderly

b. See Statistical Appendix for definition and construction

comes from implicitly subsidized care. Payments from other public sources and other private sources are \$11.4 and \$15.1 billion, respectively. Adults, who constitute over 80% of the uninsured, account for 87% of the uncompensated care received (\$47.2 billion). Not surprisingly, the full-year uninsured receive 85% of all uncompensated care (\$46.1 billion) and 81% of all implicitly subsidized care.

Total uncompensated care represents 2.2% of total health care spending estimated for 2008.¹² This is a much smaller share of total spending than the uninsured's share of the total population because the uninsured use less care than the insured (holding health status constant), because they pay for much of their care themselves and because their health is generally better than the insured's. The total insured population includes almost all of the elderly (covered by Medicare), as well as most institutionalized and disabled. Taking the entire population into account, insured adults (including the elderly but excluding people covered by Medicaid) spend about \$350 per person through taxes, donations, and payments for private health care and private insurance to subsidize care received by the uninsured.

¹² CMS estimates that total spending for health care services will be \$2.42 trillion in 2008. See "NHE Projections 2006-2016, Forecast Summary and Selected Tables," http://www.cms.hhs.gov/NationalHealthExpendData/03_NationalHealthAccountsProjected.asp.

III. Estimates of Uncompensated Care from Provider and Government Sources

The second approach to estimating the cost of uncompensated care received by the uninsured draws on data obtained from health care providers and government programs. Using independent data sources offers both a comparison to the MEPS-based estimate as well as additional information about the sources of funding for uncompensated care. To summarize the results of the estimates detailed in the following sub-sections, the overall estimate of uncompensated care from provider data sources is \$57.4 billion, consisting of \$35.0 billion in uncompensated care from hospitals, \$14.6 billion from community-based providers, and \$7.8 billion from office-based physicians (Table 3).

Table 3. Uncompensated Care From Provider Estimates

	<u>Expenditures</u>
Hospitals	\$35.0
Community Based Providers	\$14.6
Veterans Health Administration	\$5.4
Indian Health Services	\$1.6
Community Health Centers	\$1.6
Maternal and Child Health	\$0.2
Ryan White Medical Center	\$1.2
National Health Services Corps.	\$0.1
Other State and Local	\$4.5
Physicians	<u>\$7.8</u>
Total	<u>\$57.4</u>

Considering all of the assumptions made, which are described in detail below along with information on sources of financing, this estimate is remarkably similar to the MEPS estimate of \$54.3 billion. Some of the relatively small discrepancy may be due to the lack of data on the value of free pharmaceuticals

through drug companies' patient assistance plans and uncompensated care provided by pharmacists, non-physician providers, and providers of medical devices and supplies. Overall, however, the similarity of the MEPS and provider-based estimates increases our confidence in concluding that the cost of uncompensated care received by the uninsured is roughly \$56 billion.

A. Hospitals' Uncompensated Care Costs

The American Hospital Association (AHA) defines uncompensated care as care for which no payment is received from the patient or an insurer, i.e., it includes both bad debt and charity care. According to the AHA, "bad debt consists of services for which hospitals anticipated but did not receive payment. Charity care consists of services for which hospitals neither received nor expected to receive payment because they had determined, with the assistance of the patient, the patient's inability to pay. In practice, however, hospitals often have difficulty in distinguishing bad debt from charity care".¹³ The AHA combines bad debt and charity care costs to arrive at the amount of care provided to those without insurance coverage that is not reimbursed. Although some bad debt derives from care provided to people with insurance, and therefore results in an over-estimate of the uninsured's uncompensated care, it probably offsets other sources of uncompensated care that we are unable to measure. Note also, for the purpose of our subsequent discussion of sources of funding, that

¹³ American Hospital Association "Uncompensated Hospital Care Cost Fact Sheet," October 2007.

uncompensated care does not include underpayments by Medicare and Medicaid.

The AHA calculates the cost of uncompensated care by multiplying hospitals' charges for uncompensated care by their cost-to-charge ratios. Using data from the 2007 Annual Survey of Hospitals, the AHA estimated that hospitals delivered \$31.2 billion in uncompensated care, which was 5.7% of the total hospital expenses in 2006.¹⁴ Inflating this forward to 2008 yields the estimate of \$35.0 billion (Table 3).

B. Clinics and Direct Care Programs

The uninsured receive care from various types of clinics and health centers, such as community health centers, neighborhood health centers, free clinics, maternal and child health clinics, school-based clinics, rural health centers, and migrant health centers. These providers are both privately and publicly owned and receive funds from all levels of government as well as from private sources. These clinics serve substantial numbers of low income people, not all of whom are uninsured. We also include the Veterans Health Administration (VHA) and Indian Health Service (IHS) as community health providers, even though much of their care is provided through hospitals. (The AHA excludes federal hospitals from its estimate of hospitals' uncompensated care.)

Our estimates (described in more detail in a later section) use budget and program data published by six federal programs (the Veterans Health

¹⁴ Ibid.

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Administration, the Indian Health Service, the Community Health Centers, the Maternal and Child Health Bureau, the HIV/AIDS Bureau (Ryan White Care Act) and the National Health Services Corps) that support care delivered by clinics and direct care providers, and data on state and local governments' medical care spending through public assistance programs (from the Office of the Actuary, CMS). Since these providers serve both uninsured and insured low-income people and deliver both long-term and acute care, we based our estimates, to the extent possible, on information for total expenditures (inflated to 2008) on acute care medical services and the share of charges or users identified as uninsured or self pay. Estimates of proportions of users who are uninsured are either from program data or computed from data collected by the Current Population Survey.

As shown in Table 3, the Veterans Health Administration is by far the largest federal source of direct care, delivering \$5.4 billion in care to the uninsured in 2008. The Indian Health Service and community health centers each account for \$1.6 billion in care to the uninsured. Due in large part to the Bush administration's budget expansion for community health centers, these centers now spend more than double their estimated spending totals in 2001 (\$730 million). Care provided through Ryan White programs amounts to \$1.2 billion. We estimate that Maternal and Child Health clinics and National Health Service Corps sites provide \$193 million and \$107 million, respectively, in care to the uninsured. Finally, state and local governments' indigent care and public assistance programs are estimated to spend \$4.5 billion on care for the uninsured delivered by a variety of public and private health care providers. The

total amount of care provided by these community-based providers is \$14.6 billion in 2008 dollars.

C. Physicians' Charity Care

In our report on the cost of uncompensated in 2001, we estimated that physicians provided \$5.1 billion in charity care.¹⁵ This estimate was derived from 1994 data collected by the American Medical Association¹⁶ and 2001 data from the Community Tracking Studies (CTS) Physician Survey.¹⁷ The most recent CTS data, collected in 2004-05, found that the proportion of physicians providing charity care has declined, but the total number of physicians has increased, with very little change in the average number of charity care hours.¹⁸ Given this finding of essentially no change in the amount of charity care provided by physicians, we inflated our 2001 estimate to 2008, which yields an estimate of \$7.8 billion in physicians' charity care to the uninsured.

According to a recent study, which nets out excess payments that physicians sometimes receive from the uninsured, physicians' uncompensated care may be much lower than we estimate, roughly \$3.2 billion in 2005. The discrepancy is likely due to the fact that the study counts payments from the uninsured in excess of amounts the privately insured would pay as offsets to

¹⁵ J. Hadley and J. Holahan, "How Much Medical Care Do the Uninsured Use and Who Pays for It?" Health Affairs Web Exclusive (February 12, 2003).

¹⁶ D.W. Emmons, "Uncompensated Physician Care" Socioeconomic Characteristics of Medical Practice 1999. Chicago: American Medical Association, 1995.

¹⁷ Reed, M.C., P.J. Cunningham, and J.J. Stoddard, "Physicians Pulling Back from Charity Care" Center for Studying Health System Change, Washington, DC, Issue Brief No. 42, August 2001.

¹⁸ Cunningham, P.J. and J.H. May, "A Growing Hole in the Safety Net: Physician Charity Care Declines Again," Center for Studying Health Systems Change, Washington DC, Tracking Report No 13, March 2006.

lower payments.¹⁹ Furthermore, the study infers that physicians tend to base their estimates of uncompensated care on differences between their full charges and payments from the uninsured, rather than using actual payments, which embody substantial insurer discounts, from the privately insured as the benchmark. In contrast, our estimate only accounts for the losses on uninsured patients relative to what the privately insured would be expected to pay. In effect, we assume that profits from all patients, both insured and uninsured, subsidize these costs.

¹⁹ J. Gruber and D. Rodriguez, "How Much Uncompensated Care Do Doctors Provide?" *Journal of Health Economics* 26, no. 6 (2007): 1151-1169.

IV. Sources of Funding for Uncompensated Care

In this section, we first examine government programs that provide funding for uncompensated care: Medicaid, Medicare, and state and local government appropriations. We then describe the details behind the estimates in Table 3 of the amounts of uncompensated care delivered by community-based providers and their sources of financing. We combine these sources to provide estimates of the total spending by the federal vs. state and local governments to pay for uncompensated care received by the uninsured.

Briefly, Medicaid has two major programs that help fund the cost of hospital uncompensated care: disproportionate share hospital payments (Medicaid DSH) and supplemental payment programs. In addition to providing support for uncompensated care, these programs also help hospitals deal with low Medicaid reimbursement rates that are frequently less than hospitals' costs. Medicare also has two programs that provide support for uncompensated care: disproportionate share hospital (Medicare DSH) payments and indirect medical education (IME). State and local governments both operate various public assistance or indigent care programs to deliver medical care to the uninsured and allocate tax appropriations directly to hospitals and clinics to finance a variety of functions, including helping these institutions provide for the uninsured.

A. Medicaid

Medicaid makes substantial payments to support hospitals that treat large numbers of poor patients. These payments are intended to help hospitals with

both the burden of uncompensated care and low Medicaid payment rates. In estimating the amounts that are attributable to uncompensated care, it is necessary to net out payments that go to mental hospitals, nursing homes and other providers, rather than to acute care hospitals. In addition, some share of the state contribution represents intergovernmental transfers and other financial transactions whose purpose is to increase federal matching dollars, and thus are not funds available to support uncompensated care. These state funds are generally transferred back from providers to state treasuries without actually being spent for care.

Using the most recently available data reported in the Federal Register,²⁰ we estimate that the total federal Medicaid DSH allotment was \$10.3 billion in 2007. Including state matching funds increases this total to \$18.3 billion. We estimate that \$3.4 billion (\$1.9 billion federal and \$2.5 billion state) goes to mental hospitals, leaving \$14.9 billion for acute care hospitals. Applying the Congressional Budget Office's (CBO) assumption of an average annual growth rate of 2% from the March 2006 baseline results in a 2008 estimate of \$15.2 billion (\$8.6 billion federal and \$6.6 billion state) for Medicaid DSH.

Coughlin, Zuckerman and McFeeters conducted a 2005 survey of states' use and financing of DSH payments,²¹ and estimated that 30% of the state's share of DSH spending is financed from state general funds, and thus potentially

²⁰ Department of Health and Human Services, Medicaid Program: Fiscal Year Disproportionate Share Hospital Allotments and Disproportionate Share Hospital Institutions for Mental Disease Limits, Federal Register 72, no. 248 : 73831-73841 <http://edocket.access.gpo.gov/2007/pdf/E7-24486.pdf>, December 28, 2007.

²¹ T.A. Coughlin, S. Zuckerman and J McFeeters, 2007 "Restoring Fiscal Integrity to Medicaid Financing" *Health Affairs*, vol.26, no.5, pp 1469-1480.

represents new funding for hospitals. (The remainder is assumed to be transferred back to the state and does not represent a real increase in spending on care.) Assuming that the share of state money from general funds remains constant between 2005 and 2008, then an estimated \$2 billion (30% of states' \$6.6 billion contribution) is potentially available to acute care hospitals through DSH payments. Finally, assuming that the full federal estimated DSH allotment of \$8.6 billion is actually spent by states, we estimate that total federal and state Medicaid DSH spending is \$10.6 billion in 2008.

Some states also use supplemental provider payment or upper payment limit (UPL) mechanisms to provide additional funds to hospitals. This mechanism allows states to provide additional funds targeted to selected classes of hospitals by raising their Medicaid rates above the average Medicaid payment rates, but no higher than Medicare levels (thus the term upper payment limit). Even more so than with Medicaid DSH, states use supplemental payment and UPL transactions to generate additional federal matching funds without increasing actual state spending. However, due to changes in how the federal government reports Medicaid spending data, it is necessary to estimate the amount of money from these sources that actually goes to hospitals.²²

In April 2001, CBO estimated federal "other provider payments" at \$7.6 billion, or \$13.3 billion of federal and state payments, assuming a 57% matching

²² Beginning in 2001, CBO included in their March Medicaid baseline a line item estimating projected spending for "other payments to providers" as a way of estimating the amount of supplemental payments. In 2005, this line was eliminated and other provider payment spending was included with the long term care and acute care spending.

rate.²³ Based on surveys conducted by the Urban Institute in 2001 and 2005, 45% of supplemental payments in 2001 went to hospitals,²⁴ and spending for hospital supplemental payments grew at a rate of 23% per year between 2001 and 2005.²⁵ Applying these assumptions produces an estimate of \$18.8 billion in total hospital supplemental payments in 2005. Projecting this figure to 2008 (assuming the same annual percentage increases in supplemental payments and in general inflation used above) produces an estimate of supplemental payments to acute care hospitals of \$21.3 billion in 2008 (roughly \$12.2 billion federal and \$9.1 billion state). Our 2005 survey, however, indicated that only 10% of the state share came from general funds, or about \$0.9 billion. Assuming this percentage remained constant between 2001 and 2008, we estimate that total supplemental Medicaid payments to hospitals are \$13.1 billion in 2008.

Finally, to estimate the amount that is potentially available to pay for uncompensated care, we subtract a portion of Medicaid DSH and UPL payments as an offset that implicitly compensates some hospitals for low Medicaid payment rates. The American Hospital Association estimated that Medicaid underpayments for 2006 amounted to \$11.3 billion,²⁶ which is equivalent to \$12.8 billion after inflating this figure to 2008.²⁷ If we distribute this amount between federal and state governments in the same proportions as in the DSH and

²³ Congressional Budget Office April 2001 Baseline.

²⁴ Teresa A Coughlin, Brian K Bruen and Jennifer King, "State's Use of Medicaid UPL and DSH Financing Mechanisms", *Health Affairs*, 23, no.2 (2004).

²⁵ Teresa A Coughlin, S Zuckerman and J McFeeters, "Restoring Fiscal Integrity to Medicaid Financing," *Health Affairs*, 26, no. 5 (2007): 1469-1480.

²⁶ American Hospital Association "Underpayment by Medicare and Medicaid: Fact Sheet," October 2007

²⁷ American Hospital Association "Underpayment by Medicare and Medicaid: Fact Sheet," October 2007.

supplemental payment programs, the result is \$11.2 billion in federal payments and \$1.6 billion in state payments. Subtracting these amounts from the estimates of total federal DSH and supplemental payment programs, our final estimates of Medicaid payments to hospitals available for uncompensated care are \$9.6 billion in federal and \$1.3 billion in state payments in 2008.

B. Medicare

Medicare's Prospective Payment System (PPS) for hospital inpatient services includes a Disproportionate Share Hospital (DSH) adjustment that is applied to the payment rate for hospitals that treat a large number of poor patients. The DSH adjustment is based on the hospital's Disproportionate Patient Percentage (DPP), which is in turn based on two ratios that measure 1) the proportion of Medicare inpatient days accounted for by Medicare beneficiaries who are eligible for Supplemental Security Income and 2) the proportion of all inpatient days by people covered by Medicaid.

The major justification for the DSH adjustment is that low-income patients are more costly to treat and, therefore, hospitals that serve large numbers of low-income people would have higher costs. However, several MedPAC studies have found that the low-income patient share, the DPP, is only loosely tied to higher Medicare cost per case.²⁸ Moreover, DSH payments are distributed across many hospitals, while hospital uncompensated care is much more concentrated. For example, 74% of urban hospitals and 81% of rural hospitals

²⁸ Medicare Payment Advisory Commission, Report to the Congress: Medicare Payment Policy, March 2007, p. 77.

receive some DSH payment, almost all teaching hospitals (91%) receive DSH payments, and even 74% of non-teaching hospitals receive these payments.²⁹ MedPAC grouped hospitals into deciles based on uncompensated care as a percentage of total cost and found that there was little variation across deciles in the share of DSH payments received. Consequently, the amount of uncompensated care costs vastly exceeded DSH payments in the decile of hospitals with the greatest uncompensated care costs, while DSH payments greatly exceeded the amount of uncompensated care provided in the lowest decile of hospitals.³⁰

Based on this evidence, we assume that only half of Medicare DSH payments actually support uncompensated care. Given the 2008 forecast of \$10.1 billion in Medicare DSH payments, we attribute \$5.1 billion as potentially available to pay for hospitals' uncompensated care for the uninsured.

Medicare hospital payments also incorporate an Indirect Medical Education (IME) adjustment (based on the hospital's ratio of residents per bed) to recognize the higher patient care costs incurred by hospitals with graduate medical education programs. MedPAC studies have found a loose relationship between payments for indirect medical education and the cost of teaching,³¹ indicating that IME payments increase faster than costs as teaching intensity rises.

²⁹ Ibid, p.72.

³⁰ Ibid, pp. 78-79.

³¹ Medicare inpatient cost per case increased by about 2.2% for every 10% increase in the ratio of residents to hospital beds. Ibid., p. 75.

One of the reasons that Medicare continues to reimburse teaching hospitals for more than the estimated impact of the cost of teaching is that teaching hospitals perform other important social missions including treating the uninsured. As with DSH payments, however, MedPAC again finds a relatively limited relationship between IME payments and hospitals' uncompensated care.³² Since IME payments appear to support many functions, we assume that one-third of IME payments, \$2.1 billion in 2008 dollars, can be attributed to care for the uninsured. Overall, we estimate that Medicare's DSH and IME program payments which are potentially available to support uncompensated care amount to \$8.1 billion in 2008.³³

C. State and Local Governments

The Office of the Actuary at the Centers for Medicare and Medicaid Services (CMS) publishes data on state and local spending for medical care.³⁴ State and local governments make payments to hospitals in the form of tax appropriations and support public assistance or indigent care programs that provide or pay for medical care for uninsured people. The data on tax appropriations directed to hospitals come from the 2005 American Hospital

³² For example, when MedPAC divided hospitals into deciles based on hospitals' uncompensated care as a percentage of total costs, they showed that the highest decile provided more than 40% of all uncompensated care but received just 15% of IME payments.

³³ Medicare also makes payments to teaching hospitals for the direct cost of their graduate medical education programs. The beneficiaries of these payments tend to be hospitals that serve large numbers of poor patients. But because these payments are tied directly to physician training, we do not include them in our estimates of payments to hospitals for care for the uninsured.

³⁴ Centers for Medicare and Medicaid Services, Office of the Actuary, National Health Statistics Group, Table 11: Expenditures for Health Services and Supplies Under Public Programs, by Type of Expenditure and Program: Calendar Year 2005.
<http://www.cms.hhs.gov/NationalHealthExpendData/downloads/tables.pdf>.

Association Survey. Although there is no information to indicate exactly how these tax appropriations are used, they are largely directed to hospitals, particularly teaching hospitals, to support a variety of functions, including care to the uninsured. Thus, while these funds are not earmarked to support uncompensated care, they are potentially available for that purpose.

The CMS data report \$19.2 billion in total state and local medical care spending in 2005, with \$14.4 billion going to hospitals. The remainder supported home health care and other personal services, which we exclude from our estimates because they are likely to be supporting long-term care services. Assuming that half of public payments to hospitals supports uncompensated care (as opposed to other hospital functions) produces an estimate of \$7.2 billion in 2005, and \$8.6 billion after inflating to 2008.

CMS data also report that state and local government public assistance programs spent \$6.2 billion on medical care in 2005: \$1.7 billion went to hospitals, \$0.6 billion to physicians and clinic services, \$3.0 billion to prescription drugs, and the remainder spread across other providers. Inflating to 2008 dollars, we estimate \$7.3 billion in care supported by these public assistance programs, with \$2 billion spent on hospital care and \$5.3 billion on care delivered by community providers. Some of these funds, \$0.8 billion, can be identified from budget data for identifiable community providers described in Section IV.D. The remaining \$4.5 billion is attributed to other state and locally funded providers, such as public health clinics, school health clinics, and community and

neighborhood health centers that are not federally qualified. (See Table 10 below.)

D. Direct Care Programs

1. Veterans Health Administration, Department of Veterans Affairs

In 2006, the Veterans Health Administration (VHA) spent \$31.1 billion (43% of total VA expenditures) on medical care for veterans (Table 4).³⁵ We estimate that 58% of total medical care spending, \$18.1 billion, funded direct acute hospital care, outpatient care, and related operating expenses.³⁶ A recent study found that 76% of veterans who use VHA services have another source of health care coverage, such as Medicare or private insurance, while the remaining 24% of VHA users lack other health coverage.³⁷ To estimate the share of VHA spending that funds direct medical care to the uninsured, we assume that uninsured veterans receive a proportionate amount of VHA spending for acute medical care. Applying the 24% of VHA users without another source of health coverage to the \$18 billion in acute hospital and outpatient care spending produces an estimate of \$4.3 billion in care to the uninsured in 2006, which we inflate to \$5.4 billion in 2008 based on the VHA's projected 2008 budget.³⁸

³⁵ Veteran Data and Information 2006. US Dept. of Veterans Affairs. www1.va.gov/vetdata/page.cfm?pg=3. Last updated July 13, 2007.

³⁶ FY 2006 President's Budget for the Department of Veterans Affairs Medical Programs. <http://www.whitehouse.gov/omb/budget/fy2006/pdf/appendix/vet.pdf>

³⁷ Estimate from Shen, Lee, Hendicks and Kazis. "Veterans' Health Insurance and Demand for VA Care." <http://gateway.nlm.nih.gov/MeetingAbstracts/102272533.html>.

³⁸ Inflation factor derived from 2008 spending estimate in the Department of Veterans Affairs FY 2008 Budget Estimate.

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Table 4. Veterans Health Administration (VHA) Expenditures on Care to the Uninsured, 2008 (\$billions)

Total VHA medical appropriations, 2006 ^a		\$31.1
Amount for direct acute medical care (58% of total) ^b		\$18.1
Percent of VHA Users with Only VHA Coverage ^c	24.0%	
Estimated Direct Medical Care Expenditures on the Uninsured, 2006		\$4.3
Inflated to 2008 budget estimate (factor of 1.232) ^d		\$5.4

^a US Dept. of Veterans Affairs expenditures data by locality: <http://www1.va.gov/vetdata/page.cfm?pg=3>

^b 58% derived from FY 2006 national VHA budget (in millions): acute hospital care services (\$5,155) + outpatient care services (\$12,418) + proportionate general operating expenses (\$534) = total direct medical (\$18,107)/total medical program budget (\$31,149) = 58%. See OMB, Annual Appropriations to the Department of Veterans Affairs, "Budget of the United States Government, Fiscal Year 2006--Appendix." Data from Office of the Actuary, VA. www.whitehouse.gov/omb/budget/fy2006/pdf/appendix/vet.pdf

^c Estimate from Shen, Lee, Hendicks and Kazis. "Veterans' Health Insurance and Demand for VA Care." <http://gateway.nlm.nih.gov/MeetingAbstracts/102272533.html>.

^d Inflation factor based on difference between 2006 actual VA budget for medical services and 2008 estimate budget for these services. Department of Veteran's Affairs FY 2008 Budget Estimate. [Http://www.va.gov/budget/summary/VolumeI/MedicalPrograms.pdf](http://www.va.gov/budget/summary/VolumeI/MedicalPrograms.pdf)

2. Indian Health Service

The Indian Health Service (IHS) operates a comprehensive health service delivery system for approximately 1.9 million of the nation's estimated 3.3 million American Indians and Alaskan Natives. The Federal IHS delivery system is extensive, consisting of 33 hospitals, 54 health centers, and 38 health stations. IHS purchases additional services from private providers outside the IHS delivery system.³⁹ Because more than one-third of Native Americans and Alaskan Natives are uninsured, the IHS is a significant source of care for those without another source of health coverage.⁴⁰

³⁹ United States Department of Health and Human Services: Indian Health Service. "Indian Health Service Fact Sheet." Jan. 2007. <http://info.ihs.gov/Files/IHSFacts-Jan2007.doc>

⁴⁰ Share of Native Americans who are uninsured is from "Health Service Access, Use and Insurance Coverage Among American Indians/Alaska Natives and Whites: What Role Does the Indian Health Service Play?" by Zuckerman, Haley, Roubideaux, and Lillie-Blanton. *American Journal of Public Health*. Jan. 2004. Vol. 94, No. 1.

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Federal appropriations to IHS for acute care services were \$2.2 billion in FY 2007 (Table 5).^{41,42} We estimate the amount of this funding devoted to care for the uninsured by subtracting third-party collections for acute care services from total expenditures on these services. Approximately one-third of acute care services are paid for by third-party payers, leaving \$1.5 billion in spending on the uninsured in 2007.⁴³ Inflating this figure to the projected 2008 budget level produces an estimate of \$1.6 billion in IHS spending on the uninsured.⁴⁴

Table 5. Indian Health Service Appropriations for Medical Care to the Uninsured (\$billions), 2008

Acute Care Services, 2007	\$2.2
Insurance Collections	\$0.7
Total Support for Care to Uninsured (AC funding - AC collection)	\$1.5
Inflated by 1.095 to 2008	\$1.6

Source: Department of Health and Human Services Indian Health Service FY 2008 Performance Budget Submission.

<http://www.ihs.gov/NonMedicalPrograms/BudgetFormulation/documents/IHS%202008%20Congressional%20Justification%20Budget-FINAL.pdf>

3. Community Health Centers

The Community Health Centers (CHC) program was established to provide affordable and comprehensive primary health care to the medically

⁴¹ Indian Health Service Budget Request FY 2008. Jan. 30, 2007.

<http://www.ihs.gov/NonMedicalPrograms/BudgetFormulation/documents/IHS%202008%20Congressional%20Justification%20Budget-FINAL.pdf>

⁴² This also includes a proportionate share of support costs.

⁴³ Indian Health Service Budget Request FY 2008. Jan. 30, 2007.

<http://www.ihs.gov/NonMedicalPrograms/BudgetFormulation/documents/IHS%202008%20Congressional%20Justification%20Budget-FINAL.pdf>

⁴⁴ Inflation factor based on difference between 2006 enacted IHS budget for clinical and contract health services and President's proposed 2008 budget for these same items. FY 2008 HHS Budget in Brief. <http://www.hhs.gov/budget/08budget/2008BudgetInBrief.pdf>

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underserved.⁴⁵ Health centers serve a disproportionately low-income and uninsured patient population. In 2006, CHCs served 15 million patients, including six million (40%) uninsured.

To estimate CHC spending on the uninsured, we first calculate total CHC spending on direct medical and clinical care services, excluding enabling services such as case management and outreach. Summing direct care costs and related facility/administrative costs produces a total of \$6.3 billion (Table 6) in direct medical spending in 2006.⁴⁶ Since uninsured patients account for 31% of total charges at CHCs, we multiply total costs for direct care (\$6.3 billion) by 0.31 and subtract out-of-pocket payments by the uninsured (\$0.5 billion),⁴⁷ which results in an estimated \$1.4 billion in uncompensated care for the uninsured in 2006. Inflating to 2008 increases this estimate to \$1.6 billion.

Table 6. Estimated Cost of Uncompensated Care to the Uninsured at Community Health Centers, 2008 (\$billions)

Medical and Clinical Service Costs		\$6.30
Share of Charges* (Uninsured)	31.20%	
Medical and Clinical Service Costs (Uninsured)		\$1.90
Self-Pay Collections (Uninsured)		\$0.50
Total - Uncompensated Care Costs (Uninsured)		\$1.40
Inflated to 2008 Budget Estimate (factor of 1.113) ^a		\$1.60

Notes:

* Uninsured patients' charges / all patients' charges = \$2.4b / \$7.8b = 31.3%

Source: Bureau of Primary Health Care, HRSA, Uniform Data System, National Rollup report (2006).

^a Inflation factor based on difference between 2006 actual Community Health Center budget and President's 2008 budget for the program. FY 2008 HHS Budget in Brief.

⁴⁵ "The Health Center Program: What Is a Health Center?" HRSA. <http://bphc.hrsa.gov/about/>

⁴⁶ Bureau of Primary Health Care. HRSA Community Health Center Uniform Data System. National Rollup Report. FY 2006.

⁴⁷ Bureau of Primary Health Care. HRSA Community Health Center Uniform Data System. National Rollup Report. FY 2006.

We allocate this total among federal, state/local, and private sources by assuming that each supports uncompensated care in the same proportion as they contribute to CHCs' grant revenues. As a result, federal spending (56% of grant revenue) pays for \$880 million of CHCs' uncompensated care, state/local spending (34% of grant revenue) for \$540 million, and private spending (10% of grant revenue) for \$160 million.

4. *Ryan White CARE Act*

The Ryan White Comprehensive AIDS Resources Emergency Act (CARE) funds care for persons living with HIV and AIDS. CARE provides a range of outpatient and inpatient services, medications, and support services to low-income, uninsured, and underinsured persons, reaching over 500,000 individuals each year.⁴⁸ Our estimate of uncompensated care to the uninsured is based on funding for Titles I (emergency assistance to the metropolitan areas most affected by the HIV/AIDS epidemic) and II (the AIDS Drugs Assistance Program (ADAP)⁴⁹) because together these Titles fund the bulk of direct medical care delivered via the CARE Act.⁵⁰

To estimate CARE Act spending on the uninsured (Table 7), we first calculate the share of funds spent on direct medical care in each of three categories: Title I (75%), Title II non-ADAP spending (75%), and Title II ADAP

⁴⁸ Summers and Kates. "Trends in U.S. Government Funding for HIV/AIDS: Fiscal Years 1981 to 2004." Kaiser Family Foundation, March 2004.

⁴⁹ 2006 CARE Act Data Report, August 2006, http://hab.hrsa.gov/reports/2004_Data_Summary/page1.htm, <ftp://ftp.hrsa.gov/hab/HRSA.PR.06.pdf>.

⁵⁰ This also prevents double counting of funds because portions of Title III and IV are directed to CHCs or the MCHB program.

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Table 7. Ryan White CARE Act Spending on Medical Care to the Uninsured, 2008 (\$billions)

<u>AIDS Drug Assistance Program (ADAP)</u>	
Total ADAP Budget, Federal and State Sources ^a	\$1.3
Percent of ADAP Patients Uninsured	71%
ADAP Spending on Uninsured	\$0.9
<u>Title I</u>	
Federal Grants to Eligible Metropolitan Areas	\$0.6
Amount for Direct Medical Care (69%)	75%
Percent of Title I Patients Uninsured	31%
Title I Medical Care Spending on Uninsured	\$0.1
<u>Title II</u>	
Federal Grants (excluding ADAP)	\$0.3
Estimated Share for Direct Medical Care ^b	75%
Percent of CARE Act Patients Uninsured ^c	31%
Title II Spending on Uninsured, 2006	\$0.1
Total, Ryan White Care to Uninsured, 2006	\$1.1
Inflated to 2008 budget estimate (factor of 1.047)^d	\$1.2

Notes:

^a The ADAP budget is spending almost entirely on medications. Some states also use ADAP funds to purchase/maintain health insurance coverage. This figure does not include nationwide ADAP spending on insurance which was \$83 million in 2006.

^b Excludes support services, outreach and education, case management, and early intervention. Includes a proportionate amount of administration and planning monies.

^c Providers reported that 31% of CARE Act clients in 2004 were uninsured (national estimate). (2004 CARE Act Data Report, Section 2, Items 32)

^d Inflation factor based on difference between 2006 actual Ryan White HIV/AIDS Activities budget for these programs. FY 2008 HHS Budget in Brief: <http://www.hhs.gov/budget/08budget/2008budgetBrief.pdf>

spending (100%).^{51,52} We then attribute a share of spending in each category to the uninsured based on the uninsured rate among that program's users.

⁵¹ 2006 CARE Act Data Report, August 2006, http://hab.hrsa.gov/reports/2004_Data_Summary/page1.htm, <ftp://ftp.hrsa.gov/hab/HRSA.PR.06.pdf>.

⁵² Share of ADAP spending attributable to direct medical care from: Kaiser State Health Facts Online, Ryan White CARE Act Budget, www.statehealthfacts.org; 2006. The ADAP budget is spent almost entirely on medications. Some states also use ADAP funds to purchase/maintain health insurance coverage. This figure does not include nationwide ADAP spending on insurance, which was \$83 million in 2006.

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Seventy-one percent of ADAP users are uninsured,⁵³ and 31% of all CARE Act recipients are uninsured.⁵⁴ We apply the 31% to both Title I spending and Title II non-ADAP spending, which results in an estimate of \$1.1 billion in 2006. Inflating this figure to anticipated 2008 budget levels yields an estimated \$1.2 billion in spending on the uninsured through the CARE Act Program.

All Title I and Title II non-ADAP funding is federal. Adding spending on the uninsured in these categories to the federal share of ADAP spending (59%) produces an estimated \$800 million in Federal funding (67% of all CARE funding). State and local governments contribute 23% of ADAP funding, resulting in an estimated \$220 million in spending on the uninsured (19% of all CARE funding). Private sources provide \$170 million or 18% of ADAP funding (15% of all CARE funding).⁵⁵

5. Maternal and Child Health Bureau

The Title V Maternal and Child Health (MCH) Block Grant program has the primary aim of improving the health of all mothers and children in the U.S., emphasizing low-income, uninsured, and underinsured persons. Title V programs serve nearly 35 million pregnant women and children each year, including children with special health care needs. On average, 9.0% of those served by

⁵³ Kaiser State Health Facts Online, Ryan White CARE Act Budget, www.statehealthfacts.org; 2006.

⁵⁴ 2006 CARE Act Data Report, August 2006, http://hab.hrsa.gov/reports/2004_Data_Summary/page1.htm, <ftp://ftp.hrsa.gov/hab/HRSA.PR.06.pdf>. Section 2, Item 32.

⁵⁵ Distribution of ADAP funding from Kaiser StateHealthFacts.org. "Distribution of AIDS Drug Assistance Program (ADAP) Budget by Source, FY2006."

the program are uninsured.⁵⁶ MCH funds support a broad range of enabling, population-based, and direct health care services, with the latter accounting for just over half of total Title V Block Grant funding in 2008.⁵⁷

To estimate MCH Block Grant spending on the uninsured, we calculate the share of total spending for each category of program recipient (pregnant women, infants, etc.) that is attributable to direct care services (51.4%), and add to this figure a proportionate share of infrastructure expenditures. We then multiply this spending by the share of program recipients in each category who are uninsured, which produces an estimated \$263 million in MCH spending on the uninsured (Table 8). Since just over 25% of total MCH spending comes from program income, we reduce estimated total spending on the uninsured by this amount, which results in an estimate of \$193 million in uncompensated care.

To calculate the distribution of this spending among state/local, federal, and private funding sources, we multiply MCH spending on the uninsured by the share of total program spending attributable to each source. Most funding (\$140 million) is attributable to the state/local governments. Eleven percent (\$29 million) is attributable to the federal government and 9% (\$24 million) to private sources.

⁵⁶ "Number of Individuals Served by Title V, by Class of Individuals." Maternal and Child Health Bureau, HRSA, Title V Information System (TVIS), FY 2006, <https://performance.hrsa.gov/mchb/mchreports>

⁵⁷ "Federal-State Title V Block Grant Partnership Budget, by Category of Service FY 2008." Maternal and Child Health Bureau, HRSA, Title V Information System (TVIS), FY 2008, <https://performance.hrsa.gov/mchb/mchreports>

Table 8. Maternal and Child Health (MCH) Block Grant Spending on Care for Uninsured in US, 2008 (\$millions)

	Pregnant Women	Infants<1	Children 1-22	Children w/ Special Hlth Needs	All Others	All Users
Total MCD Block Grant expenditures ^a	\$385.8	\$522.7	\$1,299.0	\$2,614.8	\$319.7	\$5,172.0
Average share attributable to Direct Health Care & Related Infrastructure: 58%	\$223.8	\$320.6	\$753.4	\$1,516.6	\$185.4	\$2,999.8
Percent of users uninsured	5.9%	10.5%	6.8%	7.5%	27.5%	--
Est. MCH Block Grant spending on uninsured	\$13.2	\$33.7	\$51.2	\$113.7	\$51.0	\$262.8

Source: Maternal and Child Health Bureau, HRSA Title V Information System (TVIS), FY 2008, <https://performance.hrsa.gov/mchb/mchreports>
^a Included Federal allocation, match and overmatch, and program income.

6. *National Health Service Corps*

The mission of the National Health Service Corps (NHSC) is to improve the health of medically underserved persons by recruiting health professionals to serve in communities with the greatest need. It accomplishes this through scholarships and loan repayment programs for professionals willing to serve in areas with a shortage of primary health care access. There are currently over 4,000 clinicians and other health care professionals in the field.⁵⁸

To calculate the share of NHSC funding that is attributable to care for the uninsured, we multiply total expenses at NHSC sites (\$1.2 billion) by the share of charges attributable to the uninsured (15%), producing an estimated \$180 million in expenses for the uninsured.⁵⁹ Subtracting \$58 million in payments by self-pay patients results in an estimated \$122 million in uncompensated care for the uninsured in 2006. Since the NHSC budget is projected to decline in 2008, we estimate that NHSC sites provide an estimated \$107 million in uncompensated care for the uninsured (Table 9).⁶⁰ We attribute 100% of this funding to the federal government because it provides the scholarship and loan repayment funding that enables NHSC professionals to serve in these locations.

⁵⁸ National Health Service Corps, "About NHSC," 2003, <http://nhsc.bhpr.hrsa.gov/about/>.

⁵⁹ To avoid double counting of funds, we look only at those sites not receiving BPHC grant support. These are counted in the Community Health Center section of this report.

⁶⁰ Inflation factor based on difference between 2006 enacted IHS budget for clinical and contract health services and President's proposed 2008 budget for these same items. FY 2008 HHS Budget in Brief. <http://www.hhs.gov/budget/08budget/2008BudgetInBrief.pdf>

Table 9. Cost of Uncompensated Care at NHSC Clinics in US (in millions)

Total Expenses at NHSC Sites ^a		\$1,197.3
Self-Pay Patients' Charges as a Percent of All Charges	15%	
Expenses for Self-Pay Patients		\$179.6
Collections from Self-Pay Patients ^b		\$57.7
Total Uncompensated care Costs (2005)		\$121.9
Deflated to 2008 budget (factor of 0.881)		\$107.4

^a Only NHSC sites that do not receive grant support from the bureau of Primary Health Care. 717 sites included. 163 are certified rural health clinics.

^b Approximately 70% of this was collected based on a sliding fee scale available to self-pay patients.

7. Summary

a. Direct Care Program Spending

Overall, we estimate that the uninsured receive \$14.6 billion in uncompensated care through either direct care programs (the VHA and the IHS) or other programs that receive government funding (Table 10). Federal dollars comprise the largest share of spending on these programs (60.5%). State and local spending accounts for 37.1% and private funding for the remaining 2.4%.

We consider this to be a conservative estimate because, in the absence of direct information on the amount of care used by the uninsured, we assume that they use care at the same rate as other users with some type of insurance coverage. If, however, the uninsured have greater health care needs than insured people who receive care from these sources, then our estimates will understate the amount of uncompensated care received by the uninsured.

Table 10. Public Funding Available to Support Care for the Uninsured, by Source, 2008 (\$millions)

	Private		Federal		State/Local		Total
	\$	%	\$	%	\$	%	
Veterans system	\$0.0	0.0%	\$5,354.0	100.0%	\$0.0	0.0%	\$5,354.0
Indian Health Service	\$0.0	0.0%	\$1,628.0	100.0%	\$0.0	0.0%	\$1,628.0
Community Health Centers	\$157.7	10.0%	\$883.4	56.0%	\$536.3	34.0%	\$1,577.4
Ryan White CARE Act	\$174.4	14.6%	\$801.1	66.9%	\$222.8	18.6%	\$1,198.3
MCH Title V Block Grant	\$24.0	12.4%	\$29.0	15.0%	\$140.0	72.5%	\$193.0
National Health Service Corps	\$0.0	0.0%	\$107.4	100.0%	\$0.0	0.0%	\$107.4
Other State and Local	\$0.0	0.0%	\$0.0	0.0%	\$4,500.0	100.0%	\$4,500.0
Total	\$356.1	2.4%	\$8,802.9	60.5%	\$5,399.1	37.1%	\$14,558.1

Source: see Tables 4-9

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b. Government Expenditures on Uncompensated Care

In Section III.A we estimated that hospitals provided \$35.0 billion in uncompensated care. In Table 11 we summarize government payments to hospitals that are potentially available to support the cost of uncompensated care: \$11.0 billion through Medicaid DSH and UPL payments (after netting out Medicaid underpayments), \$7.2 billion through Medicare DSH and IME payments, \$8.6 billion through state and local tax appropriations, and \$2.0 billion through public assistance programs. Thus, we estimate that federal, state and local governments make payments of \$28.7 billion to hospitals to offset the \$35.0 billion in uncompensated care that hospitals provide.

Table 11. Estimates of Total Funds Potentially Available for Hospital care to the Uninsured by Source, 2008 (\$ billions)

Provider	Potentially Available Amount (\$Billions)		
	Federal	State/ Local	Total
Medicare			
DSH Payments	\$5.1	0.0	5.1
IME Payments	2.1	0.0	2.1
Total Medicare	7.2	0.0	7.2
Medicaid			
DSH Payments	8.6	2.0	10.6
Supplemental Provider Payments	12.2	0.9	13.1
Less Medicaid Underpayments	-11.2	-1.6	-12.8
Total Medicaid	9.6	1.3	10.9
State and Local Governments			
Tax Appropriations	0.0	8.6	8.6
Public Assistance Programs	0.0	2.0	2.0
Total State and Local	0.0	10.6	10.6
Total Government Expenditures	16.8	11.9	28.7
Private (Philanthropy, Surplus from Insured Patients, Other Profits)			6.3[*]
Hospital's Cost of Uncompensated Care			\$35.0

* This is the minimum private contribution; see text

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Table 12 summarizes the estimates of all government sources of funding that contribute to the estimated total of \$57.4 billion in uncompensated care in 2008. Overall, government funds account for \$42.9 billion, or about 75% of the total. Of this, \$25.6 billion is federal and \$17.2 billion comes from state and local governments. Hospitals receive \$16.8 billion of federal dollars and \$11.9 billion of state and local funds for a total of \$28.7 billion. The various community health providers receive \$8.8 billion in federal dollars and \$5.3 billion of state and local funds for a total of \$14.1 billion. The largest federal programs are Medicare (\$7.2 billion) and Medicaid (\$9.6 billion). As noted, state and local governments spend \$17.2 billion towards care for the uninsured. Of this, \$10.6 billion goes to hospitals through indigent care programs and direct tax appropriations. The remainder supports community providers, particularly through public assistance and indigent care programs.

Table 12. Sources of Government Funding Available for Uncompensated Care to the Uninsured 2008 (\$ Billions)

Provider	Federal	State/ Local	Total
Hospitals	\$16.8	\$11.9	\$28.7
Medicare	7.2		7.2
Medicaid (Net)	9.6	1.3	11.0
Public Assistance Programs		2.0	2.0
State and Local Tax Appropriation		8.6	8.6
Community Provider	8.8	5.3	14.1
Veterans System	5.4	0.0	5.4
Ryan White CARE Health	0.8	0.2	1.0
Maternal and Child Health	0.0	0.1	0.1
Indian Health Services	1.6	0.0	1.6
Community Health Centers	0.9	0.5	1.4
National Health Services Corps	0.1	0.0	0.1
State and Local Public Assistance Programs		4.5	4.5
Total	\$25.6	\$17.2	\$42.9

Note: Totals may not be consistent because of rounding.

There are various private contributions to uncompensated care. Physicians' donated time and foregone profits amount to \$7.8 billion. Hospital philanthropy and profit margins, which we calculate as a residual (Table 11), are responsible for at least an additional \$6.3 billion.⁶¹ The amount of private funding could be higher if government payments are poorly targeted, e.g., if Medicare or Medicaid dollars overpay some hospitals for uncompensated care while underpaying others. Thus, the total amount of government (\$42.9 billion) and private (at least \$14.6 billion) funding potentially available to pay for care received by the uninsured apparently exceeds the \$54.3 billion in uncompensated care estimated from the household survey data. Even after adjusting for possible misallocations of these funds, it appears that nearly \$43 billion of government money is "in the system" in the name of the uninsured.

The bulk of government spending, \$28.7 billion or 66%, is allocated to hospitals primarily through Medicare, Medicaid, and state tax appropriations. Much of the funding that goes to hospitals for uncompensated care could be reallocated to support a coverage expansion, though this would by no means be an easy task. Similarly, some of the funds going to community providers, e.g., Veterans Health Administration, Indian Health Service, Community Health Centers, etc. could also be reallocated, although this would be a very difficult political challenge.

⁶¹ In our previous analysis of the cost of uncompensated care, we estimated that private philanthropy contributed about 5% of the cost of hospitals' uncompensated care (J. Hadley and J. Holahan, "How Much Medical Care Do the Uninsured Use and Who Pays for It?" *Health Affairs* Web Exclusive, Feb. 12 2003, Exhibit 4). If private philanthropy continues to support hospitals' uncompensated care to this extent, it would contribute \$1.8 billion, which would leave \$4.5 billion as supported by hospitals' profits.

V. Cost-Shifting and Premiums for Private Insurance

A common corollary in the debate over the cost of the uninsured is that much of their uncompensated care is paid for by the privately insured through cost-shifting. Specifically, it is commonly perceived or asserted that health care providers make up for the losses they incur in treating uninsured patients by charging higher prices to and collecting higher payments from privately insured patients. These higher payments create an internal financial surplus (profit) that providers then use to offset their financial losses from delivering uncompensated care to the uninsured. However, as will be detailed below, the evidence shows that attributing increased private health insurance premiums to expanded coverage to the uninsured is a misperception.

If viewed as a form of “Robin Hood” pricing, cost-shifting conveys a benign connotation. However, there is also a potentially malignant interpretation: higher payments by privately insured patients to pay for uncompensated care eventually translate into higher premiums for private insurance. One recent study argued that the average employer-sponsored family insurance policy in 2005 included an extra \$922 in premiums to cover the cost of uncompensated care for the uninsured.⁶² Ironically, if the growing cost of uncompensated care contributes to the rise in private insurance premiums, it has the effect of swelling the number of uninsured by making private health insurance increasingly unaffordable.

⁶² Families USA, “Paying a Premium: the Added Cost of Care for the Uninsured,” Washington DC 2005.

Given this perspective, one argument frequently used to support expanding insurance coverage to the uninsured is that it will eliminate the need for providers to shift costs and, consequently, will lead to lower private insurance premiums. Presumably, the savings from lower private insurance premiums could be credited towards the financing of expanded coverage. In this section of the analysis we examine the question of whether and to what extent uncompensated care contributes to hospital cost-shifting and higher premiums for private insurance.

Summarizing the estimates reported in Sections II and III, the uninsured paid \$30 billion out-of-pocket for their care, leaving a balance of \$54.3 billion in care that was paid for by other sources. The analysis of governments' and providers' budgets produced a very similar estimate of \$57.4 billion spent on uncompensated care, of which \$42.9 billion came from government sources in the form of care provided by public hospitals and clinics, and payments to private providers, both direct (VHA, maternal and child health, Indian Health Service) and indirect (DSH, IME, UPL). Based on these estimates, government payments account for about 75% of the costs of uncompensated care.

Subtracting government payments from total uncompensated care leaves a balance of about \$14.5 billion dollars, which is the amount that is arguably financed by the privately insured in the form of higher payments and, ultimately, higher insurance premiums. Two questions arise: 1) Why is this amount so much lower than the amount estimated by Families USA, \$29 billion in 2005 (\$34.5 billion in 2008 dollars)?, and 2) How does the amount of uncompensated

care relate to hospitals' mark-up of charges/payments above costs, which is the mechanism for imposing cost-shifting on private payers?

The study by Families USA lists three sources of payment for uncompensated care:

- Non-patient, non-government revenue sources, including philanthropy,
- Federal, state, and local programs that partially reimburse providers for the cost of care to the uninsured, and
- Higher premiums for people with private health insurance.

We concur with the Families USA study that private philanthropy contributes a very small share of the financing for uncompensated care. However, our analysis differs in two major respects. First, although it is very difficult to identify precisely the government sources included in the Families USA tabulation, it appears that it excludes several sources that our analysis includes: a share of Medicare IME, a portion of Medicaid supplemental payments made through upper payment limit (UPL) provisions, and federal and state direct service programs (community health center grants, maternal and child health grants, Ryan White CARE Act funds, the National Health Service Corps, Indian Health Service, and the Veterans Health Administration). As a result, our estimate of the amount of funds from various government sources that is available to subsidize the cost of care received by the uninsured is much higher than the amount estimated by Families USA.

The second major difference between our approaches is that we do not necessarily assume that the private revenues used to subsidize care to the

uninsured inevitably cause higher private payments and insurance premiums. In particular, the Families USA approach omits the possibility that providers who treat substantial numbers of uninsured people have lower profits. In fact, we are highly skeptical that the high and growing cost of private insurance is strongly related, if at all, to the amount of uncompensated care delivered by private providers or to the growing number of uninsured people.

Our reasons for this skepticism are threefold. First, the amount of uncompensated care potentially subject to cost-shifting is very small relative to total private health insurance costs, especially when one divides uncompensated care between physicians and hospitals and other institutional providers. Undoubtedly, some hospitals in some geographic areas have sufficient market power to negotiate higher payments from private insurers, and some insurers have sufficient market power to pass higher rates on to employers. The same may be true of some physicians, particularly specialists, though most physicians in most markets are likely to be price takers in their negotiations with private insurers.⁶³ We estimate that the amount of uncompensated care potentially available for private cost-shifting is most likely about \$8 billion.⁶⁴ Given that total private health insurance expenditures in 2008 are estimated to be \$829.9 billion (from NHEA projections), the amount potentially associated with cost-shifting

⁶³ Physicians who can command high prices typically do not accept contracts with insurance plans. They require their patients to pay their full charges and submit their bills to insurance plans for reimbursement at the plans' rates, leaving the patient liable for both the plans' cost sharing and the excess of charges above plans' reimbursements to patients. However, these physicians are unlikely to treat many uninsured patients and, to the extent that they do not participate in insurance plans, their high charges should not affect insurance premiums.

⁶⁴ The difference between hospitals' uncompensated care and government payments is \$6.5 billion plus an arbitrary 20% (\$1.5 billion) of physicians' charity care, attributable to dominant specialty groups in some areas.

represents less than one percent of private health insurance costs. Even if all private funding for uncompensated care were recouped from private insurance payments, this would still amount to only 1.7% of private insurance premiums.

Second, the issue of cost-shifting, especially at the hospital level, is much more strongly related to fluctuations in payments by Medicare and Medicaid than it is to fluctuations in uncompensated care. As will be shown below, trends and fluctuations in hospitals' payment-to-cost ratios are essentially unrelated to changes in uncompensated care. Whether the associations between government payments and private mark-ups reflect behavior referred to as the "cost-shifting hydraulic" is an issue that is quite distinct from the effects of uncompensated care on hospitals' charges to privately insured patients.⁶⁵

Third, there is no controversy around the observation that hospitals charge privately insured patients more than other patients, and that they generate profits from those patients that are used to support other hospital missions. However, this static relationship does not mean that increases in uncompensated care cause hospitals to increase their charges to the privately insured. While an increase in profits may be a necessary condition for uncompensated care to expand, it is unlikely to be a sufficient condition. If hospitals were increasing charges in response to an increased demand for care by the uninsured, we would expect uncompensated care to increase as a share of overall costs more or less in line with increases in the number of uninsured as a share of the population. Increased charges would allow hospitals to maintain their margins

⁶⁵ A. Dobson, J. DeVanzo, and N. Sen, "The Cost-Shift Payment 'Hydraulic': Foundation, History, and Implications," *Health Affairs* 25: 1 (Jan/Feb 2006), pp. 22-33).

while providing more uncompensated care. In fact, uncompensated care has not increased as a share of hospital costs for several years, despite increases in the number of uninsured. Private payment-to-cost ratios have risen throughout this decade. The fact that hospitals have held uncompensated care constant (as a share of costs) suggests that the increase in private surpluses is related to other forces.

As is shown in the following figures, over the last twenty years hospitals' uncompensated care costs have remained remarkably stable as a share of overall costs, in spite of substantial fluctuations in hospitals' mark-ups of charges above costs for private payers, overall profits, and steady growth in the percentage of the population that is uninsured. Figure 1 shows the trend over time in the percentage of hospitals' expenses designated as uncompensated care and the percentage mark-up of charges above costs for privately insured patients. Between 1986 and 2005, the share of expenses going to uncompensated care remained remarkably steady, with a mean of 6% and a range from 6.4% in 1986 to 5.4% in 2002. While uncompensated care has been holding steady, the private-payer mark-up, which some interpret to be emblematic of cost-shifting, has gone through two periods of substantial increases, from 1986 to 1992 and from 1999 to 2005, and a substantial decline from 1992 to 1999. In fact, the year-to-year fluctuations in these two rates are virtually uncorrelated, with a correlation coefficient of only 0.04.

In Figure 2, we plot hospitals' uncompensated care percentage against hospital total margins and the percentage of the population that is uninsured.

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Over this period, hospital margins have fluctuated between lows of 3.5-3.7% (1987-1990 and 1999-2002) to highs around 6% (1995-1997), but show essentially no correlation ($r = 0.01$) with the share of expenses for uncompensated care. Conversely, the share of the population that is uninsured has shown, with only a brief exception between 1998 and 2000, a relentlessly steady increase, from around 12% in 1987-1988 to just over 15% in the most recent three years. Somewhat surprisingly, the percentage of uncompensated care was higher at the beginning of this time period (average of 6.1% between 1987 and 1989) when the percentage of the population without insurance averaged 12.3%, compared to 5.6% uncompensated care expenses over the most recent three years when the uninsured average 15.1% of the population. Overall, hospitals' share of costs devoted to uncompensated care has a fairly large negative correlation of -0.67 with the percentage of the population that is uninsured.

As a further illustration of the unlikely connection between hospitals' uncompensated care and the private payer payment-to-cost ratio, Table 13 shows data for 1999 from the 2001 MedPAC Report to Congress for all and various subgroups of hospitals.⁶⁶ In each of the subgroups, the class of hospitals with the highest proportion of uncompensated care costs has the lowest private

⁶⁶ MedPAC, "Report to the Congress: Medicare Payment Policy," March 2001, pp. 182-186.

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Figure 1:
Hospitals' Percentage Mark-Up of Private Payments above Costs
and Percent of Expenses for Uncompensated Care, 1986-2005

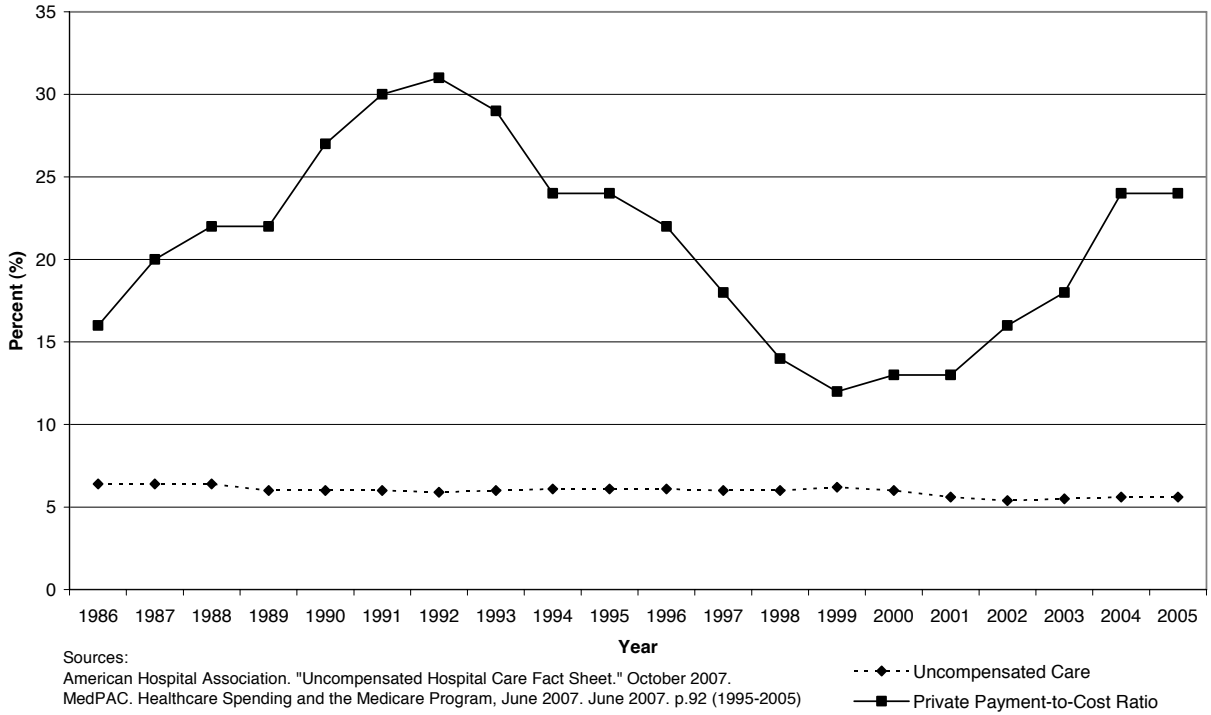
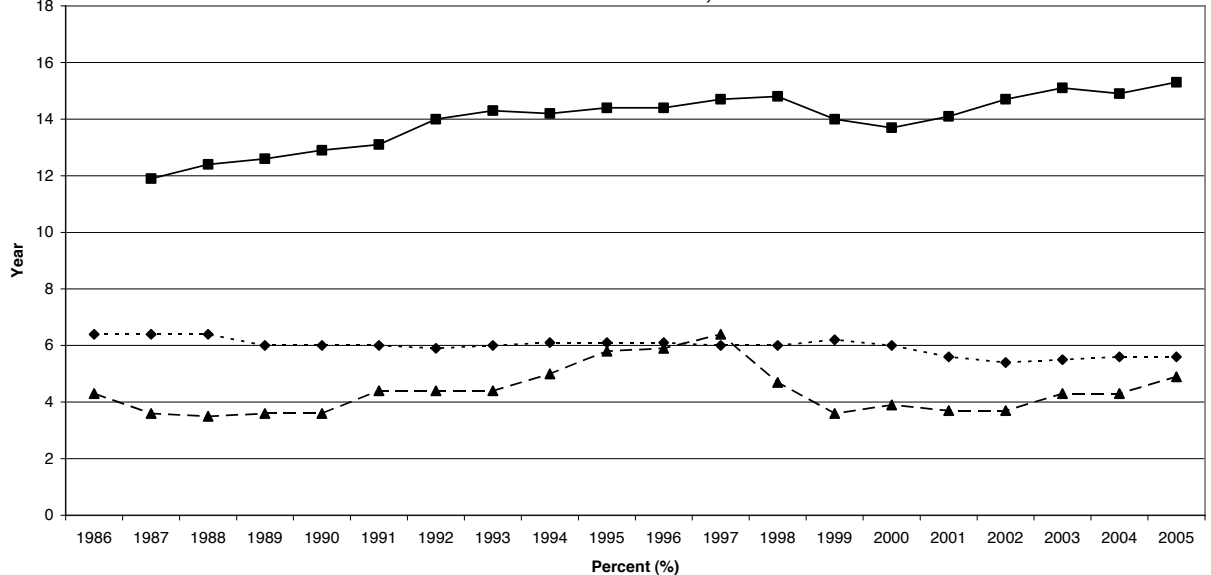


Figure 2:
Hospitals' Total Margin, Percent of Expenses for Uncompensated
Care and the Uninsurance Rate^a, 1986-2005



payer payment-to-cost ratio. In addition, the hospitals with relatively high uncompensated care burdens and relatively low private payer payment-to-cost ratios tend to have the lowest margins. While it is possible that these hospitals willingly accept lower margins and refrain from increasing mark-ups to the privately insured, it is more likely that they are unable to increase their mark-ups, presumably because of factors such as unfavorable market conditions, too few privately insured patients, and/or inadequate market power.

Undoubtedly, there are some hospitals with a substantial amount of market power that can in fact negotiate increased charges in response to increases in uncompensated care or Medicare and Medicaid underpayments. These hospitals tend to be the major teaching hospitals that have a dominant role in local markets. As shown in Table 13, however, major teaching hospitals in general have relatively low private payment-to-cost ratios, high ratios of uncompensated care costs as a percentage of overall costs, and low total margins. While some of these hospitals may be able to increase charges when necessary, this does not seem to be the dominant pattern.⁶⁷

⁶⁷ Major teaching hospitals have increased their total margins in recent years and now approach those of other hospitals but this seems to be related to significant increases in Medicare payment particularly through IME and DSH payments; Medicare margins were 4.2 percent in 2005 for major teaching hospitals, while Medicare margins for other teaching and non teaching hospitals were -3.9 percent and -6.9 percent respectively. MedPAC, "A Data Book: Healthcare Spending and the Medicare Program," June 2007.

Table 13. Hospitals' Private Payment-to-Cost Ratios, Uncompensated Care Costs, and total Margins, 1999

	Private Pay to Cost Ratio	Uncompensated Care (% Costs)	Total Margin (%)
All Hospitals	1.12	6.2	2.8
Urban	1.13	6.2	2.5
Rural	1.34	5.2	4.9
Major Teaching	1.06	9.7	0.2
Other Teaching	1.15	5.0	3.7
Non-Teaching	1.24	5.0	3.6
DSH			
Large Urban	1.08	8.3	1.2
Other Urban	1.22	6.8	3.3
Rural	1.44	7.2	4.8
Non-DSH	1.17	3.9	4.0

Source: MedPAC, Report to Congress, 2001, pp.182-186.

The various explanations for the fluctuations in hospitals' mark-ups to private payers remain controversial. Some argue that they represent the rise and fall of aggressive private managed care,⁶⁸ others attribute them to government underpayment,⁶⁹ and other observers suggest that a combination of factors is at play and that cost-shifting may have been a transitory phenomenon between eras of generous cost reimbursement and aggressive prospective payment.⁷⁰ What seems reasonably clear, however, is that uncompensated care is at most a

⁶⁸ MedPAC, "Report to the Congress: Medicare Payment Policy," March 2007, p. 63.

⁶⁹ A. Dobson, J. DeVanzo, and N. Sen, "The Cost-Shift Payment 'Hydraulic': Foundation, History, and Implications," *Health Affairs* 25: 1 (Jan/Feb 2006), pp. 22-33).

⁷⁰ M. Morrissey, "Cost Shifting: New Myths, Old Confusion, and Enduring Reality," *Health Affairs Web Exclusive*, October 8, 2003; P. Ginsburg, "Can Hospitals and Physicians Shift the Effects of Cuts in Medicare Reimbursement to Private Payers?" *Health Affairs Web Exclusive*, October 8, 2003, p. W3-472; P. Feldstein, "Cost Shifting," Ch. 16 in *Health Policy Issues: An Economic Perspective*, Chicago: Health Administration Press, 2003.

very minor player in the economics of hospital cost-shifting. Given the wide range of financial pressures most hospitals face, it is not surprising that uncompensated care is one of many arguments used to obtain the highest payments possible from private payers. However, if the uninsured were fully covered, it seems unlikely that the negotiating and market dynamics among providers, private payers, and public payers would be very much affected.

VI. The Incremental Cost of Care Used by the Uninsured if Covered

How much more care would the uninsured receive if they were fully covered by insurance? To answer this question, we estimated two-part statistical models of medical spending and simulated how much more care the uninsured would receive if they had full-year insurance coverage. These models allow the effect of insurance coverage to vary with a person's health status while controlling for the effects on spending of demographic, health and socio-economic characteristics. Since many of the uninsured are younger and healthier than the insured, they would be expected to have lower medical spending independently of their lack of insurance. The statistical models control for the effects of these other factors when we predict how much more the uninsured would spend if insured.

The simulations suggest that people who are uninsured at any time during the year would increase their total spending per person by 70%, from \$2,290 per person to \$3,885 per person (Table 14). The percentage increase in spending is much larger for the full-year insured (118%) than for the part-year insured (38%). The increase in spending is also much greater for adults (75%) than for children (33%), presumably reflecting the differences in the incidence and costliness of adults' and children's' health problems.

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Table 14: Simulated Increases in Total Spending by the Uninsured If They Were Fully Insured, by Age (Projected 2008 \$s)

Total Spending	Per Capita Spending (\$)			Total (\$ billions)		
	Actual	Simulated If Fully Insured	Change in Spending	Actual	Simulated If Fully Insured	Total Change in Spending ^a
All Uninsured	2,290	3,885	1,595	176.1	298.7	122.6
Full-Year	1,686	3,673	1,987	69.4	151.0	81.6
Part-Year	2,983	4,129	1,146	106.7	147.7	41.0
Children	1,363	1,868	504	25.9	35.5	9.6
Full-Year Uninsured	1,076	1,857	781	8.2	14.2	6.0
Part-Year Uninsured	1,556	1,874	319	17.7	21.3	3.6
Adults^a	2,595	4,543	1,948	150.5	263.4	113.0
Full-Year Uninsured	1,823	4,083	2,259	61.2	137.0	75.8
Part-Year Uninsured	3,655	5,175	1,520	89.3	126.4	37.2

Notes: a. Row and column totals may not match because of rounding

Source: Authors' tabulations from the 2002-2004 Medical Expenditure Panel Surveys.

In the aggregate, total spending would increase by \$122.6 billion to \$298.7 billion, compared to the uninsured's current total spending of \$176.1 billion (which includes insured spending by people with part-year coverage). Most of the increase in spending goes to the full-year uninsured and to adults, who make up most of the uninsured population and have a much larger increase in per person spending than children.

Comparisons with Other Estimates

Prior estimates (using MEPS data) of the incremental resource cost of covering the uninsured ranged from \$34 to \$69 billion in 2001 (2.8 to 5.6 percent of total national health spending), depending on whether the expanded coverage was primarily through Medicaid or through private insurance.⁷¹ If we assume that

⁷¹ IOM, *Hidden Costs, Value Lost*, p. 103.

60 percent of the expansion was through the private insurance system, the weighted average of these 2001 estimates would be about \$55 billion, or 3.7 percent of total national health spending in 2001. Our current incremental cost estimate of \$122.6 billion represents 5.1 percent of projected total national health spending for 2008, which is towards the higher end of the 2001 range of estimates.

The increase of about \$68 billion over seven years in the incremental cost of covering the uninsured is attributable to several factors: rapid increases in health care costs, continuing growth in the number of uninsured people, and changes in their characteristics. Between 2001 and 2008, per capita health care spending, which incorporates changes in both price and use, grew by 52.8% - more than twice the 22.3% increase in the consumer price index. Inflating the \$55 billion estimate for 2001 to 2008 by the increase in per capita health spending boosts the incremental cost estimate to \$84 billion. Thus, inflation in health care costs and per capita use accounts for more than 42% of the difference between the 2001 and 2008 estimates.

The remaining difference between the \$84 billion and our current estimate reflects a combination of an increase in the number of uninsured people and changes in their characteristics. Using Current Population Survey data to illustrate the increase in the number of uninsured Americans, the size of the uninsured population grew by almost 3.4 percent per year between 2001 and 2006, from 39.7 million to 47 million. Extrapolating to 2008 at the same rate results in a projected uninsured population of 50.2 million people, an increase of

26.4 percent over 2001. Applying this increase in the size of the uninsured population grows the incremental cost estimate from \$84 billion to \$106.2 billion, which accounts for another one-third of the difference between our current estimate and the 2001 estimate projected forward to 2008.

We believe that the remaining difference of about 25% (\$16.3 billion) is attributable primarily to changes in the characteristics of the uninsured populations between the two time periods. The 2001 estimates were based on MEPS data from 1996-1998, while our current 2008 estimate is based on MEPS data from 2002-2004. First, the full-year uninsured make up a larger share of the total uninsured population, 53.4 percent in the 2008 sample compared to 51.4 percent in the 2001 sample. More importantly, the 2008 uninsured sample is both older and in poorer health (Table 15). Given that older people spend much more than children at every health status level and that people in fair or poor health spend much more than those in excellent or very good health, these changes likely explain the higher level of spending per newly insured person in 2008 (\$3,885) compared to 2001 (\$3,751 in 2008 dollars).⁷²

Other factors that may contribute to the higher incremental cost estimate for 2008 are the decline of tightly managed HMOs, which may have restricted use by the insured in the earlier period, and poorer access to care by the uninsured in the later period. A coverage expansion in a tightly managed care environment would produce a smaller incremental effect of having coverage on

⁷² The projected estimate of \$3,751 was computed by taking a weighted average of per capita spending under private and public expansions in 2001 (from Hadley and Holahan, 2003) and inflating to 2008 by the change in total national health spending per capita (from the National Health Expenditure Accounts).

Covering the Uninsured in 2008

Table 15: Age and Health Distributions of Uninsured Samples, 2001 and 2008

	2008 (2002-2004 MEPS)	2001 (1996-1998 MEPS)
Age Distribution		
0-18	24.7%	28.5%
19-49	61.8%	60.5%
50-64	13.5%	10.3%
Health Status		
Excellent or Very Good	62.2%	63.1%
Good	26.7%	24.9%
Fair or Poor	10.9%	10.3%

Source: Authors' tabulations from the 2002-2004 and 1996-1998 MEPS.

spending by the uninsured. Conversely, poorer access to care in the later period would increase the size of the spending gap between the uninsured and the insured.

Methodological factors that may influence the 2008 estimate include improved measurement of spending while uninsured by people who are uninsured for only part of the year, the discrepancy between the MEPS data and the CPS data in their estimates of the number of uninsured people, and possible measurement error in reporting insurance status. More accurately assigning a larger share of the part-year uninsured's spending to the months when they are insured in effect increases the estimated effect of having insurance coverage on spending in the statistical models. From a more technical perspective, this result could be thought of as a type of endogeneity bias – that is, uninsured people who expect to incur medical spending have an increased incentive to seek insurance

coverage. This behavior would tend to overstate the effect of insurance on spending.

As noted above, the CPS reports fewer uninsured people than MEPS reports. According to the CPS, 47.0 million Americans were uninsured in 2006, which we generally regard as a point-in-time or full-year-equivalent estimate. Projecting the 2006 number to 2008 yields 50.2 million uninsured people. The comparable number for MEPS for 2008 is 54.9 million, or 10% higher. Thus using the CPS estimate of the number of uninsured Americans would reduce our estimate by about \$12 billion.

Buchmueller et al. conducted a structured review of numerous studies of the effect of health insurance on the use of ambulatory care visits and hospital care.⁷³ The studies reviewed generally estimated increases in use of 30-50% for children and 60-100% for adults. Although these estimates are somewhat smaller than our estimates, they are not directly comparable because they measured service use for specific services rather than for total expenditures, which include spending on drugs and other services not captured by studies of visits. Finally, Brent Kreider and Steven Hill investigated the effects of reporting errors in measuring insurance coverage.⁷⁴ They found that even though there is uncertainty about the number of people lacking insurance, under reasonable non-parametric assumption, estimates from MEPS of the maximum cost of covering the uninsured are not much affected by this uncertainty.

⁷³ T. Buchmueller, K. Grumbach, R. Kronick and J. Kahn, "The Effect of Health Insurance on Medical Care Utilization and Implications for Insurance Expansion: A Review of the Literature," *Medical Care Research and Review* 62, no. 1 (2004): 3-30.

⁷⁴ B. Kreider and S. Hill, "Partially Identifying Treatment Effects with an Application to Covering the Uninsured," *Journal of Human Resources* 2008 (forthcoming).

VII. Summary and Implications for Policy

People uninsured for all or any part of 2008 receive approximately \$86 billion in medical care during the time they lack insurance coverage. The uninsured pay for \$30 billion of their care out-of-pocket and receive about \$56 billion in uncompensated care. Total uncompensated care represents 2.2% of total health spending in 2008.

We estimate that government spends nearly \$43 billion, roughly 75% of total uncompensated care costs, through Medicaid DSH and supplemental payment programs, Medicare DSH and IME payments, various direct care programs, and state and local tax appropriations. Given the magnitude of government payments, we estimate that cost shifting to private insurance finances a relatively small amount of uncompensated care. Private insurance premiums are at most 1.7% higher because of the shifting of the costs of the uninsured to private insurers in the form of higher charges.⁷⁵

Expanding health insurance to provide full-year coverage to all Americans currently uninsured for any part of the year would increase their medical spending by \$122.6 billion in 2008, over and above their current uninsured spending of about \$86 billion. The increase in total spending corresponds to 5.1% of total health care spending and 0.8% of GDP. For comparison purposes, a recent analysis estimated that the tax subsidy received by privately insured workers with employer-sponsored insurance was over \$200 billion in 2006.⁷⁶

⁷⁵ See Section V. for a detailed discussion of cost shifting and uncompensated care.

⁷⁶ T. Selden and B. Gray, "Tax Subsidy for Employment-Related Health Insurance: Estimates for 2006," *Health Affairs* 25, no. 6 (2006):1568-1579.

The 5% increase is also smaller than the average annual increase in total health spending of 7.6% per year since 2000.

The estimate implicitly assumes that the uninsured's new coverage would reflect the distributions of public and private coverage and benefits held by lower- and lower-middle-income insured people, and that their medical care use would also be similar. The cost estimate would change if the new coverage were either substantially more generous (very low cost-sharing, as in Medicaid) or less generous (high deductibles) than current coverage. Similarly, it assumes that provider payment rates and administrative costs under various public and private plans would stay largely the same. Various health system reforms, such as competing private health insurance plans within purchasing pools, greater use of public programs' fee schedules, or expanded use of health information technology, could reduce the estimated incremental resource cost of expanding coverage. A recent report from the Commonwealth Fund estimates that a menu of fifteen savings options could reduce health spending by \$1.55 trillion over ten years.⁷⁷

Most importantly for the policy debate, however, it is essential to differentiate the incremental resource cost of insurance expansion from transfer or crowd-out costs, and from the more thorny issue of the financing of insurance expansion. Incremental resource cost is a key number for assessing the cost-

⁷⁷ Commonwealth Fund Commission of a High Performing Health System, *Bending the Curve: Options for Achieving Savings and Improving Value in U.S. Health Spending* (New York: The Commonwealth Fund, December 2007).

effectiveness of expanding insurance coverage, i.e., comparing the value of improved health associated with expanded coverage to its resource cost.⁷⁸

However, the additional cost of medical care used by the uninsured is not the same as the cost to the government of a coverage expansion, since out-of-pocket spending and income-related premium payments by the newly insured are likely to pay for some of these extra costs. Further, the cost attributed to any broad health financing reform could be significantly higher depending on the extent to which people drop their prior coverage in favor of coverage under the new plan, or retain their current coverage but receive new public subsidies to help pay their premiums.

These costs are not new national resources being devoted to health care but rather represent a transfer of spending from one type of coverage to another: although government spends more, many individuals, families, and businesses spend less. The savings to businesses and families in private insurance premiums and out-of-pocket spending can be large and are often overlooked in health reform cost calculations that focus on increased government spending. How the cost of the subsidies is distributed among different classes of people and different geographic areas is at least as major a political issue as the amount of the subsidies.

Undoubtedly, covering all of the uninsured could have significant cost implications for the federal government, regardless of how the reform is designed. Adding the cost of additional care to current spending by or for the

⁷⁸ W. Miller, E. Vigdor and W. Manning, "Covering the Uninsured: What Is It Worth?" *Health Affairs* 23 (2004): w157-w167 (published online March 31, 2004; 10.1377/hlthaff.w4.157).

uninsured, total medical care costs for newly insured people will be about \$208.6 billion, consisting of \$122.6 billion in new spending on top of the \$86 billion already in the system. Although this is substantial, not all of this money necessarily represents new government spending. Of the \$86 billion, the uninsured now pay \$30 billion themselves. Much of this, and perhaps more, could be captured by premiums, since the MEPS data show that 71% of the uninsured have incomes above 125% of poverty and will therefore likely be responsible for some or all of the premium cost themselves. Whether this will be greater than the \$30 billion that is already being spend depends on the subsidy structure.

Some of the total costs of covering the uninsured can be offset by redirecting the nearly \$43 billion that we estimate government programs currently spend on the uninsured. Once the nation achieves universal coverage there would be little need for much of this funding. Indirect payments to hospitals through Medicare and Medicaid would seem to be the most fungible. There is also an additional \$5.1 billion of Medicare DSH spending (not included in the \$43 billion above) that appears to be misallocated to hospitals that provide little care to the uninsured. However, hospitals are likely to argue that these dollars should not be diverted until after universal coverage is attained and that even then, some may still be needed if there are extra costs of caring for large numbers of poor people or people, such as undocumented immigrants, who may not be eligible for coverage. Direct service providers who treat special populations, such as veterans, Native Americans, non-English speaking immigrants, and low-

income pregnant women and children, may argue that their funding is needed to preserve the infrastructure that currently serves those populations.

Recognizing the political difficulties of eliminating existing subsidies, most actual reform plans look to savings or increased efficiencies in other parts of the system (greater use of information technology, better care management, and increased use of medical effectiveness research) to fund increased coverage. Another source of savings might accrue from the improved health of the uninsured. Numerous studies have shown that the uninsured delay seeking care for treatable conditions that often require more expensive care when they progress to an advanced state.⁷⁹ More recent research suggests Medicare would spend less on new beneficiaries who were previously uninsured if they had coverage in later middle age.⁸⁰ Although these sources of financing are less visible and more difficult to measure than the funding for existing programs, they are no less real and should be taken into account in the policy debate over expanding insurance coverage.

⁷⁹ J. Hadley, "Sicker and Poorer: The Consequences of Being Uninsured," *Medical Care Research and Review*, Vol. 60, no. 2 (supplement), (2003):3S-75S.

⁸⁰ J. Hadley and T. Waidmann, "Health Insurance and Health at Age 65: Implications for Medical Care Spending on New Medicare Beneficiaries," *Health Services Research* 41, no. 2 (2006) ; J. McWilliams, E. Meara, A. Zaslavsky, and J. Ayanian, "Health of Previously Uninsured Adults after Acquiring Medicare Coverage," *Journal of the American Medical Association* 298 (24): 2886-2894, Dec. 26, 2007; A. Dor, J. Sudano, and D. Baker, "The Effect of Private Insurance on the Health of Older, Working Age Adults," *Health Services Research* 41(3, pt. 1): pp. 759-787, June 2006.

STATISTICAL APPENDIX

A. MEPS Design, Analysis Sample, and Definitions

The Household Component of the MEPS is a nationally representative survey of the U.S. civilian non-institutionalized population, which excludes people in nursing homes, long-term hospitals, and people with long stays in acute-care hospitals. The sampling frame is drawn from respondents of the National Health Interview Survey. The MEPS employs an overlapping panel design that selects a new panel of sample households each year. Data are collected for two full calendar years from five interview rounds that take place over two and a half years. Although the analysis in this report focuses primarily on the non-elderly, we did not make any exclusions for Medicare coverage among the non-elderly and we include the uninsured elderly (less than one percent of the elderly population) with other uninsured adults. Total sample sizes for the 2002-2004 surveys are 40,706 families and 102,836 individuals. The average response rate is 64.1%.

The MEPS defines spending as direct payments received from or on behalf of an identified patient from an explicit source of payment. Indirect payments to providers that are not related to specific medical events, such as disproportionate share payments, tax appropriations, and grants, are not included. Payments for over-the-counter drugs, alternative care services, and phone contacts with medical providers are not included. Medical service use, charges and payments by source are obtained from a follow-up Medical Provider

Component (MPC) survey that contacts all hospitals and home health agencies and samples of physicians, clinics and pharmacies reported by household survey respondents. The MPC data are used to improve the accuracy of charge and payment information obtained from household respondents and to impute data as needed. Payment amounts are imputed for people covered by capitation plans and for people who receive free or discounted care from public hospitals and clinics.

In addition to the standard payment sources (out-of-pocket, private insurance, which includes Medigap and CHAMPVA, Medicare and Medicaid), MEPS reports payments from Other Public Programs and Other Sources. Other Public Programs includes the Veterans Health Administration, the Indian Health service, military facilities (other than covered by CHAMPVA), other federal government facilities, state and local sources (community health centers, local health departments, state programs other than Medicaid), and Medicaid payments for people who were not formally enrolled in Medicaid, e.g., emergency Medicaid coverage for pregnant women and newborns. Other Sources includes workers compensation, other types of insurance payments (auto, liability, homeowners, single service), and other miscellaneous and unknown sources.

B. Calibrating the MEPS to the National Health Expenditure Accounts (NHEA)

The MEPS and the NHEA employ substantially different methodologies and definitions to measure medical spending. In particular, the NHEA collects aggregate national information from industry sources and government

administrative data and employs a “matrix approach” to insure that estimates by type of service and source of payment are consistent with each other.⁸¹ As a result, the NHEA estimate of out-of-pocket spending is calculated essentially as a residual after other sources of payment are tabulated.

There are also substantial differences in populations and services covered. The MEPS reports direct payments for the civilian, non-institutionalized population, while the NHEA includes people in the military and the institutionalized population (residing in nursing homes, prisons, long-term care facilities). The NHEA also includes spending for over-the-counter drugs, nursing home care, program administration, public health activities, and research and construction. As a result of these differences in definitions and methodology, the MEPS estimate of total medical expenditures is considerably lower than the NHEA estimate – in 2002 the difference was just over 60% (\$1,314 billion for the NHEA compared to \$833 billion for MEPS). Adjusting to the extent permitted by the different data sources and methods to make the two estimates as comparable as possible reduces the difference to 13.8%.⁸²

Since the NHEA is the standard source of measuring health spending in the US, we adjusted the MEPS data so that the estimates we generate will align more closely with the NHEA estimates. Using information reported in Sing et al. (2006), we subtracted from the NHEA expenditure estimates for long-term care, active duty military, health care products/services not counted by MEPS, provider

⁸¹ See “NHEA Definitions, Sources and Methods,” available at http://www.cms.hhs.gov/NationalHealthExpendData/02_NationalHealthAccountsHistorical.asp

⁸² M. Sing et al., “Reconciling Medical Expenditure Estimates from the MEPS and NHEA, 2002,” *Health Care Financing Review* 28 (1): pp. 25-40, Fall 2006.

revenues from non-medical activities, and indirect payments for DSH, IME, and GME made by Medicare and Medicaid. We then assumed that the MEPS estimate of households' out-of-pocket spending is more accurate than the NHEA estimate, since MEPS collects this information directly from households, while the NHEA calculates it as a residual after accounting for payments from other sources. We then adjusted the payer-specific amounts in the MEPS for private health insurance, Medicaid, and Medicare so that their national estimates would match the national estimates for each source in the adjusted NHEA. Finally, the national totals for the two sources were compared and a final adjustment was made to all other sources of payment in the MEPS (VA, workers comp, Tricare-Champus, other private, other public, and other) so that the grand totals for national personal health care spending for the civilian non-institutionalized spending matched each other. Table I.A1 reports the payer-specific adjustment factors used to calibrate MEPS to the NHEA.

Table I.A1: MEPS/NHEA Adjustment Factors

Source of Payment	Adjustment Factor
Out-of-Pocket	1.00
Medicaid	1.53
Medicare	1.13
Private Insurance	1.26
All Other Sources	0.98

In our previous national estimates of the cost of care for the uninsured, we used a single adjustment factor of 1.25 for all sources of payment. Using a single adjustment factor effectively increases the spending estimates for out-of-

pocket, Medicare, and all other sources, while reducing it for Medicaid. Although there may be other approaches to making these adjustments, we concluded that it was most important to calibrate the MEPS to the NHEA by source of payment because the estimates of the national amounts paid by Medicare and Medicaid are probably more accurate than the estimates for other sources of payment. However, these estimates still require making assumptions about the amounts of Medicare and Medicaid payments for non-institutionalized people, as well as other assumptions about how payments are cross-classified for services other than acute medical care. As a result, they may still deviate from the true amounts spent by Medicare and Medicaid on the MEPS-defined populations and services.

C. Measuring Uninsured Spending by People Insured for Part of the Year

In our previous analyses, we were unable to identify when medical spending occurred for people who were uninsured for a part of the year and had to estimate the share of their annual medical spending that could be attributed to uninsured care. In this analysis, we used information from individual medical events recorded by the MEPS to identify services that were received during the portion of the year (months) when a person reported not having any insurance coverage. Individual medical events occurring during uninsured months were further screened to determine if there were payments received from an insurance source, to allow for discrepancies between people's reporting of the months they were uninsured and for lags in providers' receipt of insurance payments. This

approach also addresses retrospective coverage of services for people whose insurance status may have been pending, and for people who may have received service-specific coverage, e.g., emergency Medicaid or Medicaid coverage of prenatal and newborn/infant care. Using the dates of service recorded in the individual medical event files allows us to develop more accurate estimates of the amounts of spending incurred during insured and uninsured spells for people who do not have full-year coverage.

D. Pooling Years and Projecting for Inflation and Population Growth to 2008

In order to increase sample sizes by age and type of insurance, we pooled data from the MEPS for calendar years 2002-2004, which were the three most recent years available when this study was being conducted. Medical spending data were then projected forward to 2008 price levels using current and projected levels of personal health care spending per capita from the National Health Expenditure Projections.⁸³ The specific inflation factors used were 1.425 for 2002, 1.335 for 2003, and 1.257 for 2004.

Total and uninsured population sizes by age (0-18, 19-64, and 65+) and by insurance status (insured or uninsured) for the non-elderly were projected to 2008 from growth rates calculated from the 2004-2006 Current Population Surveys. These estimates assume that the annual rate of growth between 2006 and 2008 will be the same as it was between 2004 and 2006. We also assumed

⁸³ Available at http://www.cms.hhs.gov/NationalHealthExpendData/03_NationalHealthAccountsProjected.asp#TopOfPage

that the part-year insured population would grow at the same rate as the full-year uninsured population.

In using the CPS to extrapolate the number of uninsured people in the MEPS, it should be pointed out that estimates of the number of uninsured people derived from the MEPS differ from estimates based on the Current Population Survey. The latter are the most commonly used estimates of the number of uninsured in the U.S. There are number of reasons for this discrepancy related to various design issues, such as sampling and question wording.

There has been considerable debate about whether the CPS estimates measures coverage at a point in time or for the entire previous year. The wording of the CPS survey questions should yield the number of people uninsured for the full year. But, as has been shown in several reports, the CPS full-year number lines up very closely to the MEPS and National Health Interview Survey (NHIS) estimates of coverage at a point in time.⁸⁴ Thus, more recently observers have come to accept the CPS as a point in time estimate. The Census itself has commented on this issue in its last two releases and has stated that the CPS estimates, for various reasons, seem to be capturing a point-in-time estimate of the uninsured.⁸⁵ This means that it would include people who are uninsured for the full year as well as for part of the year.

The CPS showed a population of 260 million non-elderly in 2006 and an uninsured rate for the non-elderly of 17.9 percent. Increasing this by population

⁸⁴ G. Kenney, J. Holahan, and L. Nichols. "Toward a More Reliable Federal Survey for Tracking Health Insurance Coverage and Access". Health Services Research, 2006 June; 41(3 Pt 1): 918–945.

⁸⁵ C. DeNavas-Walt, B.D. Proctor, and J. Smith, "Income, Poverty, and Health Insurance Coverage in the United States, 2006". US Census Bureau, August 2007.

growth between 2004 and 2006 yields a population estimate of 265 million in 2008. Assuming the uninsured rate increased at the same rate between 2006 and 2008 as it had between 2004 and 2006, we derive an estimate of uninsurance rate of 18.9 percent, which implies 50.1 million uninsured at a point in time in 2008.

The CPS does not permit dividing this number into full-year and part-year uninsured. The National Survey of the America's Families (NSAF) did provide estimates of the number of uninsured at a point in time, for the full year, and ever uninsured during the year. Using this information, we can impute estimates for the CPS of full-year and part-year uninsured for 2008. The NSAF ratio of ever-uninsured to point-in-time uninsured was 1.32. Multiplying this by the 50.1 million estimate from the CPS of the point-in-time uninsured yields an estimate of 67.8 million "ever-uninsured" in 2008. The NSAF showed that 53 percent of the ever-uninsured were uninsured for the full year. Multiplying the .53 times 67.8 yields 36.0 full-year uninsured; the residual is 31.8, the number uninsured for part of the year. These numbers are roughly 12 percent below the number of part year uninsured and full year uninsured on the MEPS (Table 1a). These NSAF numbers are from 1999 and may be somewhat outdated. But one could generate point in time estimates for the MEPS and derive a similar result.

Thus, although we use the CPS to extrapolate the number of uninsured people in the MEPS from 2002-2004 to 2008, it is likely that if one were to use the CPS estimates of the number of uninsured directly, the result would be somewhat lower estimates of the amounts of current uncompensated care and of

the incremental cost of expanding coverage. However, these lower estimates would not necessarily be more accurate than those based on the MEPS, although they might have more currency because the CPS is the accepted standard in spite of its acknowledged difficulty in obtaining an accurate estimate of people uninsured for a full year and its inability to estimate the number of people uninsured for part of the year.

E. Estimating “Implicitly subsidized” Care Received by the Uninsured

Since the MEPS does not record payments for care that are not tied directly to an identified patient, it does not capture the value of care that is implicitly paid for by indirect payments to providers for public or private sources. Public sources include general tax appropriations, government grants, and indirect payments made by Medicare and Medicaid through DSH, UPL, IME, and GME provisions of various reimbursement formulas. The indirect Medicare and Medicaid payments are made essentially to hospitals only, while tax appropriations and grants go to both hospitals and clinics, such as community health centers and maternal and child health clinics. Private sources of payment include philanthropy and surpluses (profits) generated from care delivered to privately insured people.

We define the value of implicitly subsidized care as the difference between the amount providers would expect to receive in payment from someone with private insurance coverage and the amount actually paid by the uninsured person. This calculation involves estimating the expected private payment and

adjusting for payments made by public agencies, such as the VA, workers comp, and other public programs. In effect, we assume that payments from these sources are payments in full and that whatever discrepancy there might be between those payments and expected private payments reflects a contractual discount accepted by the provider. Since providers accept substantial discounts from charges in payments made by private insurance, we do not treat similar discounts given to public payers as a form of implicitly subsidized care.

The calculation of implicitly subsidized care is applied to all services received while a person is uninsured. The calculation involves the following steps:

- Multiply total charges for uninsured service by the ratio of total payments from private sources (out-of-pocket, other private, other) to total payments from all sources. The resulting product represents the total volume of uninsured care that is eligible to receive implicitly subsidized care.
- Calculate the expected payment if privately insured by multiplying total charges from step 1 by the ratio of total payments to total charges for all services received by people full-year private insurance coverage.
- Calculate the difference between the expected payment if privately insured (from step 2) and actual payments from private sources (out-of-pocket, other private, other). This difference is defined as the value of implicitly subsidized care that is paid for by other unidentified sources, both public and private.

SUPPLEMENTARY TABLES

- A.1 *Medical Spending per Capita by Insurance Status (Elderly)*
- A.2 *Medical Spending per Capita by Insurance Status (Total Population)*
- A.3 *Two-Part Spending Models for Total Spending (by age)*
 - A.3a Children (ages 0-18)
 - A.3b Non-Elderly Adults (ages 19-64)
 - A.3c Elderly (ages 65+)

Table A.1: Medical Spending Per Capita by Insurance Status and Source of Payment: Elderly (65+) (Projected 2008\$)

	Full Year Insured			Part-Year Insured			Full-Year Uninsured	
	All	Medicare Only	Medicare+ Private	Dual (Medicare + Medicaid)	Other ^d	All Spending		Insured Part
n	10,966	4,583	5,080	1,468	436	122		92
Population (estimated)	33,862,097	11,765,510	17,933,195	2,633,005	1,530,387	345,015		247,786
Expenditures (\$)	12,297	10,525	12,805	18,286	9,672	3,705	3,178	528
By source of payment (\$)								
Out-of-pocket	1,906	2,166	1,944	709	1,527	744	594	149
Private	2,096	0	3,428	86	6,076	46	46	0
Medicare	6,645	6,788	6,898	7,335	1,394	1,817	1,817	0
Medicaid	853	267	13	9,557	233	376	376	0
Other Public ^a	576	758	491	474	340	232	189	44
Other Private ^b	221	545	32	125	102	371	156	215
Donated ^c	0	0	0	0	0	119	0	119

a. Includes Veterans Health Administration, TriCare, Other Federal, Other State & Local, Other Public, and Workers Compensation

b. Includes Other Private and Other Sources

c. Implicitly subsidized care is care received by the uninsured that is subsidized by indirect revenue sources not measured by the MEPS. See Appendix I.E for details of the imputation methodology.

d. Includes Medicare only, Medicare plus Medicaid, and other combinations of full-year coverage

e. Uninsured spending is for care received during months when the person is uninsured.

Source: Authors' tabulations from the 2002-2004 Medical Expenditure Panel Surveys.

Table A.2: Medical Spending Per Capita by Insurance Status and Source of Payment: All People (Projected 2008\$\$)

	Full Year Insured						Part-Year Insured		Full-Year Uninsured
	All	Private	Medicare	Medicaid	Dual	Other	All Spending	Insured Part	
n	75,179	45,923	10,933	14,784	2,444	1,095	12,064		15,593
Population (estimated)	224,070,297	157,520,051	34,973,640	24,265,624	4,650,354	2,660,628	36,102,594	36,102,594	41,376,407
Expenditures (\$)	5,711	3,963	12,567	4,823	18,539	4,772	2,990	2,606	1,702
By source of payment (\$)									
Out-of-pocket	857	687	2,113	176	744	799	551	396	588
Private	2,584	3,006	2,540	461	157	1,808	1,116	1,116	0
Medicare	1,234	27	6,856	63	6,516	270	62	62	0
Medicaid	703	25	193	3,885	10,590	1,277	854	854	0
Other Public ^a	254	185	625	142	400	270	161	115	46
Other Private ^b	78	33	241	96	133	347	101	64	37
Donated ^c	0	0	0	0	0	0	145	0	145

a. Includes Veterans Health Administration, TriCare, Other Federal, Other State & Local, Other Public, and Workers Compensation

b. Includes Other Private and Other Sources

c. Implicitly subsidized care is care received by the uninsured that is subsidized by indirect revenue sources not measured by the MEPS. See Appendix I.E for details of the imputation methodology (available at www.kff.org)

d. Includes Medicare only, Medicare plus Medicaid, and other combinations of full-year coverage

e. Uninsured spending is for care received during months when the person is uninsured.

Source: Authors' tabulations from the 2002-2004 Medical Expenditure Panel Surveys.

Covering the Uninsured in 2008

Table A.3a Two-Part Spending Models for Total Spending - Children (ages 0-18)

Variable	Any medical expenditures	Total medical expenditures
Percent of the year insured	1.138 *	0.299 *
General Health Status		
Very good	0.168	-0.051
Good	0.047	-0.071
Fair or Poor	0.669 **	0.925 *
Health Status Insurance Interactions		
Very Good x Pct Insured	-0.080	0.174
Good x Pct Insured	0.054	0.467 *
Fair or Poor x Pct Insured	0.307	0.116
MSA	-0.168 **	0.075
Female	0.112 **	-0.123 *
Age		
0-1	1.180 *	0.475 *
2-4	0.508 *	-0.507 *
5-9	0.346 *	-0.441 *
10-12	0.222 *	-0.225 *
Race/Ethnicity		
Hispanic	-0.213 **	-0.277 *
African american	-0.448 *	-0.270 *
Asian	-0.531 *	-0.295 *
American Indian	-0.424 **	0.002
Education		
Less than high school	-1.164 *	-0.226 **
High school diploma	-0.882 *	-0.112
College degree	-0.383 ***	0.082
Income (% poverty)		
100-200% FPL	0.024	-0.105
200-400% FPL	0.303 *	-0.123 ***
Marital Status		
Married, spouse not present	-0.358 ***	0.407
Widowed/divorced/separated	-0.240 ***	0.114
Never married	-0.118	0.068
Other Health		
ADL/IADL	0.423	0.694 *
Unable	-0.947	0.014
Require aid/help	1.220 **	0.706 **
Social/Cognitive limitation	0.304	0.622 **
Activity limitation	0.266	0.729 ***
Deceased/Institutionalized	-0.113	0.789 **
Diabetes	-0.626 **	-0.040
Hypertension	-	-0.368
Asthma	-	0.024
Back disorder	-1.599 *	0.152
Infectious disease	-0.813 *	-0.327 *
Endocrine	1.122 **	0.230
Blood	1.248 ***	0.129
Heart	-0.486	0.631 *
Bronchitis	-0.332	-0.209
Digestive disorder	-0.703 **	0.140

Covering the Uninsured in 2008

**Table A.3a Two-Part Spending Models for Total Spending - Children (ages 0-18)
(cont.)**

Variable	Any medical expenditures	Total medical expenditures
Genitourin	-0.574 ***	0.005
Skin	0.253	-0.302 **
Musculoskeletal	-0.287	-0.077
Fracture	0.365	0.115
Otitis media	0.570	-0.302 *
Malignant neoplasm	-	1.622 *
Pregnancy	0.064	0.016
Number of Conditions		
One condition	1.970 *	0.601 *
Two conditions	3.722 *	1.126 *
Three conditions	4.799 *	1.540 *
Four conditions	-	1.854 *
Five or more conditions	-	1.862 *
Census Region		
Midwest	-0.306 *	0.020
South	-0.414 *	-0.033
West	-0.421 *	-0.144 **
Constant	1.010 *	7.151 *

Note: * p<0.01, ** p<0.05, *** p<0.10

Covering the Uninsured in 2008

Table A.3b Two-Part Spending Models for Total Spending - Non-Elderly Adults (ages 19-64)

Variable	Any medical expenditures	Total medical expenditures
Percent of the year insured	1.21 *	0.30 **
General Health Status		
Very good	0.12	-0.03
Good	0.15 **	0.05
Fair	0.28 *	0.29 ***
Poor	0.20	0.48 **
Health Status Insurance Interactions		
Very Good x Pct Insured	0.08	0.17
Good x Pct Insured	0.11	0.25 ***
Fair x Pct Insured	0.05	0.20
Poor x Pct Insured	0.32	0.09
MSA	-0.09	-0.02
Female	0.94 *	0.22 *
Age		
19-24	0.33 *	-0.05
25-29	0.19	0.14
30-34	0.15	0.02
35-39	-0.02	-0.09 ***
40-44	0.07	0.04
45-49	0.05	-0.09
50-54	-0.03	-0.09
55-59	0.11	0.02
Race/Ethnicity		
Hispanic	-0.55 *	-0.07
African american	-0.52 *	-0.02
Asian	-0.54 *	-0.28 *
American Indian	-0.70 *	-0.04
Education		
Less than high school	-0.99 *	-0.14 **
High school diploma	-0.60 *	-0.03
College degree	0.02	-0.06
Income (% poverty)		
100-200% FPL	0.09	-0.21 *
200-400% FPL	0.17 *	-0.26 *
Marital Status		
Married, spouse not present	-0.22 ***	-0.03
Widowed/divorced/separated	-0.01	-0.02
Never married	-0.15 *	-0.13 *
Other Health		
ADL/IADL	0.48 **	0.52 *
Unable	-0.58	0.22 **
Require aid/help	0.01	0.31 *
Social/Cognitive limitation	0.15	0.19 *
Activity limitation	0.25	0.29 *
Deceased/Institutionalized	-0.37	2.38 *
Diabetes	0.74	0.19 *
Hypertension	0.78	-0.01
Asthma	-0.04	0.09
Back disorder	-0.61	-0.04

Covering the Uninsured in 2008

**Table A.3b Two-Part Spending Models for Total Spending - Non-Elderly Adults (ages 19-64)
(cont.)**

Variable	Any medical expenditures	Total medical expenditures
Infectious disease	-0.91 ***	-0.21 *
Endocrine	0.75	0.01
Blood	0.49	0.38 *
Heart	0.30	0.53 *
Bronchitis	0.15	-0.16 **
Digestive disorder	0.02	0.15 *
Genitourin	0.41	0.23 *
Skin	0.47	0.00
Musculoskeletal	-0.46	-0.06
Fracture	0.26	0.40 *
Otitis media	0.81	-0.22 *
Malignant neoplasm	0.09	0.48 *
Pregnancy	2.67 **	0.81 *
Number of Conditions		
One condition	1.81 *	0.31 *
Two conditions	2.93 *	0.53 *
Three conditions	3.61 **	0.83 *
Four conditions	4.19 **	0.95 *
Five or more conditions	5.37	1.00 *
Census Region		
Midwest	-0.09	0.06
South	-0.15 **	-0.04
West	-0.08	0.00
Constant	-0.19	7.51 *

Note: * p<0.01, ** p<0.05, *** p<0.10

Covering the Uninsured in 2008

Table A.3c Two-Part Spending Models for Total Spending - Elderly (ages 65+)

Variable	Any medical expenditures	Total medical expenditures
Percent of the year insured	0.513	0.492
General Health Status		
Very good	-0.653	-1.092
Good	-1.037	-0.832
Fair	-0.681	0.112
Poor	-0.205	0.979
Health Status Insurance Interactions		
Very Good x Pct Insured	0.716	1.065
Good x Pct Insured	1.065	0.937 ***
Fair x Pct Insured	1.089	0.100
Poor x Pct Insured	0.520	-0.635
MSA	-0.588 *	0.092 **
Female	0.280	-0.024
Age		
75+	0.294 ***	-0.025
Race/Ethnicity		
Hispanic	-0.783 *	0.060
African american	-0.213	-0.026
Asian	-0.295	0.089
American Indian	-1.676 *	-0.281 ***
Education		
Less than high school	0.322	-0.136
High school diploma	0.542	-0.113
College degree	1.291 **	-0.088
Income (% poverty)		
100-200% FPL	-0.100	-0.006
200-400% FPL	0.037	0.040
Marital Status		
Married, spouse not present	-0.631	-0.291 **
Widowed/divorced/separated	-0.657 *	0.002
Never married	-0.491	0.124
Other Health		
ADL/IADL	-0.163	0.194 *
Unable	-2.400 *	0.043
Require aid/help	0.879 ***	0.093
Social/Cognitive limitation	0.310	0.129 **
Activity limitation	0.444	-0.004
Deceased/Institutionalized	-1.669 *	0.667 *
Diabetes	-1.157 *	0.137 *
Hypertension	-	-0.018
Asthma	-1.456 **	0.184 **
Back disorder	-1.791 *	0.041
Infectious disease	-0.873	-0.012
Endocrine	-0.001	0.015
Blood	-	0.172 **
Heart	-0.237	0.478 *
Bronchitis	-1.480 ***	-0.102
Digestive disorder	-0.998 **	0.288 *
Genitourin	1.397 **	0.140 *

Covering the Uninsured in 2008

Table A.3c Two-Part Spending Models for Total Spending - Elderly (ages 65+)
(cont.)

Variable	Any medical expenditures	Total medical expenditures
Skin	-0.532	0.062
Musculoskeletal	-1.243 *	0.052
Fracture	-1.129	0.341 *
Otitis media	-	-0.168
Malignant neoplasm	-	0.391 *
Pregnancy	-	*
Number of Conditions		
One condition	3.046 *	0.566 *
Two conditions	5.291 *	0.835 *
Three conditions	6.670 *	1.024 *
Four conditions	11.599 *	1.031 *
Five or more conditions	-	1.172 *
Census Region		
Midwest	-0.158	0.033
South	-0.263	-0.190 *
West	0.208	-0.227 *
Constant	0.399	7.299 *

Note: * p<0.01, ** p<0.05, *** p<0.10

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