Effects of Providing Insurance to Uninsured People | 4

W ith national health expenditures (NHE) rising rapidly, many policy makers fear the cost implications of reform proposals that would extend coverage to the estimated 37 to 38 million uninsured Americans. Thus, new health expenditures by or on behalf of those who otherwise would be uninsured are perceived as an important element of reforming the nation's health care system. Analysts and policymakers come to different conclusions about the likely cost of covering this segment of the population. This chapter examines the assumptions underlying estimates of the costs of covering uninsured people. The analyses reviewed are summarized in table 4-1.

The first part of this chapter briefly discusses the different approaches various reform proposals take to provide coverage to uninsured people. Then it examines the different assumptions analysts make for estimating the incremental and total costs of those provisions. The third section compares approaches taken in analyses of reform proposals with methods and findings of recent studies about utilization and expenditure differences between insured and uninsured people (e.g., Long and Marquis (91); Spillman (151)). The final section compares the results of these studies with the results of analyses.

The chapter's focus is on analyses of proposals that would provide for universal coverage by a specific date (e.g., the American Health Security Act of 1993 (H.R. 1200/S. 491), other single-payer, tax-financed proposals, and the Health Security Act of 1993 (H.R. 3600/S. 1757)). Some attention is given to analyses of proposals that would provide coverage gradually (e.g., H.R. 5502, H.R. 5919, and H.R. 5936 in the 102d Congress), although there is typically less information on the methods and results of these analyses than for the universal coverage proposals.
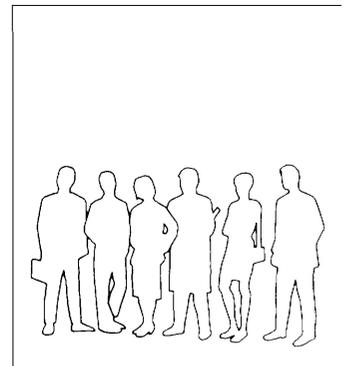
TABLE 4–1: Analyses of the Impact of Health Reform Proposals on National Health Expenditures Reviewed in This Report

Proposal	Applying government cost controls (chapter 2)	Encouraging managed competition (chapter 3)	Providing universal coverage to uninsured people (chapter 4)	Reducing administrative costs (chapter 5)
American Health Security Act of 1993 (H.R. 1200/S. 491)[b]	CBO		*CBO*	CBO
Comprehensive Health Reform Act of 1992 (H.R. 5919)[c]				CBO
Health Care Cost Containment and Reform Act of 1992 (H.R. 5502)[c]	**CBO**		*CBO*	CBO
Health Security Act (H. R. 3600/S. 1757)[b]	**CBO** Clinton Administration Lewin-VHI	**CBO** Clinton Administration Lewin-VHI	**CBO** **Clinton Administration** **Lewin-VHI**	**CBO** Clinton Administration Lewin-VHI
Health Security Act (H.R. 3600/S. 1757)[b], Lewin-VHI scenario without government cost controls		**Lewin-VHI**		
Managed Competition Act of 1992 (H.R. 5936)[c]		CBO ESRI	@ O	CBO
Managed competition plan, Starr version			Sheils et al.	
National health plan, full savings scenario				ESRI
National health plan, administrative savings scenario				ESRI
Single-payer plan, CBO version with patient cost-sharing			**CBO**	
Single-payer plan, CBO version without patient cost-sharing			**CBO**	CBO
Single-payer plan, GAO version				*GAO*
Single-payer plan, Grumbach et al. version				**Grumbach et al.**
Single-payer plan, Lewin-VHI version				**Lewin-VHI** [d]
Single-payer plan, Woolhandler and Himmelstein version				**Woolhandler and Himmelstein**
Universal Health Care Act of 1991 (H.R. 1300)[c]	CBO		CBO	**CBO**

KEY: CBO = U.S. Congress, Congressional Budget Office; GAO = US. General Accounting Office; ESRI = Economic and Social Research Institute.

[a]Full citations for the analyses are in appendix B.

bBill numbers are for 103d Congress.

CBill numbes are for 102d Congress.

dAnalysis was conducted by Lewin-ICF, The company was acquired and expanded in 1992. For purposes of this report all Lewin analyses are Identlfied as Lewin-VHI.

SOURCE: Office of Technology Assessment, 1994.

The chapter also devotes attention to the distinction between incremental and total expenditures related to covering uninsured people. Incremental expenditures are the additional expenditures that might be incurred by or on behalf of people previously (or currently) without insurance if they became insured. Total expenditures combine the baseline healthcare expenditures that uninsured people incur even in the absence of insurance, plus the incremental expenditures estimated to result from *insurance-induced* demand for services. [1] The amount of incremental expenditures is important to projections of NHE, the subject of this report. Total costs maybe important in so-called distributional analyses, and for analyses of Federal budget impacts. These issues are important, but are beyond the scope of this report.

The Office of Technology Assessment (OTA) faced several obstacles in developing this chapter. One that may be particularly frustrating to users interested in the cost of a covering uninsured people under a specific proposal is that some analysts do not report these costs in their publications. A second obstacle is that when cost estimates are available, they may be difficult to compare because they are based on different assumptions. Some analysts assume that newly insured people will have utilization patterns typical of those insured under current law, not reflecting in their estimates the scope and depth of the benefit package proposed by the reform (e.g., Lewin-VHI (89); Sheils, Lewin, and Haught (146)).[2] In other analyses, the estimates do reflect the benefit package and other aspects of a particular reform proposal (e.g., Doyle (28); Thorpe (154)). Analysts may make different assumptions about baseline spending by uninsured people. Using a lower baseline is likely to result in higher incremental costs, all other things being equal. Finally, analysts differ in how they take into account currently "uncompensated" care for uninsured people, some or all of which is now cost-shifted to people with insurance.

It is difficult to compare evidence from the empirical research literature on the incremental costs of covering uninsured people to analysts' estimates because the few current research studies available focus largely on expenditures for a subset of the health services that might be covered under any particular reform bill (91,1 51), or do not compute total costs (198).[3]

PROVISIONS FOR PROVIDING COVERAGE FOR UNINSURED PEOPLE IN REFORM PROPOSALS

Proposals to extend coverage to uninsured people vary according to whether the purchase or provision of coverage is mandatory, the scope of services covered, the depth in terms of patient cost-sharing, [4] and how quickly the coverage is phased in. Selected proposals that provide for universal coverage or incremental approaches to coverage are described below and summarized in table 4-2.

▌Proposals for Universal Coverage

OTA characterizes a proposal as a universal coverage proposal if it provides that all Americans legally in the United States would have insurance coverage by a specified date. Universal coverage proposals that take this approach and that have

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[1] As described later in this chapter, people with insurance have been found to use more services than those without insurance, all other things being equal. The expected increase in the use of services that is associated with obtaining insurance is sometimes referred to as *insurance-induced* demand. In economic terms, consumer *demand* increases as the price decreases; the (immediate) price to the consumer decreases because most or all of the cost of a service is being paid by a third party (the insurer).

[2] Analysts may account for differences between the expenditures expected under current benefit packages and expenditures expected under the benefit package described in a reform proposal elsewhere in their analytic process.

[3] There is more research evidence on the utilization (as opposed to expenditure) patterns of insured versus uninsured people (e.g., Long and Marquis (9 I); Office of Technology Assessment (189)).

[4] Patient cost-sharing is the share of providers' charges that insured patients are obligated to pay themselves (191).

TABLE 4–2: Approaches to Expanding Coverage in Selected Health Care Reform Proposals

Proposal	Approach to expanding coverage	Scope and depth of benefits
Universal Coverage		
American Health Security Act of 1993 (H. R. 1200/S. 491)	Tax-financed, government-administered Insurance program	Comprehensive, including long-term care, no patient cost-sharing
Consumer Choice Health Security Act (H.R. 3698/S. 1743)	Individual mandate, with individuals assisted by re-fundable tax credits	All medically necessary acute care and prescription drugs; maximum deductibles at $1,000 per indvidual and $2,000 per family through 1998, adjusted to reflect CPI increases after that; out-of-pocket limit is $5,000 for years prior to 1998
Health Equity and Access Reform Today (H.R. 3704/S. 1 770)	Individual mandate effective January 2005; prior to 2005, voluntary, but availability increased by employ-ers mandated to offer but not required to contribute and phase-in of Federal subsidies for low-income per-sons depending on savings	Scope and depth to be determined largely by a board but voted on by Congress; cost-sharing differs between "standard" and "catastrophic" plans
Health Security Act (H. R. 3600/S. 1 757)	Individual and employer mandate, plus Federal subsidies	Comprehensive, [a] excluding long-term care [b]; three levels of combination patient cost-sharing and delivery systems [c]
Managed competition plan, Starr version	Individual and employer mandate, plus Federal subsidies	Comprehensive, high cost-sharing and low cost-sharing
Single-payer plan, CBO version, with patient cost-sharing	Tax financed, government-administered insurance program	Actuarially equivalent to Medicare and current private coverage; patient cost-sharing equivalent to current typical levels
Single-payer plan, CBO version without patient cost-sharing	Tax-financed, government-administered insurance program	Same as above, but no patient cost-sharing
Universal Health Care Act of 1991 (H. R. 1300)	Tax-financed, government-administered insurance program	Comprehensive, including nursing home, home health, long-term care for disabled, no patient cost-sharing
Proposals that gradually expand coverage		
Comprehensive Family Health Access and Savings Act (HR. 3918/S. 1807)	Purchase of Insurance voluntary, subsidies for pre-mium expenses of certain persons with pre-existing conditions, phase-m of Federal subsidies, contingent on Federal Medicare and Medicaid savings	Relatively minimal standards for catastrophic plans, high cost-sharing (at least a $3,000 deductible)
Comprehensive Health Reform Act of 1992 (H.R. 5919)	Tax deductibility of health insurance for self-employed, regulation of employment-based health insurance	Not specified

Proposal	Approach to expanding coverage	Scope and depth of benefits
TABLE 4–2: Approaches to Expanding Coverage in Selected Health Care Reform Proposals (cont'd.)		
Health Care Cost Containment and Reform Act of 1992 (H R 5502)	Voluntary Improvements in Medicare and Medicaid, new Federal health Insurance program for children, and extension and expansion of tax deductibility of health Insurance costs for self-employed Insurance market reforms	Most would be covered by same scope and depth of coverage as today, some expansion of public benefits
Managed Competition Act of 1992 (H R. 5936)	Voluntary: Subsidies for low-income people, regulation of private Insurance market	Uniform **package to be** specified by a national health board expansion of Medicare preventive service benefits

KEY: CPI = consumer price index

aComprehensive can have different meanings, but typically Includes a mandated benefit package that covers payment for hospital care, physcian and other professional services, prescription drugs preventive health services, and some mental health benefits.

bLong-term care refers to home- and community-based services to assist people unable to perform specified numbers of activitles of daily living.

cThe three levels are *lower cost-sharing,* higher cost-sharmg, arid *combination cost-sharing For* purposes of calculating premium costs of covering uninsured people, the Clinton Administration uses the higher cost -sharing plan, which is essentially equivalent to current conventional fee- for-service indemnity plans (e.g., with annual indivldual and family deductibles and coinsurance of 20 percent for most services) except that fee schedules are required The Iower cost-sharing and combination cost-staring plans differentiate cost-sharing for In-network and out-of-network services The lower cost-sharing plan specifies a table of flat copayments for most in-network care, but does not include a deductible

SOURCE Off Ice of Technology Assessment, 1994

been analyzed in terms of their impact on NHE include the American Health Security Act of 1993 (H.R. 1200/S. 491) and the Health Security Act (H.R. 3600/S. 1757), both introduced in the 103d Congress, and the Universal Health Care Act of 1991 (H.R. 1300), introduced in the 102d Congress. In addition, the Consumer Choice Health Security Act (H.R. 3698/S. 1743) and the Health Equity and Access Reform Today Act (H.R. 3704/S. 1770) are universal coverage proposals that have been introduced during the 103d Congress, but, to OTA's knowledge, have not been subject to analysis in terms of their impact on NHE.

As summarized in table 4-2, these proposals for universal coverage use different strategies. The American Health Security Act of 1993 would establish a federally-mandated single-payer national health insurance program administered by the states. The program would replace most private and public health insurance programs and provide coverage for a comprehensive set of health and long-term care benefits. The program would require no per-service cost-sharing by patients.

In contrast, the Health Security Act (H.R. 3600/S. 1757) would require all persons to either purchase or be covered by a comprehensive health benefits package. The act would require all employers to pay for a portion of health insurance. Unemployed and self-employed individuals would be required to buy their own insurance. Subsidies would be available to people below a certain income and to certain types of firms, and increases in premiums for the standard benefit package would be held to the rate of growth in the Consumer Price Index (CPI) (see chapter 2 for details).

Under the Consumer Choice Health Security Act (H.R. 3698/S. 1743), all persons would be required to purchase health insurance through plans that meet Federal benefits, rating, and underwriting standards. Employers currently providing health benefits would be required to convert them

into added wages, at least in the first year. Federal subsidies would be in the form of refundable tax credits for a portion of the premium cost of qualified health insurance plans and other medical expenses. The plans would have relatively higher patient cost-sharing than those under the Health Security Act and the American Health Security Act of 1993. This reform proposal has not been analyzed in terms of its impact on NHE.

The Health Equity and Access Reform Today Act (H.R. 3704/S. 1770) would combine an individual mandate effective in the long-term (i.e., in 2005) with phased-in subsidized coverage for low-income uninsured individuals as savings from other provisions of the proposals are achieved. There has been no analysis of this proposal in terms of its impact on NHE.

∎ Proposals That Phase in Coverage

Some proposals attempt to extend coverage by relying on incentives and market reforms to encourage individuals and families to purchase health insurance, including: the Managed Competition Acts of 1992 (H.R. 5936 in the 102d Congress) and 1993 (H.R. 3222/S. 1579 in the 103d Congress), the Comprehensive Health Reform Act of 1992 (H.R. 5919 in the 102d Congress), the Affordable Health Care Now Act of 1993 (H.R. 3080/S. 1533 in the 103d Congress), and the Comprehensive Family Health Access and Savings Act (H.R. 3918/S. 1807 in the 103d Congress) (table 4-2). Not all of these proposals have been subject to analysis in terms of expenditures associated with covering uninsured people or their impact on NHE.[5]

It is important to try to estimate the effects of expanded coverage on NHE for all these approaches, but this chapter focuses primarily on the methods used to project costs of covering uninsured people under "universal coverage" bills that have been analyzed. A brief section is devoted to methods and assumptions used in analyses of a

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5 The Congressional Budget Office (CBO) completed an analysis of the Managed Competition Act of 1993 as this report was being prepared for publication (134, 174).

more incremental approach to covering uninsured people.

ANALYSES OF REFORM PROPOSALS

■ Overview of Basic Analytic Approaches

Although projecting the cost of covering newly insured people for any year and under any proposal requires answering a series of complex questions (see box 4-1), the typical overall conceptual approach can be described quite simply. Analysts overall seem to follow a relatively similar framework:

1. They estimate the expenditures that uninsured people would incur if they remained uninsured in the first full year of the reform;
2. They estimate the expenditures currently insured people who are demographically similar to uninsured people would incur in the first full year of the reform;
3. Then analysts subtract 1 from 2, to derive an estimate of the incremental cost of (expenditures associated with) covering previously uninsured people.[6]

There are differences among analysts in how they implement their framework and in what estimates and information on methods they choose to publish. These differences are important to the interpretations that may be placed on any particular number.

These differences include the following:

- how analysts define the benefit package under reform (i.e., services covered and patient cost-sharing);
- how analysts account for a change in benefits under reform;
- how analysts define insured and uninsured people;
- how analysts determine what prices will be in the future, particularly if the prices are regulated;
- how analysts take account of previously uncompensated care; and
- the general statistical approach that analysts take to estimating the costs of covering uninsured people.[7]

The next section of this chapter reviews in greater depth the methodological detail that is available on the key assumptions and inputs underlying the analytical approaches used to estimate costs of covering uninsured people under proposals for universal coverage. The section focuses on analyses of the American Health Security Act of 1993 (H.R. 1200/S. 491); other tax-financed, single-payer, universal-coverage plans (e.g., the Universal Health Care Act of 1991 and generic single-payer plans with and without coinsurance); and the Health Security Act of 1993 (H.R. 3600/S. 1757). Analyses of these bills were conducted by the Congressional Budget Office (CBO), the Clinton Administration, and/or Lewin-VHI. Table 4-3 summarizes the available es-

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6 An implicit assumption of this approach is that previously uninsured **people will use health services as do demographically** similar people who are already insured. Analysts make this assumption in part because there is little or no experimental data on how uninsured people will respond once they become insured. This issue is **discussed later in this chapter.**

[7] **General statistical approaches include** the folk) wing:

- **Use a** two-part econometric model, which involves first estimating if uninsured people have used any services, and then estimate how much they cost, using a variable for insurance status;
- Statistically match expenditures of insured people to uninsured people;
- Use an econometric model for estimating utilization differences and use average expenditure figures to cost out new services;
- Statistically match utilization (physician visits and hospital days) and use average expenditure figures to cost out new services;
- Multiply insurance costs for currently privately insured people by a previously calculated factor that measures insurance-induced demand.

BOX 4-1: Information Required To Estimate the Effects of Extending Health Insurance to Uninsured People

1. How many people have no health insurance?
   - full year
   - part year
   - by age, sex, health status, income, region, employment status, family composition

2. How many people would be newly covered by the proposal?

3. What is the current health care utilization of persons with:
   - no coverage
   - part-year coverage
   - coverage less complete than mandated[1]
   - coverage similar to that proposed/mandated
   - by type of service:
     hospital
       inpatient
       outpatient
       emergency room
     physician
       ambulatory
       inpatient
     dental
     pharmaceutical
     mental health
     optical
     other

4. What are the health expenditures of persons currently without coverage—part year, full year, by type of service?

5. How will health care utilization of various services change for newly insured persons?[2]
   - part-year to full-year coverage
   - expanded coverage (services covered)
   - by plan type
   - by age, sex, income, health status, and so forth
   - by type of service
   - in response to changes in coinsurance requirements

6. How will expenditures change?
   - by type of service

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[1] Some items may not be addressed explicitly in all analyses. According to Anderson, these items are always required at least implicitly.

[2] This is sometimes analyzed in two steps: 1) effects of change from uninsured to hypothetical average or standard plan; 2) effects of specific proposed coverage, copayments, and so forth, relative to average/standard plan (7).

SOURCE: Office of Technology Assessment, 1994, based in part on Anderson, March 1994 (7). Full citation is at the end of this report.

timates of costs, in 1994 dollars, of covering uninsured people under universal coverage proposals that have been subject to analysis. Table 4-4 sets out some of the key assumptions underlying these estimates. Table 4-5 summarizes the estimates as percentages of projected baseline NHE.[8]

Analyses of Proposals for Universal Coverage

CBO'S Analyses of Single-Payer Universal Coverage Proposals

Box **4-2** presents CBO'S general approach to estimating the demand response of previously uninsured people to insurance coverage under any benefit package. As described below, aspects of particular reform proposals or other factors may cause CBO to make additional or alternative assumptions that may change the results of its analysis. It is not always possible to discern the effects of the alternative assumptions because, as noted above, CBO rarely reports its estimates of costs of covering uninsured people separately from its overall NHE estimates (see table 4-3).

CBO has concluded generally that with universal coverage, expenditures by or on behalf of currently uninsured people would increase by 57 percent under typical employment-based insurance with 25 percent coinsurance, and by 93 percent under policies without requirements for patient cost-sharing.[9] It is important to note that these percentage increases do not represent percentage increases in overall NHE, but only percentage increases in expenditures on behalf of uninsured people.

Generic single-payer proposals

CBO'S April 1993 analysis examines two hypothetical single-payer systems (not related to specific reform proposals). CBO defined a single-payer system as one in which all covered health care services are insured and paid for by a single insurer.

The first single-payer system (SP1) formulated and costed out in terms of NHE by CBO in its April 1993 memorandum had the following features: it would require the kind of patient cost-sharing that is now typical in the United States; the plan's benefits would be actuarially equivalent to the average benefits now paid under Medicare and private insurance; and it would prohibit balance billing.

As formulated by CBO, the second single-payer system (SP2) is a "Canadian-style single-payer system" with universal coverage, but no cost-sharing.

CBO'S April 1993 analysis of the two single-payer reform systems incorporated into its estimates of the cost of covering uninsured people some, but not all, assumptions about the potential effects of hypothetical reform systems (see table 4-4). For example, analyses of SP1 and SP2 assumed the use of Medicare's payment rates for hospital and physician services to estimate the costs of services now covered by all types of third party payers.[10] On the other hand, CBO did not include in its April 1993 analysis 'the effects of cost containment provisions-such as effective expenditure caps or price and utilization controls-that might reduce spending if these were part of the new system" (165).

CBO'S April 1993 analysis estimated that the increase in expenditures for new physician and hospital services in 1991 would be $21.9 billion under SP1 (with coinsurance), and $30.9 billion under SP2 (with no coinsurance); these estimates are inflated to 1994 dollars in table 4-3.

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[8] Each **table also presents findings from the research evidence on costs reviewed later** in this chapter.

[9] According to CBO and others, the increase would be greater for physician services than for hospital services .

[10] In contrast, in an example described in CBO's November 1993 memorandum providing background on its behavioral assumptions, CBO noted that it assumed "no change in average payment rates for providers."

		Estimated increase in spending (1994 $ billions)	Estimated total spending (1994 $ billions)	Estimated total "premium" costs (1994 $ billions)
Proposal subject to analysis and research evidence	**Analysis[b]**			
Proposal				
Single-payer proposals				
American Health Security Act of 1993 (H.R. 1200/S. 491)	CBO	NA	NA	NA
Single-payer, CBO version with patient cost-sharing	CBO	$29.2	$75.8 (0)[c]	NA
Single-payer, CBO version without patient cost-sharing	CBO	$41.1[d]	$87.7 (O)[c]	NA
Universal Health Care Act of 1991 (H.R. 1300)	CBO	NA	NA	NA
Managed competition proposals				
Health Security Act (H.R. 3600/S. 1757)	CBO	NA	NA	NA
	Clinton Administration	$83.6[e]	NA	NA
	Lewin-VHI	$28.4	NA	$82.2 (0)'
Managed competition plan, Starr version, low patient cost-sharing	Sheils et al.	$39.8[f]	$85.2 (0)[g]	NA
Managed competition plan, Starr version, "typical" patient cost-sharing	Sheils et al.	$33.7	$78.0 (0)[h]	NA
Research evidence				
	Long and Marquis	$17.6 -31.9 (0) (P)	$62.3 -$77.0 (0) (P)	$77.0
	Spillman	$41,4 (o) (P)	$66.6 (P)	NA

KEY: CBO = U.S. Congress, Congressional Budget Office; NA = not available, O = OTA calculation, P = partial estimate, not comparable to others that may consider all of personal health care expenditures

[a]All estimates have been converted to 1994 dollars by either increasing or decreasing the amounts at annual rates of 10 percent Ten percent ɪs a rough estimate of recent annual inflation in national health expenditures

[b]Full Citations for the analyses are in appendix B. Full citations for the research studies--Long and Marquis (91) and Spillman (151)--are in the list of references at the end Of the report

[c]By addition.

[d]Assumes no patient cost-sharing (therefore, higher projected utilization).

eCalculated based on method suggested by Off Ice of Management and Budget analysts as follows The Administrations unpublished estimate of costs of newly expanded coverage for insured people, plus costs of covering previously uninsured people, is $95 billion in 1994 dollars (155,202) The Administration does not have a separate estimate for covering previously uninsured people, but suggests that using the same proportions used by Lewin-VHI in its analyses of the Health Security Act would provide a rough idea of the distribution between newly covered people and expanded benefits for previously insured people (202) In Lewin-VHI's December 1993 analysis, it estlmated that the cost of covering uninsured people and the cost of expanded coverage for people already insured would be a total of $47 billion in 1998, the flrst full year of plan Implementation (89) (A total of $47 billion in 1998 is approximately equivalent to $28.4 billion in 1994, using a 10% annual discount (inflation) rate) The $416 billion of this total relevant to covering previously uninsured people is equivalent to 88 percent of $47 billion. Eighty-eight percent of $95 billion is $836 billion

fAssumes low Patient ~ost-sharing (a $10 copayment **per Outpatient visit, but no deductible). Further assumes that total utilization** under the low patient-cost-sharing plan would be about 2 percent higher than in the high cost-sharing plan for persons who are not now enrolled in plans with lower cost-sharing Sheils and colleagues identified privately insured persons in the National Medical Expenditure Survey data who are already in plans without cost-sharing by examining the source of payment data reported for services used by those individuals (1 46)

9Calculated by adding Sheils and colleagues' estimate for baseline 1998 spending by uninsured people to Sheils and colleagues' estimate for new 1993 spending by newly insured people with low cost-sharing, plus the estimated impact of reduced patient cost-sharing, and inflating to 1994 dollars

hCalculated by adding Sheils and colleagues' estimated baseline to their estimate of expenditures associated with Increased utilization by newly insured people and inflatlng to 1994 dollars.

IOTA calculation, **based** on Lewin's premium estimate being 15 percent higher than the Administration's ($1 ,933 ●1.15 = $2,223) times 37 million full -time-equivalent uninsured people.

SOURCE Office of Technology Assessment, 1994.

TABLE 4–4: Key Assumptions in Estimates of Costs of Providing Insurance for Uninsured People and in Research Studies

Proposal subject to analysis	Analysis or study[a]	Key assumptions
Proposal		
Single-payer proposals		
American Health Security Act of 1993 (H.R. 1200/S, 491)	CBO	The program would cover virtually all spending for hospital care, physician and other professional services, nursing home care, and home health services, all spending on prescription drugs, and "all baseline third-party payments and half of baseline out-of-pocket expenditures for durable medical equipment ,. "[b]
		For hospital care, physician and other professional services, nursing home care, and home health services, "the estimate excludes only other private funding (Including nonpatient revenues and philanthropic contributions), 20 percent of current out-of-pocket spending (representing an esti-mate of services that the new program would not cover), and spending by the Veterans Adminis-tration[c] and Indian Health Service."
		State plans would have to cover routine dental care for all beneficiaries.d
		"Spending for drug abuse treatment [apparently, for newly Insured and others] would triple over baseline expenditures, adding $16 billion to the cost of these benefits by the third year of the plan. "
		"The benefit for home and community-based services and the unlimited mental health benefit would add over $50 billion a year to uncapped health spending after three years [this apparently applies to newly insured and previously insured people combined]."
Single-payer plan, CBO version with patient cost-sharing	CBO	"Typical" contemporary coinsurance (e.g., deductible + 20% coinsurance, with out-of-pocket maximum);[e] Medicare payment rates;[e] baseline spending $46.6 billion (1994 dollars); no effects of supplementary coverage; potential provider offsets not considered; effects of potential cost-containment provisions not included.
Single-payer plan, CBO version with-out patient cost-sharing	CBO	First dollar coverage;[e] Medicare payment rates;[e] baseline spending $46.6 billion (1994 dollars); no effects of supplementary coverage; potential provider offsets not considered; effects of potential cost-containment provisions not included.
Universal Health Care Act of 1991 (H.R. 1300)	CBO	Policy parameters as specified in H.R. 1300; "estimated additional demand for health services generally based on the methodology detailed in CBO'S April 1993 staff memorandum (165)"; spending would increase in proportion to the growth in the use of health services.
Managed competition proposals		
Health Security Act (H.R. 3600 /S. 1 757)	CBO	Estimate of insurance induced demand uses the assumptions described in CBO's November 1993 memorandum (169).
	Clinton Administration	Coverage equivalent to that under the Health Security Act; OTA calculation, per Administration guidance-product not equivalent to multiplication of average alliance fee-for-service premium by 37 million FTE uninsured people.

Proposal subject to analysis	Analysis or study[a]	Key assumptions
	Lewin-VHI	Incremental costs represent increased health expenditures under current law and utilization patterns following from existing distribution of insurance plans (I e., not adjusted for proposed cost-sharing or other provisions of the act), total premium costs calculated by OTA, based on Lewin-VHI premiums 15% higher than Administration's and 37 million FTE uninsured
Managed competition plan, Starr version, low patient cost-sharing	Sheils et al	Impact of reduced patient cost-sharing
Managed competition plan, Starr version, "typical" patient cost-sharing	Sheils et al.	Makes assumptions about nature of high versus low patient cost-sharing, assumes a relatively comprehensive uniform minimum benefit package [f]
Research evidence		
NA	Long and Marquis	Incremental and total expenditure costs are for physician and hospital expenditures only, baseline spending for physician and hospital services equivalent to $447 billion (1994 dollars) total premium costs include coverage for physician and hospital services plus coverage for ' other professional' services and prescription drugs, with typical coinsurance under a mix of managed care and indemnity plans
NA	Spillman	Expenditures for basic' (physician and hospital services) only baseline spending estimate was $252 billion (1994 dollars).[g]

KEY: CBO=U.S. Congress Congressional Budget Office. FTE = full-time equivalent: NA + not applicable.

[a] Full citations for the analyses are in appendix B Full citations for the research studies are at the end of the report.

[b] CBO notes that, "The bill authorizes the board to place limits on the cost and frequency of benefits for eyeglasses and durable medical equipment However, the source of these figures used by CBO to estimate the impact of this provision of the bill is not provided in CBOs memorandum (170)

[c] The Veterans Administration is now the Department of Veterans Affairs

[d] CBO estimates that this represents approximately 50 percent of baseline dental spending from all sources of payment in 1996, initially about $100 per person per year. The source of these figures is not provided in CBOs memorandum (170)

[e] These were assumptions rather than policy parameters set forth in a particular reform proposal because CBO designed the generic systems analyzed in its April 1993 analysis

[f] The benefit package was assumed to include hospital Inpatient and outpatient care, physcian care, laboratory tests and x-rays psychiatric services, prescription drugs, preventive and primary care. and other professional services referred by a physician The plan was assumed to not cover dental care eyeglasses or cosmetic surgery.

[g] By excluding from calculations of use and spending by currently uninsured people those who received some pubic benefits under various programs Spillman's analysis excluded those with the potentially heaviest use of services (169). Spillman's estimate of baseline spending by in insured people under her definition of uninsured) was $15.6 billion in 1989 dollars (equivalent to $25.2 billion in 1994 dollars) Spillman's estimate of baseline spending by uninsured people is substantially different from Long and Marquis's estimate of baseline spending ($40 6 billion in 1993 dollars equivalent to $447 billion in 1994 dollars)

SOURCE Office of Technology Assessment 1994

TABLE 4–5: Incremental Costs of Covering Uninsured People as a Percentage of NHE		
Proposals subject to analysis and research evidence	Analysis[a]	Estimated Increase as a percentage of baseline NHE in projection year
Proposal		
Single-payer proposals		
American Health Security Act of 1993 (HR. 1200/s, 491)	CBO	NA
Single-payer plan, CBO version with patient cost-sharing	CBO	2.9%
Single-payer plan, CBO version without patient cost-sharing	CBO	4.1%
Universal Health Care Act of 1991 (H.R. 1300)	CBO	NA
Managed competition proposals		
Health Security Act (H.R. 3600/ S. 1757)	CBO	NA
	Clinton Administration	NA
	Lewin-VHI	3.0%[b]
Managed competition plan, Starr version	Sheils et al.[c]	3.4%
Empirical research studies not connected to particular proposals		
	Spillman	39% (O) (P)[d]
	Long and Marquis	1.8-3 2% (P)

KEY: CBO = U.S. Congress, Congressional Budget Office; NA = not available, NHE = national health expenditures, O = OTA calculation, P = partial estimate, not comparable to other estimates

aFull citations for analyses are in appendix B. Full citations for the research studies are at the end of the report.

bBaseline for 1998 NHE used by Lewm-VHI (89) waS $1,395 billion.

cNote that under Sheils and colleagues' method, the particular reform proposal is Irrelevant except to the extent it affords universal coverage and the benefit package (services covered) are more-or-less comprehensive (i.e., typical of a package sponsored by a large group such as in an employment setting) See text

dCalculation by OTA using CBO baseline of $664 billion for 1989 (167).

SOURCE Off Ice of Technology Assessment, 1994

American Health Security Act of 1993 (H.R. 1200/S. 491)

CBO published little description of its method for estimating additional demand for health services by previously uninsured people in its December 1993 analysis of S. 491 (170). Instead, CBO referred readers to the methods detailed in its November 1993 memorandum, "Behavioral Assumptions. . . ." and noted that its analysis of insurance-induced demand under S. 491 does not distinguish between the additional spending attributable to currently uninsured persons and additional spending due to enhanced coverage.

Rather, all of the figures "represent weighted averages of the estimated increases in demand on the part of the currently uninsured, Medicare beneficiaries, Medicaid recipients, and people with private health insurance coverage" (170).

Analyses of Managed Competition Universal Coverage Proposals

Lewin-VHI's analysis of Starr's managed competition proposal

Sheils and his colleagues' 1993 analysis of Starr's managed competition proposal with universal

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BOX 4-2: CBO's Generic Approach to Projecting Costs of Covering Uninsured People in the Context of Calculating Premium Costs

General Approach

According to a November 1993 memorandum, the Congressional Budget Office generally takes the following steps to project the costs of covering previously uninsured people:

1. Overall, ". . .using data from the 1987 NMES [National Medical Expenditure Survey], [CBO] bases its estimates of the effect of insurance coverage on a comparison of use by otherwise similar demographic groups who differed only in whether they had insurance during the year." In this step:

> The uninsured group [in the NMES] was made up of people under age 65 who reported themselves as uninsured throughout the year, even if some public-sector payments were made on their behalf during that time. The insured group was composed of people younger than 65 who had employment-based or union coverage throughout the year and who received no health benefits from public programs.

2. CBO calculates:

> . . .what costs and payments for services used by the uninsured group would have been if those individuals had been insured by giving specific uninsured demographic groups the same average use as the corresponding insured group, summed over all groups. The demographic groups are defined by age, sex, [self-reported perceived] health status, and income relative to the poverty threshold.[1]

According to CBO:

> The adjusted results indicate that uninsured people cost about 64 percent of what they would cost (at current charges) if they had insurance. Hence, their use of services would increase by 57 percent[2] if they received coverage under a typical employment-based plan (which includes copayment requirements), with no access to benefits under public programs (169).

Important Underlying Conditions and Assumptions

CBO's generic method incorporates some important underlying conditions and assumptions, and has some limitations recognized by CBO. For example, CBO typically imposes the following conditions:

1. that currently uninsured people will be covered by a "typical employment-based plan" (as of 1987);
2. that the plan includes typical copayment requirements,[3] and
3. that newly insured people will have no access to benefits under public programs.

In addition, CBO considers whether a proposal prohibits, requires, or assumes copayments at the point of service. CBO calculates the associated increase in expenditures by multiplying its "utilization/expenditure increase" factor of 1.57 by a factor of 1.23 for a total increase in expenditures of 1.93 (169). The factor of 1.23 is based on CBO's analysis of results of the Rand Health Insurance Experiment (169).[4]

> CBO benchmarks (or "control totals") its initial results to the national health accounts (133).

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[1] In this aspect of its analysis, according to CBO: "Costs were measured as reported charges, reduced by insurer discounts where applicable; they included all services used, even if the providers were not compensated. Payments included only services for which patient-specific payments were made to the providers." (169)

[2] If uninsured people "cost" 64 percent of what they would cost with insurance, the increase in costs is (1/.64)-1 = .56, or approximately 57 percent.

[3] Because CBO derives expenditures information directly from NMES, it does not actually use coinsurance information in calculating expenditures; rather, CBO uses a factor based on the Rand Health Insurance Experiment later in its process to deduce what expenditures might be if coinsurance were not included under reform.

[4] Issues related to the impact of patient cost-sharing on use of services are not covered in this report. For a discussion of limitations of the Rand Health Insurance Experiment, see OTA's background paper, *Benefit Design: Patient Cost-Sharing* (191).

SOURCE: Office of Technology Assessment, 1994, based on CBO sources as shown. Full citations are at the end of the report.

coverage projected a $30.6 billion increase in NHE in 1993 ($33.7 billion in 1994 dollars; table 4-3), equal to about 3.4 percent of baseline projected NHE in 1993 (table 4-5). As CBO did, Lewin-VHI based its estimates on a comparison of expenditures by otherwise similar demographic groups who differed only in whether they had insurance during the year.

Lewin-VHI's method differs from CBO'S in at least one way. According to CBO, projections by Lewin-VHI (e.g., Sheils, Lewin and Haught (146)) of the percentage increase in expenditures related to increased utilization by newly insured people may be too high because Lewin-VHI included people with public benefits, such as Medicare-disabled[11] and Medicaid, in the group it defined as "insured" (169).

According to CBO, this is the reason one of Lewin-VHI's estimates of increases in health care utilization and expenditures for newly insured people (74 percent overall) is higher than CBO'S estimate of 57 percent (see above). Lewin-VHI has countered that including people with public coverage in the insured group is legitimate because nearly all health reform plans would excuse patient cost-sharing for low-income persons even if they are employed (144). In any event, Lewin-VHI'S and CBO'S estimates do not differ by much when adjusted roughly for health care cost inflation (see table 4-3). For example, CBO'S April 1993 estimate for universal coverage with a typical cost-sharing plan is $29.2 billion (when adjusted to 1994 dollars by OTA) (165). Lewin-VHI's estimate for the "high cost-sharing" version of managed competition (essentially equivalent to contemporary cost-sharing arrangements) is $33.7 billion (1994 dollars) (146), a difference of $4.5 billion.

Lewin-VHI's analysis of the Health Security Act

In December 1993, Lewin-VHI calculated that the Health Security Act would increase expenditures by previously uninsured people by $41.6 billion in 1998 (approximately $28.4 billion in 1994 dollars; table 4-3), equal to approximately 3 percent of both baseline and reform 1998 NHE[12] (table 4-5). As with the Lewin-VHI estimate for Starr's managed competition proposal, this figure represents the incremental costs of coverage, assuming utilization patterns similar to those of people with insurance coverage in 1987, adjusted for estimated changes in utilization between 1987 and 1990 (89).

Clinton Administration's analysis of the Health Security Act

The Clinton Administration produced projections of NHE in January 1994(197) but did not publish estimates of the costs of covering newly insured people. Two groups in the U.S. Department of Health and Human Services (the Agency for Health Care Policy and Research (AHCPR) and the Health Care Financing Administration (HCFA)) have included estimated expenditures associated with covering previously uninsured people to model *premium costs* under the Health Security Act (28, 135, 154). Their methods are described in box 4-3. In addition, in response to OTA's requests, Administration analysts have provided an estimate of the costs of new and enriched insurance coverage taken together and explained how one could then derive a separate dollar estimate of costs of covering uninsured people under the Health Security Act (box 4-4) As explained in box 4-4, the resulting Administration estimate of incremental costs of covering unin-

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11 People under 65 with disabilities may be eligible for, and receive services that are paid for, by Medicare.

12 According to Lewin-VHI's analysis, baseline and reform NHE would be nearly identical in 1998.

BOX 4-3: HCFA and AHCPR Methods for Projecting Costs of Covering Uninsured People

HCFA's Method

According to testimony:

The first step in HCFA's simulation process was to determine each individual's **insurance** status. The modelers used CPS [Current Population Survey] indicators for this, and considered a person to be insured if he/she was covered by employer-sponsored insurance, other private insurance, CHAMPUS, Medicare, or Medicaid. HCFA then adjusted health expenditures to reflect the coverage offered through the regional alliance plan. That coverage is for hospital care, physician and other professional services, prescription drugs, and durable medical equipment other than vision and hearing products. Therefore, the analysts excluded all other National Health Accounts (NHA) expenditure categories.

The cost of coverage of mental health, dental, and preventive care in the standard benefit package was estimated separately, from aggregate data, and added in at the end of the process. Once expenses were adjusted for coverage differences, the modelers applied the fee-for-service plan deductibles, coinsurance, and cost-sharing limits to each person covered through the regional alliances.

An **insurance-induced demand adjustment** was applied to all those enrolled in the regional alliance. The basis for the induced demand was the difference between out-of-pocket spending under current law and that determined by the reform simulation already described. The induction factor varied by type of service. Post-induction spending is equal to the expenditures calculated previously plus (or minus) induced spending.

Following these steps, HCFA imputed expenses to currently **uninsured** people. Existing patterns for use for the **uninsured** person were discarded, because those patterns are influenced by the absence of insurance. An imputation file was created for each service covered under the regional alliance. To create the file, insured people were divided into groups according to gender, four age classes, and three poverty status classes. Expenditures were tabulated for each group to determine: (a) the proportion that had no expenditure and (b) means expenditures and use for each decile of the user distribution. Expenses were inputted for **uninsured** persons using these imputation files. . .

After plan benefits had been determined, premiums were calculated for each of the policy and alliance types. An offset was applied to expenses to reflect current-law cost-shifting attributable to uncompensated care. . . (154).

AHCPR's Method

According to testimony:

. . . following conventions in health economics, AHSIM estimates a two-part model of expenditures for each service. The unit of observation is the person. The first equation in each service's set of two equations estimates the probability of using the service at all as a function of demographic, income, **insurance**, employment, and health status measures from the 1987 NMES-2. The second equation estimates annual expenditures on the service for all *users* of the service, as a function of the **same explanatory variables**. Combining the results of these equations (i.e., multiplying the probability of use times the coefficients in the second equation) yields an equation that predicts expenditures for each type of person. Predicted expenditures are aged to 1994.

Health expenditures for each person are then predicted for each of the ten services included in the AHSIM [Agency for Health Care Policy and Research's Simulation Model] model using this system of equations. Predictions for both the probability and the level (given any use) of an expense were made for each person based on these regressions. The procedure assigns the same expected values to people with private insurance and similar personal characteristics, based on a hypothetical "average" insurance policy. Expected values are modified to take into account specific plan provisions using information from the Rand National Health Insurance Experiment about the effects of such provisions. . . (154).

(continued)

BOX 4-3: HCFA and AHCPR Methods for Projecting Costs of Covering Uninsured People (cont'd.)

An April 1993 memo from AHCPR explains the AHSIM model on a step-by-step basis as follows:

- *Step 1:* AHCPR estimates a multivariate model predicting the probability of use and the level of expenditure per user for 10 categories of expenditures, from the 1987 NMES;
- *Step 2:* AHCPR uses the coefficient estimates from the model to impute 1987 expenditures under alternative insurance arrangements to everyone under the age of 65 in the NMES household sample. The AHCPR memo illustrates the use of this step in the AHSIM model to:

1. estimate the effect of age, gender, health problems, and geographic site on the baseline probability of hospital use and the level of expenditure if the person is hospitalized. The effects of all characteristics are "summed. . .in order to determine the predicted values for a person with the specified characteristics";

2. predict the expected hospital expenditures of a currently uninsured person in the baseline survey data;

3. alter the predicted values when, "as a result of reform, the person is covered all year by a plan that is typical of employer sponsored insurance." According to AHCPR:

In this case, the indicator for [employer-sponsored insurance] is switched from 0 in the baseline to 1 after reform, and the estimated effect of this characteristic is added to the predicted values.

AHCPR then takes the following steps:

- *Step 3:* Adjust the expenditures assigned to each person for the relative generosity of the benefit package being simulated, based mainly on findings from the Rand Health Insurance Experiment (HIE). "Generosity" is defined in terms of patient cost-sharing provisions.
- *Step 4:* Calculate benefits paid and out-of-pocket expenses for each person in the database under a particular plan, by applying the plan provisions to the expenditures imputed to each person.
- *Step 5:* Project the claims and expenditures of each family to 1994.
- *Step 6:* "Age" the NMES sample "by age, race, and sex to the Census Bureau's 1994 population projections," incorporating "the population growth rates observed between 1987 and the most recent Current Population Survey (CPS) with respect to insurance status (employer-sponsored, other private, public insurance, and uninsured) and family income in relation to the poverty line";
- *Step 7:* Tabulate the projected health expenditures database for 1994 to calculate estimated health expenditures statistics under the baseline and reform scenarios, or use the projected microdata for more elaborate simulations and calculations (7,199).

AHCPR's memo illustrates the effect of all steps in the AHSIM model, for the uninsured person whose hospital expenditures were predicted in Step 2 above. The AHCPR model can also introduce the values for each person and family "into a more elaborate simulation model that calculates premium payments and subsidies for out-of-pocket expenditures under various scenarios for health care reform" (199). According to testimony, the following steps have been taken to calculate premiums under reform (specifically, the Administration's Health Security Act):

Every individual included in the AHSIM model actually had three types of reform expenditures assigned to them, indicating their (assumed) behavior under fee-for-service (FFS) , managed care (HMO), and preferred provider (PPO) insurance arrangements. . .Premiums for each type of insurance plan were computed on the basis of average benefits paid per insurance policy plus an administrative load. . .In this way, each person was taken into account in computing initial premium levels. Premiums were adjusted for current regional variations in premiums. . .

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BOX 4-3: HCFA and AHCPR Methods for Projecting Costs of Covering Uninsured People (cont'd.)
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Two passes through the data were made to compute the final set of premiums. . . The first pass. . .determines the extent to which a household's direct costs will be offset by supplemental insurance and out-of-pocket discounts. In the second pass through the data, expenditures are increased to reflect additional spending induced by supplemental insurance and out-of-pocket discounts. Insurance premiums are then adjusted to reflect these higher expenditures

The AHCPR memo also shows the predictions of the model with respect to the 1994 annual expenditures of all persons who are uninsured all year under current law, if they were provided with a full year of coverage under the 20th percentile fee-for-service plan and why the predicted per capita expenditures of the all-year uninsured do not vary greatly from the expenditures predicted for the population that currently hold employer-sponsored insurance.

SOURCES: Office of Technology Assessment, adapted from Anderson, March 1994 (7); Thorpe, Nov. 22, 1993 (154); Department of Health and Human Services, Jan. 26, 1994 (199). Full citations are at the end of the report.

sured people (table 4-3) is not equivalent to other analysts' estimates of incremental costs. The primary reason is that Administration analysts do not include previously uncompensated costs in their base] inc. [13]

CBO'S analysis of the Health Security Act

CBO'S February 1994 analysis of the Health Security Act of 1993 (H.R. 3600/S. 1757) provides a brief overview of projected NHE by sources of funding. However, CBO does not go into any detail about how it arrived at costs of covering uninsured people, or what proportion of increased NHE in any year would be attributable to coverage for previously uninsured people (172). CBO'S analysis refers to coverage for uninsured people as a factor contributing to increases in demand for services (and associated expenditures), and as a component of its estimates of average health insurance premiums for the standard benefit package. [14] However, CBO provides no quantitative

estimates of the amount of the increase from covering uninsured people.

According to CBO, the calculation of the average premium follows the method specified in section 6002 of the Health Security Act. According to CBO, the estimate proceeds in three steps:

1. calculate the initial amount of health spending in the baseline that would be paid for by premiums collected by the alliances,
2. increase that base amount in proportion to the expected increase in the use of health services by individuals who are currently uninsured or who have coverage that is less comprehensive than the standard benefit package,
3. divide the result by the number of people covered by alliance premiums.

CBO assumed that the Administration's standard benefit package would initially be 5 percent more expensive than the average benefit of privately insured people in the baseline. It is unclear from its report how CBO used this assumption to

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[13] Administration analysts argue that it is more rational to think about the costs of enriched insurance overall, rather than considering separately the costs of providing insurance for those currently without any insurance and providing enriched benefits to those who are already insured (202).

[14] CBO notes that: "[the proposal's] provisions for covering the uninsured [and other provisions] would increase the demand for health services. But the l imits on the growth of health insurance premiums and the reductions in the Medicare program would hold down health spending. For the first few years after the proposal was in place, the increases in spending would exceed the decreases. . . . From 2000 on, however, national health expenditures would fall below the baseline by increasing amounts."

BOX 4-4: Why Clinton Administration Estimates of Costs of Covering Uninsured People Are Different from Other Estimates

Clinton Administration officials have said that the costs of new and enriched insurance coverage taken together would be $95 billion (in 1994 dollars) (202). Officials at the Office of Management and Budget (U.S. Executive Office of the President) provided the Office of Technology Assessment (OTA) with a formula for deriving the newly insureds' share of the costs (202). This formula consists of applying the Lewin-VHI proportions for: 1) coverage for previously uninsured people (88.5 percent), and 2) coverage for new benefits to previously insured people (11.5 percent) to the $95 billion figure. The result of this calculation is a net cost for covering previously uninsured people of approximately $83.6 billion in 1994 dollars.

It is important to note that a major component of this estimate is the "offset applied to expenses to reflect current-law cost-shifting attributable to uncompensated care" (see box 4-3). For estimating the costs of covering uninsured people, this offset means that only the out-of-pocket expenditures of uninsured people are considered in the baseline (155). In contrast to other analysts' approaches, then, the Administration's approach is roughly as follows:

Baseline estimate =

    Uninsureds' out-of-pocket expenditures for services $ [_____] [1]

    = Total baseline expenditures $ [_____]

Incremental expenditures =

    Uninsureds' historical use of services for which providers may not be compensated (based on National Medical Expenditure Survey utilization figures) $ [_____]

    + Uninsureds' use of "insurance-induced" services $ [_____]

    + Uninsureds' use of new services due to enriched benefit package $ [_____]

    Total incremental expenditures $ [_____]

    Total expenditures attributable to newly insured = baseline + incremental expenditures $ [_____]

Implicitly, then, the Administration's approach assumes that the costs of services for which providers are not compensated by uninsured patients now (and for which providers may shift costs to other payers) may not be fully recouped under reform and they make this adjustment on their costs of covering previously uninsured people. In contrast, other analysts (e.g., Lewin-VHI) implicitly assume *in this aspect of their estimates* that uncompensated costs will be recouped under reform. However, as does the Clinton Administration, other analysts may account for some reduction in other aspects of their analyses. For example, as shown in table 1-3 in chapter 1 in this report, Lewin-VHI's analysis of the Health Security Act dealt with uncompensated care costs by calculating gross increases in provider reimbursement as a result of previously uncompensated care being compensated under the act, and then assuming "that a portion of the increase in provider reimbursement would be returned to consumers in the form of reduced charges through the negotiation process in managed care plans, resulting in a [smaller] net increase in provider

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BOX 4–4: Why Clinton Administration Estimates of Costs of Covering Uninsured People Are Different from Other Estimates (cont'd.)

reimbursement..." (i.e., the "reduction in cost shift" shown in the table) (89). These adjustments are made in the portion of the Lewin-VHI analysis termed "change in provider reimbursement" and "pre-empt reimbursement windfall," and not in the Lewin-VHI estimate of the costs of covering uninsured people. The Clinton Administration builds into its premium caps (see chapter 2 in this report) an implicit mechanism for recouping the "reimbursement windfall" that would come from providing coverage to previously uninsured people.[2]

In terms of calculating change in NHE, either approach seems reasonable. The difference in approaches means, however, that Lewin-VHI's and the Clinton Administration's *dollar estimates of incremental costs of covering uninsured people* are not comparable.[3,4] This difference in estimating methods alone is likely to account for a considerable part of the apparent difference between the Administration's and others' estimates of incremental costs of covering uninsured people. However, without additional information from the analysts, it is difficult to estimate just how much assumptions about uncompensated costs matter.

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[1] Specific numbers are unavailable.

[2] To suggest how this offset might work, OTA did a trial calculation similar to the one in footnote i of table 4-3, in which it multiplied the Administration's estimate of the premium for a single person ($1,933) and CBO's estimate of the premium for a single person ($2,100) by an estimate of the number of full-year uninsured people (37 to 38 million), for a roughly estimated range in total premium costs of $71.5 billion to $79.8 billion. Note that this range is both less than the incremental cost of covering newly insured people (as calculated by OTA following the Clinton Administration's instructions) and in the same range as the other analysts' estimates.

[3] In addition, Lewin-VHI and the Clinton Administration differ with respect to their estimates of the amount of physician uncompensated (i.e., cost-shifted) care that will be recouped under reform (135,145). Any attempt to reconcile the Clinton Administration and Lewin-VHI estimates of NHE would have to account for this difference.

[4] There are other reasons why the Lewin-VHI and Clinton Administration estimates of changes in NHE are different (see Lewin-VHI (89); Rivlin et al. (135); Rivlin et al. (136); Sheils and Lewin (145)).

SOURCE: Office of Technology Assessment based on sources as shown. Full citations are at the end of the report

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calculate increased spending attributable to newly insured people.

CBO also says that its "estimate of the base amount of spending includes all baseline private health insurance premiums, subsidies from State and local governments for public hospitals and clinics, half of State and local subsidies for mental institutions, all Medicaid spending for noncash beneficiaries, and federal Medicaid payments for disproportionate share hospitals." Thus, CBO'S definition of the base amount differs from the Administration's.

Overall, CBO says its premium estimates are about 15 percent higher than the Administration's.[15,16]

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15 The difference was smaller for the single-person premium: CBO estimated a $2,100 total premium for a single person; the Administration estimated $1,933 for a single person.

16 To get a rough estimate of the total premium costs for covering uninsured people, OTA multiplied CBO's premium estimate for a single person by the approximately 37 million to 38 million full-time-equivalent uninsured people in the United States, for an estimate of $77.7 billion to $79.8 billion (all figures in 1994 dollars; see table 4-3); this estimate is slightly lower than similar estimates calculated by others (e.g., from using the same method to calculate total premiums for uninsured people using Lewin-VHI's estimated premiums (see table 4-3)). Given that OTA used the same rough formula to calculate Lewin-VHI and CBO total premium costs, the difference between the OTA estimates can be accounted for by different premium estimates for single persons provided by Lewin-VHI and CBO. These calculations are not helpful in figuring the incremental costs of covering uninsured people (i.e., how much NHE would increase due to providing insurance to uninsured people), however.

To estimate the incremental spending attributable to newly insured people, CBO reports it used an estimate of induced demand using the assumptions described in its November 1993 memorandum (see box 4-2).

Summary of Analyses of Universal Coverage Proposals

Because of differences in analysts' assumptions, available estimated spending *increases* attributable to insurance coverage for previously uninsured people appear at first glance to differ markedly. Overall, the available range of increases is $28.4 billion to $83.6 billion (1994 dollars) (89,165).

Several problems arise in trying to draw solid conclusions about the actual range in estimated increases, however. Comparisons of estimated total spending may provide a better sense of the estimated magnitude of spending by previously uninsured people, '7 but such comparisons do not provide information on the incremental *change* in expenditures associated with covering uninsured people.

Issues raised in comparing estimated increases in spending include:

- Very few incremental estimates are actually reported, so the range presented above may not be representative of analysts' estimates of the cost of insuring uninsured people.
- Perhaps more importantly, the estimates that are presented by or obtained from analysts may have strikingly different components. For example, the estimates make different assumptions about benefits covered. Some estimates represent spending assuming past insurance coverage and utilization patterns, not the types of insurance coverage and utilization patterns that may occur under particular reforms

(89,165). Other estimates include spending by previously uninsured people that would occur under the benefit package provided under reform. In addition, some analyses differ in their definitions of insured and uninsured, and estimates differ in what they assume about uncompensated care costs.[18]

The next section of this chapter provides a brief overview of analyses of proposals that would phase in coverage. The analyses report no separate estimates of the cost of covering uninsured people. The analyses were all done by CBO.

Analyses of Proposals That Phase In Coverage

The preceding section reviewed analyses of proposals that would require universal coverage by a specific date. Other proposals may aim to increase the proportion of Americans with coverage gradually. Some proposals aim to increase coverage by subsidizing the purchase of private health insurance or by other measures to reduce the price of insurance. In estimating the cost and impact of such bills, a critical assumption is the extent to which the purchase of insurance would rise with a fall in price. Other bills would place more emphasis on expanding coverage from public programs, in which case key assumptions include eligibility and participation (e.g., H.R. 5502 introduced in the 102d Congress, H.R. 200 introduced in the 103d Congress). Neither approach would necessarily achieve universal coverage. In either case, analysts may have a problem in attempting to predict how many people will either purchase private insurance or be eligible for public coverage in any given year. Assumptions about voluntary purchase of coverage may be particularly difficult. Further, not every eligible person participates in public coverage programs (145).

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17 As shown in the last two columns of table 4-3, most estimates of the *total* spending **(or premium costs) of** covering previously uninsured people are in the $70-billion to $80-billion range.

18 Questions about the range in estimates are different from questions about whether any of the estimates reflect reality. This issue is addressed later in this chapter.

19 Two papers prepared under contract to OTA review the literature on insurance choice among consumers (35,140).

In projecting NHE and the federal budget impact of plans that were introduced in the 102d Congress, with no specific date for universal coverage, CBO projected increases in the number of people likely to be covered by health insurance in selected calendar years (168). However, CBO did not report estimates of the incremental costs of covering these people. Because the benefit packages differ across the reform proposals (or are unspecified), it would be difficult to use '*typical" employment-based coverage (and associated premium costs) to estimate gross premium costs per year. In its July 1993 document, CBO did not provide enough information to enable another analytic group to understand or replicate the results in terms of net new increases in covered individuals, or in terms of the impact of these increases on health expenditures. However, in response to OTA's request, CBO provided information on how it arrived at the numbers of newly insured people under each of three proposals (see box 4-5).

CBO says that under the Managed Competition Act of 1992 (H.R. 5936 introduced in the 102d Congress), newly insured people would increase their use of health services by 80 percent. CBO does not, however, explicitly state why, nor the specific impact this increase would have on national health expenditures (1 68).[20]

∎ Summary of Analyses

Because analyses of the incremental costs of covering previously uninsured people under alternative reforms use varying assumptions and publish varying types and levels of analysis, comparing and reaching conclusions about the likely range of estimates in costs of covering uninsured people is difficult.

REVIEW OF THE EVIDENCE

OTA's review of the evidence on the costs of covering previously uninsured people has two sections: evidence on utilization and evidence on expenditures.

∎ Evidence on Utilization with Expanded Coverage

The most compelling evidence on how newly insured individuals would increase their utilization would come from comparing representative samples of individuals randomly assigned to insurance coverage or not.[21] N. such study has been conducted, nor is one likely to be conducted (1 89). Instead, researchers infer evidence on differences in utilization among people who are insured or uninsured, or who go in and out of these conditions, from either the Rand Health Insurance Experiment (HIE) conducted between 1974 and 1981 or, more typically, from surveys that collect information on health care utilization from people in various insurance circumstances (e.g., the Health Interview Survey (HIS), the Survey of Income and Program Participation (SIPP), and the National Medical Expenditure Survey (NMES).[22] This section reviews the evidence from these sources.

Numerous studies have looked at differences in utilization between insured and uninsured people. This review relies heavily on a previous report by OTA (189) and on a draft review of existing literature conducted under contract for OTA and for the Library of Congress' Congressional Research

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20 The 80 percent increase is not consistent with CBO's generic method for calculating increased utilization (169).

21 Obviously such a study would not be a simple undertaking.

22 Sometimes, analysts informally "combine" both types of information. For example, CBO says that it uses the Rand HIE evidence as a "floor" for responses to becoming insured (169).

BOX 4-5: CBO's Approach to Estimating the Numbers of Newly Insured People Under Reforms Without Universal Coverage

This note from CBO provides additional details on the estimates of the number of additional people who would have health insurance coverage under three legislative proposals. It supplements the information contained in the CBO paper "Estimates of Health Care Proposals from the 102d Congress" (168). All the bills referred to were introduced in the 102d Congress.

H.R. 5502

H.R. 5502, the Health Care Cost Containment and Reform Act of 1992, would reduce the number of individuals with no health insurance through two mechanisms. The bill would extend Medicaid eligibility to all children in families with income under 200 percent of the Federal poverty level and to adults under age 65 in families with income below 100 percent of the Federal poverty level. H.R. 5502 would also establish a new Federal health insurance program for children under 19 years of age.

CBO's estimate of the number of individuals who would become newly insured under this plan is equal to the sum of the previously uninsured individuals enrolling in Medicaid plus other previously uninsured children enrolling in the health insurance program for children.

The number of individuals eligible for these benefits was estimated using data from the March 1991 Current Population Survey extrapolated to the year 2000. All pregnant women and infants who would become eligible for Medicaid and who currently lack insurance are assumed to enroll. The participation rate for all other previously uninsured children and adults qualifying for the Medicaid program is assumed to be 85 percent. In total, 8.6 million previously uninsured individuals would enroll in Medicaid in the year 2000.

The estimate of the health insurance plan for children assumes that 10 to 15 percent of employers who do not now offer health insurance would offer coverage to employees' children through the new plan, and 90 percent of the previously uninsured children with family income in excess of 200 percent of the Federal poverty level would become insured. These figures are based on tabulations by Lewin-ICF that relate the purchase of nongroup health insurance to its cost relative to income. In total, 0.6 million children would become insured for the first time.

H.R. 5919

H.R. 5919 would make a number of changes in the health insurance market for small businesses. The changes would induce some companies to provide health insurance for their workers and cause others to drop insurance coverage. CBO's estimate assumed that these small-market reforms would cause no net change in insurance coverage.

The bill would increase health insurance coverage by allowing the self-employed to deduct their health insurance costs from taxable income. CBO's estimate of the increase in the number of insured people is based on the Joint Committee on Taxation's estimate of the resulting increase in spending on health insurance.

H.R. 5936

In developing its estimates of H.R. 5936, CBO assumed a baseline number of uninsured persons of 40.4 million in 2000. As a result of the low-income assistance and tax subsidies included in the bill, an estimated 20.2 million uninsured people would become insured in that year. The net reduction in the number of people without health insurance in the year 2000 would be only 13.9 million, however, because an estimated 6.3 million people now covered by Medicaid or employer-sponsored group health insurance would lose their coverage. This loss of coverage would occur mainly among current Medicaid recipients whose incomes exceed the level at which a full subsidy would be paid under H.R. 5936 and who would decide not to purchase insurance. In addition, some people who work for firms employing mostly low-wage workers who would be eligible for partial premium subsidies may lose insurance coverage if the firm decides to cease its employer contribution.

BOX 4–5: CBO's Approach to Estimating the Numbers of Newly Insured People Under Reforms Without Universal Coverage (cont'd.)

Of the 20.2 million people estimated to become insured, about 14.7 million would be persons whose incomes made them eligible for a full premium subsidy. People with incomes between 100 and 200 percent of the Federal poverty level would be eligible for a partial premium subsidy and a tax deduction for the portion of the premium that is not directly subsidized. Assuming a price elasticity of demand for basic health insurance of -0.6 and an average marginal tax rate of 15 percent for people who are currently uninsured, an estimated 3.6 million people between 100 and 200 percent of poverty and 1.9 million people with incomes over 200 percent of poverty would be newly insured. These estimates represent about 30 and 15 percent, respectively, of currently uninsured people in these two income ranges.

SOURCE U S. Congress,Congressional Budget Office, Mar. 17, 1994 (204). Full citation is at the end of the report.

Service (CRS) by Long and Marquis (91).[23] Selected recent studies not included in the previous OTA and the Long and Marquis reviews are also examined (55,56, 151).

Reviews

U.S. Congress, OTA

In September 1992, OTA published a comprehensive review of the association between being uninsured or insured on patients' use of health services (1 89).[24]

OTA's review of available multivariate studies[25] found that, in the aggregate, uninsured people used health services at approximately 30 to 100 percent the rate of privately insured individuals, and at approximately 10 to 50 percent the rate of publicly insured individuals, depending on the study. Further, OTA found that uninsured people had less access to more intensive, relatively high

technology, expensive services. OTA's findings support analysts' assumptions that uninsured people typically use fewer services and incur fewer expenditures than insured people, and that the gap is considerable.

Given the limitations of available data and studies, however, OTA could not conclude that there was a causal relationship between health insurance and utilization. Other factors, not well controlled for in studies, could potentially influence both patients' and health care providers' decisions about the use of health services (e.g., availability of health care services, income, patient and provider attitudes and beliefs, and unmeasured health characteristics).

OTA's review provided little indication of what newly insured people might do once they obtain insurance. Finding that insured and uninsured people use services differently, or that previously insured people who lose their coverage use fewer

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[23] The Long and Marquis analysis referred to in this report is being prepared under contract to OTA and CRS in connection with another OTA assessment (*Technology, Insurance, and the Health Care System*) and in connection with CRS's continuing responsibility to provide Congress with advice on health financing issues. The paper by Long and Marquis will be printed jointly by CRS and OTA.

[24] The main purpose of OTA's September 1992 review was to determine whether having health insurance made a difference to Individuals' health outcomes, as opposed to their health-scm ice-related expenditures. The fact that there wealmost no studies that directly tracked the effects of health insurance status on health outcomes, controlling for other appropriate factors, required OTA to try to trace potential effects of health insurance status on health care utilization.

[25] Multi variate studies use observational data but control statistically for factors that could potentially account for differences in the variable of interest, In the studies that OTA reviewed in 1992 and that are of interest in this report, the variable of interest was use of health services. Potential confounding variables included such factors as income, health status, gender, ethnicity, and availability of services. Not all multivariate studies controlled for the same potential confounding factors (189).

services, does not necessarily indicate the quantity or cost of services that individuals might use once they are covered. OTA's analysis of the population of people who are uninsured found that they are a very diverse group in terms of health status, age, income, employment, education, family composition, ethnicity, residence (i.e., metropolitan versus nonmetropolitan area), and region (i.e., West, South, Midwest, Northeast). This diversity suggests that a range of responses to obtaining insurance coverage could be expected.

Long and Marquis, in press

In preparation for their own analyses of available data (see below), Long and Marquis reviewed past studies of estimates of the gap in utilization between insured and uninsured people. The studies were published between 1982 and 1992, and had used survey data from 1976 through 1987. The studies differed in many respects, including their definitions of insured and uninsured populations and the way in which they measured utilization (91). Not surprisingly, Long and Marquis found that studies differed widely in their estimates of the access gap. Depending on the study, uninsured people had from 46 to 100 percent as many ambulatory encounters as insured people,[26] and obtained 31 to 81 percent as many inpatient hospital

services as insured people. In the context of estimating the costs of covering uninsured people, this wide range of estimates could be of considerable concern. As noted above, the larger the gap, the greater the estimated additional resource cost of universal access (91).

Long and Marquis' examination of the past literature led them to hypothesize that differences among past studies could possibly be attributed to one or more of the following factors:

- studies were done at different times and there were changes over time in uninsured people's use of services relative to insured people's use of services,
- different populations or different control variables in the analyses,
- different definitions of health care use,
- different definitions of insurance and lack of it,
- different data collection methods (91).

Studies

Rand HIE results

The Rand HIE is the largest experimental study of people with health insurance, although it has a number of limitations (118,191). Its biggest limitation may be that, except for one year in one site (1 17), no one in the experiment lacked health insurance.[27] According to the Rand HIE study team,

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[26] Ambulatory encounters were defined differently in different studies.

[27] In the Rand HIE, approximately 5,800 persons in six sites (Dayton, Ohio; Seattle, Washington; Fitchburg and Franklin County, Massachusetts; Charleston and Georgetown County, South Carolina) were randomly assigned, for 3 years or 5 years, to one of over a dozen fee-for-service health insurance plans. In Dayton, Ohio, in the initial year of the study, some research participants were uninsured. In all other sites and at all other times, research participants had health insurance, although coverage varied in terms of patient-cost-sharing requirements (1 I 8,191).

"Strictly speaking, our results have nothing to say about uninsured individuals" (118).[28,29]

Spillman, 1992

Spillman used data from the 1980 National Medical Care Utilization and Expenditure Survey (NMCUES)[30] to estimate how being uninsured affects utilization of "basic" health care services (151). Spillman defined *basic health services* as emergency visits to hospital emergency departments, nonemergency services in hospital emergency departments and other ambulatory settings, and inpatient hospital services. Spillman's analysis differed from many others primarily because she used various State- and county-level variables, including county-level supply of primary providers of services, to control for factors affecting market price and access to services.[3t]

Spillman found that:

- Uninsured men, women, and children who use services had only 70 to 80 percent as many nonemergency ambulatory visits as their insured counterparts.
- Uninsured men and women had slightly less than two-thirds the expected visits to hospital emergency rooms[32] of their insured Counterparts, but children's visits did not differ by insurance status.
- Uninsured men, women, and children were only 24 to 30 percent as likely to have any hospital admissions as their insured counterparts.[33]

Long and Marquis, in preparation

In an unprecedented effort to try to narrow the range of estimates, Long and Marquis used data from a range of surveys (i.e., the HIS, NMES, SIPP) and applied similar statistical methods to the dissimilar surveys.

Long and Marquis's analysis suggests the following:

- In a single year, adults reporting a complete lack of health insurance have 61 percent as many ambulatory health services contacts (that is, contacts with a physician or other medical provider working in a physician's office or clinic, including a visit to a doctor's office, a clinic, or hospital emergency room, and telephone contacts with a physician's office) and 67 percent

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28 Some argue that the experiment's condition in which family members were obligated to pay 95 **percent of the fee for each health care** service (e.g., visit to a physician, x-ray) is functionally equivalent to being uninsured. But the fact that people who are reimbursed even 5 percent of health care charges, especially with an income-adjusted annual out-of-pocket maximum, makes this conclusion tenuous. In addition, there were other factors that made these study participants different from the typical insured or uninsured person (e.g., their physicians knew that the patients were in a major national study).

29 The Rand HIE does have some evidence on how insured people respond to the likelihood of decreased coverage. Newhouse and colleagues compared utilization and expenditures in the year prior to the experiment (the "accounting year") to the first year of the experiment. In addition, they examined differences among groups covered for 3 and 5 years, and spending after families exceeded their annual maximum dollar expenditures. Newhouse and colleagues found no statistically significant increase in average expenditures during the first year of coverage, that the 3- and 5-year groups did not differ measurably, and that spending after exceeding the out-of-pocket maximum did not rise above the "free plan'" rate. They concluded that "In general, transitory effects for medical services were weak...." The same was not true, however, for dental services "Dental utilization on the lower coinsurance plans, especially on the free-care plan, was markedly higher in the first year than in subsequent years" (11 8). There was also an effect for mental health services (11 8). Unfortunately, however, Newhouse and colleagues do not report results separately for people who were completely uninsured before the experiment began. Information on this group would have been useful in the current debate.

30 NMCUES was the predecessor to the 1987 NMES.

31 Spillman's analysis also controlled for factors such as health status (including pregnancy), age, race or ethnicity, education, and income.

32 *Emergency visits* were defined as hospital emergency room visits for which the respondent reported that treatment 'as 'ceded within a few hours (15 I).

33 Average days per admission were found to be less responsive to price than the probability of admission, and the results varied by age and gender (15 1).

as many hospital days in the year as people with health insurance coverage all year.

▪ Children lacking health insurance had 70 percent as many ambulatory contacts and 81 percent as many inpatient days as children with coverage all year.

Long and Marquis point out several factors that they were unable to resolve that could increase or decrease their estimates of increased utilization by previously uninsured people. For example, Long and Marquis tested the impact of using more complete health status measures (e.g., number of chronic conditions) than the typical measure of perceived health status,[34] and found that the use of such measures would increase by about 10 percent their estimate of the number of ambulatory contacts that uninsured people would use once they were insured, and slightly increase their estimate of the number of inpatient services that uninsured people would use once they became insured.[35] In contrast, Long and Marquis concluded that their estimate of insurance-induced demand could be 50 percent too high if other unobserved differences between insured and uninsured people meant that previously uninsured people use services at 85 percent the rate of those who were previously insured.

Hafner-Eaton, 1993

Hafner-Eaton's analysis of data from the 1989 National Health Interview Survey examined only the likelihood of a person having made any physician visits during the previous 12 months (55). Hafner-Eaton theorized that initial physician visits are more patient-initiated than are follow-up visits and are therefore more sensitive to insurance status differences. According to Hafner-Eaton, "If patients are able to obtain some care, they have passed the threshold of such utilization determinants as their own perceptions, physician screening, geographic supply barriers, and so forth"

(55). Hafner-Eaton's analysis also controlled statistically for a number of factors other than insurance status that could affect use of physician services. In addition to the variables that most researchers control for (gender, age, ethnicity, and perceived health status), Hafner-Eaton simultaneously controlled for functional health status,[36] comorbidities, region, metropolitan statistical area, and household head's education. Hafner-Eaton provided results for three different groupings of survey respondents: 1) those reporting chronic conditions (who may or may not also have had acute conditions); 2) those reporting acute illnesses during the 12-month period, but reporting no chronic conditions; and 3) those reporting neither chronic nor acute conditions (designated the "well" people). Hafner-Eaton's findings apply to people under 65.

Hafner-Eaton found that, overall, uninsured people were fifty percent as likely as insured people to have had an initial physician visit. Taking into consideration that Hafner-Eaton defined the insured population to include people with either private or public coverage, this estimate is roughly similar to that of other researchers. Hafner-Eaton's findings are also consistent with others in that uninsured individuals perceiving themselves to be in poor health had more visits than uninsured people in good health, but that uninsured persons reporting acute illnesses were less likely to go without care than both uninsured chronically ill individuals and uninsured well persons.

Hahn, 1994

Hahn's recently published article based on NMES also reports findings roughly consistent with other analysts (e.g., Long and Marquis (91)). Hahn examined data only for adults ages 18 to 64, used relatively complex measures of utilization (e.g., reactive versus proactive visits) and insurance sta-

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[34] Perceived health status is measured by questions such as "In general, would you say that your health is excellent, good, fair, or poor?"

[35] The increase in inpatient services was not quantified.

[36] Functional health status was not further defined, and results in Hafner-Eaton appear to be presented only for perceived health SlatUS.

tus **(see** table 4-6), and controlled for health status using only perceived health status. Hahn controlled for sociodemographics using family income and education, but did not include controls for region or residence (i.e., metropolitan area versus nonmetropolitan area).

Hahn presented her findings in terms of the expected additional (or fewer) visits or hospital nights that could result from extending full-year private insurance coverage to uninsured people. Hahn estimates that, on average, reactive physician visits would increase 69 percent (from 1.6 visits per patient per year to 2.7 visits per patient per year), preventive visits would increase 60 percent (from .204 visits per patient per year to .327 visits per patient per year), and hospital nights would increase 83 percent (from .331 nights per patient per year to .606 nights per patient per year). In contrast, Hahn found that physician visits and hospital nights for people with Medicaid coverage could decrease if they received private coverage instead.[37]

■ Evidence on Expenditures with Expanded Coverage

As described earlier in this chapter, analysts who calculate the costs of covering uninsured people under particular reform proposals may take somewhat different statistical approaches. The researchers who have done estimates of costs of covering uninsured people under a universal coverage scheme, although not in the context of particular reform proposals, also take differing

statistical approaches. For example, the Long and Marquis and Spillman estimates described below first estimated differences in utilization as described above, and then assigned expenditures to services that were: 1) used previously and 2) expected to be used under universal coverage.[38] In contrast, the third study reviewed here only uses survey data on expenditures for health services by insured and uninsured individuals without first estimating utilization differences (198). This section reviews conclusions of three studies of estimated costs of covering previously uninsured people.[39]

Spillman, 1992

Following her analysis of differences in utilization of physician and hospital services (see above), Spillman asked, "What is the monetary cost of the additional resources that would have to be committed to health care if the uninsured were to use basic services on a par with the insured?" To arrive at this estimate in 1989 dollars, Spillman adjusted utilization differentials for nonemergency ambulatory and inpatient care using:

- estimates of the percentage of persons uninsured for any part of 1987 (the most recent year for which such estimates were available when she did her analysis),
- the average share of the year spent without insurance computed from NMCUES data,
- population estimates by age, and
- per capita spending data derived from HCFA'S 1984 and 1989 National Health Accounts.[40]

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37 This is an interesting example of a situation in which, **although utilization maybe lower under private coverage, expenditures** are likely to **be higher, because of relatively low Medicaid provider payment rates (56).**

lx Only two studies described in the "utilization" section above went on to estimate the costs associated with reducing the gap in utilization between insured and uninsured people.

39 Some have made the argument that covering the currently uninsured would lead to cost Savings because the care received by uninsured people is often of a more expensive, emergency nature. However, no analyst has made this assumption.

40 Spillman used a complicated method to compensate for several deficiencies (relative to her goals) in the HCFA and NMCUES data (e.g., the fact that national health accounts do not include separate estimates for individuals younger than 65, for adults separately from children, or for outpatient against inpatient hospital spending). Spillman notes several implicit and explicit assumptions that arise from the methods she used (e.g., that spending ratios for elderly and nonelderly people were roughly the same in 1984 and 1989; that spending is approximately proportional to utilization; that being uninsured affects the probability of use by children but not average use once admitted to the hospital; and that ratios of inpatient to outpatient care in community hospitals are similar to those for all hospital spending) (151).

TABLE 4–6: Additional Methodological Details in Studies on Differences in Utilization of, and Expenditures for, Health Services by Insured and Uninsured People[a]		
Study cited in source of evidence	**Type of health insurance for which relevant**	**Measures of utilization used**
Selected original studies		
Spillman, 1992	Health insurance on average	Emergency visits to hospital ED, nonemergency services in hospital EDs and other ambulatory settings; inpatient hospital services[b]
Long and Marquis, in preparation	Private employer-sponsored coverage; adjusted for all versus partial - year coverage	Numbers of ambulatory encounters and numbers of inpatient days, ambulatory services Included contacts with physicians in their offices and clinics, as well as, to the extent it was able to be differentiated, outpatient hospital services
AHCPR, December 1991	Any private insurance or public insurance[c] but no private Insurance versus persons uninsured throughout 1987	*Expenditures for personal health services.* direct expenses Incurred for hospital stays, emergency room and outpatient clinic visits, ambulatory physician visits, nonphysician ambulatory care, dental visits, prescription medicines, home health care, and other items (e.g., medical equipment and supplies)
Hafner-Eaton, 1993	Any private insurance, Medicaid, Medicare, military coverage (e.g., CHAMPUS); the category uninsured was a residual	Llkelihood of a person having any physician visits during the previous 12 months
Hahn, 1994	Five mutually exclusive Insurance groups created from the data. 1) uninsured for the full year, 2) private Insurance for the full year, 3) private insurance for part of the year and uninsured for the remainder; 4) Medicaid coverage for the full year, and 5) Medicaid coverage for part of the year. Privately Insured Included military coverage (e.g., CHAMPUS) Study sample of persons with public Insurance Included only those covered under AFDC or a similar program, and excluded people who had coverage because they were sick and disabled (e g., medically needy Medicaid coverage).	Three types of medical care visits *Reactive ambulatory* measured using the sum of 3 variables (1) number of outpatient hospital visits to a physician, 2) number of medical visits not in an outpatient hospital setting to a physician; and 3) number of visits to an emergency room) only if the reason for the visit was not preventive or proactive, *Preventive or proactive,* measured using same 3 variables as reactive visits, but counted as prevent we or proactive if identified as a vision exam, maternity care visits, immunization, or general checkup not associated with a condition; *Hospitalization,* measured as 1) number of hospital stays, 2) number of nights spent in the hospital

	TABLE 4–6: Additional Methodological Details in Studies on Differences in Utilization of, and Expenditures for, Health Services by Insured and Uninsured People[a] (cont'd.)	
Study cited in source of evidence	**Type of health insurance for which relevant**	**Measures of utilization used**
Reviews		
OTA, September 1992	Varied; studies did not provide enough information to distinguish among scopes and depths of coverage	*Utilization* Patient reports of having a usual or regular source of care, and of foregone or delayed care, physician visits, inpatient hospital stays, use of clinical preventive services.
		Process of care Hospital length of stay, cost of hospital care, number of procedures, types of procedures, negligent adverse events, patient satisfaction with process of care,
Long and Marquis, in preparation (review portion)	Varied	Ambulatory encounters (probability of an ambulatory contact, plus number of contacts, combined)[d], Inpatient hospital services (probability of an inpatient stay plus length of stay, combined)

KEY: AFDC = Aid to Families with Dependent Children, AHCPR = U S Department of Health and Human Services, Public Health Service, Agency for Health Care Policy and Research; CHAMPUS = Civilian Health and Medical Plan of the Uniformed Services ED - emergency departments NA= not applicable or not available, OTA – U S Congress, Off Ice of Technology Assessment

[a]Study results are shown in table 4-2

[b]Spillman used the two-part model of utilization made standard after the RandHealth Insurance Experiment

[c]Persons with public insurance include those with Medicaid, Medicare, CHAMPUS and State and local medical assistance programs (198)

[d]Ambulatory encounters can include phone calls or visits to physicians' or other providers Offices or visits to hospital outpatient departments Surveys do not always distinguish among these types of encounters and settings for encounters and studies using surveys do not always define their terms clearly

SOURCES Off Ice of Technology Assessment, 1994 based on sources as shown Full citations are at the end of this report

Spillman projected the incremental cost of closing the service gap at $25.7 billion in 1989 dollars ($41.4 billion in 1994 do11ars) (151), an increase by or on behalf of previously uninsured people of approximately 165 percent.[41] Spillman's estimate amounts to 3.9 percent of NHE, using a baseline of $664 billion for 1989, and is higher than estimates from the other two studies reviewed here (OTA calculation, based on baseline from CBO (168)).

In its November 1993 publication on behavioral assumptions, CBO comments that the Spillman analysis probably overstates the increase in expenditures because of the way Spillman defined the uninsured population: "By excluding those who received some public benefits under various programs, she excluded the only segment of the uninsured population that has significant health care expenses" (169). As a result, Spillman's estimate of expenditures on behalf of uninsured people was atypically low.

As noted above, CBO estimated that baseline spending by uninsured people was approximately $35 billion in 1991 ($46.6 billion in 1994 dollars, by OTA's calculation (165)). By comparison, Spillman estimated that baseline spending by uninsured people was $15.6 billion in 1989 ($1 8.9 billion in 1991 dollars, and $25.2 billion in 1994 dollars, by OTA's calculations (151)). The difference between CBO'S approach and Spill man ap-

41 That is $25.7 i\,newspending/$ 15.6 in spending at uninsured utilization level=1.65.

preach suggests the importance of understanding how the uninsured population is defined for estimates of incremental costs of covering uninsured people. It is also important to understand that Spillman's total applies to a smaller portion of personal health care expenditures than the analysts' estimates (see table 4-5).[42]

Long and Marquis[43]

Long and Marquis converted estimates of differences between insured and uninsured people into predicted units of ambulatory and hospital inpatient services (i.e., numbers of ambulatory encounters and numbers of inpatient days) for uninsured people, and used the predicted units to calculate the potential cost of covering the uninsured (91).

As did Spillman's, Long and Marquis's cost information came primarily from the HCFA National Health Accounts (86), and their estimates of aggregate use came from the HIS.[44]

Long and Marquis concluded that, if previously uninsured people were insured with a typical employment-based policy, they would incur an additional $19.9 billion in payments to physicians and hospitals in 1993 alone ($21.9 billion in 1994 dollars, as calculated by OTA) (91). Long and Marquis estimated that this increment is equal to 2.2 percent of projected baseline 1993 NHE.[45]

In addition to noting uncertainties that could affect their estimates of utilization, Long and Mar- quis noted other uncertainties that could affect their estimates of the costs of covering uninsured people (91). In 1993 dollars, Long and Marquis estimate that incremental costs could range from $16 billion to $29 billion.

AHCPR Analysis of NMES, 1987

The National Medical Expenditure Survey (NMES) is the basic source of information on expenditures that most analytical groups use to make projections of the costs of more complete insurance coverage. In a 1991 report, analysts at the AHCPR analyzed the NMES data and found that "differences in health care use and expenditures according to insurance coverage remained when economic status, ethnic/racial background, and health status were considered separately" (198).

The NMES results suggest that individuals under 65 who were uninsured all year incurred average total expenditures of $915 per user, compared with an averageof$1,316 for people with any private insurance all year, and $2,619 for people with public insurance only. Thus, prior to adjustments for other factors likely to affect the use of services, uninsured individuals who used services incurred costs that were 69 percent of those incurred by people with private insurance, and 35 percent of those incurred by people with public insurance only.[46] Thus, to bring expenditures of the average uninsured health care user to the level of a privately insured health care user would increase expen-

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[42] Physician and hospital services account for about 65 percent of personal health care expenditures, and 60 Percent Of overall NHE (83).

[43] See previous note on the Long and Marquis analysis.

[44] Other sources of data were also used. For example, charges per inpatient day for privately insured patients compared with self-pay or no-charge patients were derived from AHCPR's Hospital Cost and Utilization Project, adjusted by data on days per discharge from the 1990 National Hospital Discharge Survey (9 1).

[45] Adding baseline expenditures to the increment] costs of covering uninsured people for physician and hospital services would result in total spending on physician and hospital services of $67.0 billion (in 1994 dollars). As an example of what gross premium costs might be, Long and Marquis assumed that "other professional" services and prescription drugs might be covered under a universal coverage proposal, and that adding those services, adjusting for coinsurance (which would decrease premium costs), and adjusting for "administrative load" on the insurance premiums (which would increase premium costs at about the same amount that patient cost-sharing would decrease, according to Long and Marquis) could result in gross premium costs of $77.0 billion in 1994 dollars (table 4-3).

[46] OTA calculations based on table 1 in AHCPR's report (198).

ditures an average $401 per user, a 44 percent increase on average.[47]

▮ Findings and Policy Implications

Findings

Tables 4-3 and 4-5 earlier in this chapter present analysts' estimates of incremental or total health spending for newly insured people under universal coverage proposals, alongside results from empirical research on the same topic,[48] Table 4-4 presented key assumptions used by the analysts and the researchers.

These summary tables highlight three issues:

• Many analyses do not report dollar estimates of the incremental or total costs of covering newly insured people but some estimates are available (e.g., Lewin-VHI (89); CBO (165)).

ᵐ While the available estimates are all similar in direction (i.e., covering uninsured people will add to national health expenditures under reform), they appear to vary a great deal from each other in magnitude, even for the same proposal (from $28.4 billion (89) to $83.6 billion (Clinton Administration, based on OTA's calculation) (both figures are in 1994 dollars, as calculated by OTA). The greatest difference between these estimates can probably be explained, at least in part, if one knows that the Clinton Administration included part of the costs of previously uncompensated (i.e., cost-shifted) care in their estimate of new spending for previously uninsured people, while the other analyst included an estimate of cost-shifted care in their estimates of *baseline* spending by

uninsured people.[49] Both analysts subtracted some of the cost-shifting elsewhere in their NHE analyses. Other differences between analysts' estimates appear to stem primarily from the type and scope of insurance coverage that is assumed under reform,[50] and policy parameters for patient cost-sharing requirements.

▪ Research studies support analysts' conclusions that adding new people to the insurance rolls will increase national health expenditures, but the two available studies also vary from each other ($17.6 billion to $41.4 billion in incremental costs (in 1994 dollars, as calculated by OTA)). The two research estimates would naturally tend to be lower than estimates associated with reform proposals because the research estimates generally apply to a smaller portion of personal health and national health expenditures.

Without access to the analysts' models or documentation, it is only possible to explain differences among analysts' estimates qualitatively; it is not possible to reconcile them.

In summary, all available evidence suggests that providing coverage to uninsured people is likely to increase national health expenditures under reform. Some of the differences among estimates can be explained, at least in part, through a relatively close examination of the assumptions underlying the analysts' and researchers' estimates. However, it is not possible for OTA to select or calculate a specific dollar figure as the correct incremental (or total) cost of covering previously uninsured people under reform.

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[47] Not all Uninsured people use services. According to AHCPR'S analysis of the NMES, 63.7 percent of uninsured people and 87.3 percent of privately insured people used services in 1 987. *(Uninsured* was defined as uninsured all year).

[48] As discussed in chapter 1, OTA uses the terms *analyst* and *analyses* in relation to estimates of specific proposals for health reform. Empirical research studies are estimates of the costs of covering uninsured people, having no specific reform proposal in mind.

[49] CBO does not provide separate dollar figures on costs of covering uninsured people, but, as discussed above, it appears to have included uncompensated care and public spending m its base figures for the Health Security Act (172).

[50] For example, Lewin-VHI assumes an extrapolation" of current coverage (89), and the Clinton Administration (and CBO (172)) assume the expanded benefit package under the Health Security Act.

Policy Implications

As noted above, analysts predicting the impact of reform on NHE do not always report information about the component of the change in NHE that derives from the potential cost of covering uninsured people. Analytical groups may require clear guidance from Congress about whether Congress requires such discrete estimates.

If Congress is interested in having analysts report separately projections of the potential costs of covering uninsured people, it will likely have to determine the types of information that it will find most useful. Are estimates of the cost of covering uninsured people under assumptions of current policy (i.e., with no other aspects of reform embedded) sufficient? Or do policy decisions require analysts to integrate into their estimates of costs of covering uninsured people the potential effect of other aspects of reform, such as the proposed benefit package? How should current cost-shifting be treated?