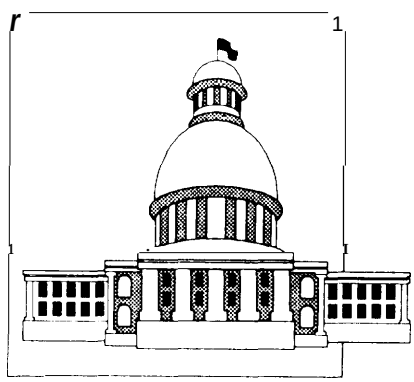
Applying Government cost Controls

2

Recent health reform proposals rely on a number of approaches to constrain health expenditures. One is to apply government cost controls. [1] Government cost controls are measures by which federal, state, or local governments play a director indirect role in financing and paying the facilities and providers through which health care services are delivered. Government cost controls include limits on average price of health insurance, (i.e., premiums), prices of particular categories of health services (e.g., physicians' fees), overall expenditures for a particular health care category or facility (e.g., hospitals), or overall outlays for a particular source of funding (e.g., national, state, or local government budgets).

This chapter begins with a brief description of the key government cost-containment strategies in selected health reform proposals (see box 2-1).[2] It examines analysts' assumptions about the effectiveness of government cost control strategies because alternative assumptions can result in wide variation in the estimates of "savings" that can be achieved by adopting a particular reform plan. The analyses of proposals reviewed in this chapter are summarized in table 2-1. Analysts' key assumptions are summarized in table 2-2. The chapter also reviews the empirical evidence on the effectiveness of key government cost-control



[1] Other approaches include increasing consumer cost-sharing, promoting managed competition, and instituting tax incentives, Managed competition is discussed in chapter 3.

[2] The chapter does not examine all of the health reform proposals introduced in Congress in the current or past legislative sessions, nor does it examine all projections of national health expenditures (N HE) for those proposals.

BOX 2-1: Key Government Cost-Control Strategies

Listed first are the kinds of *limits* found in current proposals that have such limits. Then, the box lists the *mechanisms* designed to achieve the goals.

Limits on spending overall or by specific payers, which in current proposals include the following:

- An overall national spending limit, affecting almost all aspects of spending (H.R. 200)
- National limit on Medicare spending (H.R. 200)
- National limit on non-Medicare spending (H.R. 200)
- State budgets developed by states and approved by the federal government with a set federal contribution as a percentage of the state budget (H.R. 1200/S. 491)

Price controls on private health insurance premiums, which include:

- Region-by-region initial year caps on regional alliance health insurance premiums (H.R. 3600/S. 1757)
- Regional alliance premium growth rate caps (i.e., caps on the growth rate for private health insurance premiums), region by region (H.R. 3600/S. 1757)
- Insurance premium schedules for public coverage (e.g., Medicaid) plans (H.R. 3600/S. 1757)

Other cost control mechanisms:

- Negotiated prospective spending limits for operating expenses for hospitals, nursing homes, and other institutional- or facility-based care (H, R. 1200/S, 491)
- Negotiated prospective expenditure limits (or risk-adjusted per-enrollee cavitation payments) for new Comprehensive Health Service Organizations (CHSOs) (H.R. 1200/S. 491)
- Prospective limits on overall spending by fee-for-service plans (optional) (H.R. 3600/S, 1757)
- Fee schedules for services provided by physicians, hospitals, and other professionals in fee-for-service plans and potentially for some prescription drugs (H.R. 3600/S. 1757)
- Maximum payment rates for each class of non-Medicare health services, generally set using Medicare payment methods (staff- and group-model HMOS would be exempt) (H.R. 200)
- Maximum payment rates for Medicare health services, reduced as needed to conform to the national Medicare budget (H.R. 200)
- State-established payment programs that would exempt providers in the state from the federally set maximum payment rates, if overall expenditures remained within the maximum payment rates (H.R. 200)
- Negotiated prospective fee schedules for physician and other professional services, able to be adjusted by states (H. R. 1200/S. 491)
- Negotiated prescription drug prices (H.R. 1200/S. 491)

SOURCE. Office of Technology Assessment, 1994

strategies.[3] The chapter addresses the following questions about the evidence and analysts' conclusions about government cost-control strategies:

- Can any savings be attributed to government cost-controls and, if so, is it possible to quantify the savings resulting from a particular set of government cost controls?

[3] The chapter does not review the evidence on the effectiveness of government attempts to control utilization directly (e.g., by utilization review programs) or indirectly (e.g., by limiting health care technology or capacity, such as in certificate-of-need programs). These types of controls play a relatively unimportant role in recent health reform legislation and are not modeled in NHE estimates.

- Is there empirical evidence to support assigning particular effectiveness ratings to a set of government cost-control strategies?

The final section provides conclusions and policy implications relevant to modeling government cost-control strategies.

KEY GOVERNMENT COST-CONTROL STRATEGIES

The proposals relevant to this chapter vary in the extent to which they use explicit limits and supporting mechanisms, in the proportion of national health expenditures (NHE) to which the mechanisms apply, and in other specifics (e.g., permissible growth rates for budgets or premiums). For example, premium limits under the Health Security Act (H.R. 3600/S. 1757) would apply to about a third of NHE according to the Clinton Administration (155). The amount of NHE that is subject to limits is an important factor in estimating the effect of government cost-controls on national health expenditures.

As background for understanding the kinds of assumptions that analysts make, this section provides an overview of selected key government cost-control mechanisms in the proposals that feature the controls:[4]

- the Health Security Act (H.R. 3600/S. 1757),
- the American Health Security Act of 1993 (H.R. 1200/S. 491), and
- the Health Care Cost Containment and Reform Act of 1993 (H.R. 200).

Health Security Act (H.R. 3600/S. 1757)

The Health Security Act proposes to constrain the growth of health expenditures for the standard benefit package through numerous mechanisms,[5] including premium growth limits (see table 2-3). Premium limits are considered to be "backstop" mechanisms for constraining the growth of expenditures.

Under the act, a National Health Board (NHB) would set the initial-year premium limits for regional health alliances (H.R. 3600/S. 1757, section 6002). The initial-year premium 1imits would form the basis for health plan premium bids. Weighted-average regional alliance premiums would then be allowed to grow no faster than the rate of the projected increase in the consumer price index (CPI) plus 1.5 percent for 1996, the CPI plus 1.0 percent for 1997, the CPI plus 0.5 percent for 1998, and the CPI plus O percent for 1999 and 2000. For the year 2001 and beyond, the average regional alliance premiums would be allowed to increase no faster than the rate of change in the CPI, plus the average change in real gross domestic product (GDP) per capita unless Congress approved another rate. These limits on premium growth would come into effect only when regional alliance premiums exceed the target rate.

The Health Security Act has several mechanisms to ensure that regional alliance premiums for the standard benefit package would be no greater, on average, than the levels determined by the National Health Board and the growth rates prescribed in the legislation. These include penalties on health plans that in effect would reduce excessive premiums to the limits on a dollar-for-dollar basis. In addition, fee schedules for fee-for-service plans and the fee-for-service component of other types of health plans, as well as options for States or regional alliances to impose prospective budgets on fee-for-service plans, are intended to help keep premiums within the legislated limits. The Health Security Act would also limit the rate of increase in corporate alliance premiums. Corporate alliances would be terminated if they experienced increases in premiums above the targeted amount.

[4] Bills are from 103d Congress.

[5] This act also has provisions intended to constrain expenditure growth by increasing competition among plans, as discussed in chapter 3.

TABLE 2–1: Analyses of the Impact of Health Reform Proposals on National Health Expenditures Reviewed in This Report

Proposal	Analyses[a] 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 (HR. 5919)[c]				CBO
Health Care Cost Containment and Reform Act of 1992 (HR. 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-VHl scenario without government cost controls		**Lewin-VHI**		
Managed Competition Act of 1992 (H. R. 5936)[c]		**CBO** ESRI	CBO	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-VHl version				Lewin-VHI[d]
Single-payer plan, Woolhandler and Himmelstein version				Wool handler and Himmelstein
Universal Health Care Act of 1991 (H.R. 1300)[c]	**CBO**		CBO	CBO

KEY CBO = U.S. Congress, Congressional Budget Office, GAO = U S General Accounting Office, ESRI = Economic and Social Research institute

aFull Citations for the analyses are in appendix B

bBill numbers are for 103d Congress

CBiII numbers are for 102d Congress.

dAnalysis was conducted b, Lewin-lCF The company was acquired and expanded in 1992 For purposes of this report all Lewin analyses are identified as Lewln-VHl

SOURCE Office of Technology Assessment, 1994

TABLE 2–2: Key Assumptions and Criteria for Judging Effectiveness of Expenditure Limits for Selected Health Care Reform Proposals

Proposal	Analysis[a]	Design of expenditure limit	"Effectiveness rating" for expenditure limit	Criteria for effectiveness ratings: Criteria for rating limits as effective in meeting target	Criteria for effectiveness ratings: Criteria for rating limits as ineffective in meeting target
American Health Security Act of 1993 (H.R. 1200/ s. 491)	**CBO**	**National and state budgets**	75%	A single payment mechanism A uniform system of reporting by all health care providers. Prospective budgets for hospitals and nursing homes Prohibition of balance billing for covered services. Strong incentives for states to keep spending within their share of the national budget since they would have to fund any excess spending beyond the federal share of approved state budgets.	States would not be penalized for failing to stay within their approved budgets.
Health Care Cost Containment and Reform Act of 1992 (H.R. 5502)[b]	**CBO**	National health budget, divided into a Medicare category and a non-Medicare category of expenditures	Medicare category 75%	HCFA collects most of the data necessary to set rates and track spending relative to the budgeted amounts, so that expenditure limits enforced by rate-setting could be reasonably but not totally effective in controlling Medicare spending. HCFA has considerable experience in setting payment rates and estimating the responses of providers.	The absence of prospective budgets for hospitals, nursing homes, and other institutional providers of health care. No provision for continually adjusting payment rates for noninstitutional providers (e. g., physicians) to assure that the expenditure limits were not exceeded, nor a mechanism to recover any excess spending that might occur

(continued)

TABLE 2-2: Key Assumptions and Criteria for Judging Effectiveness of Expenditure Limits Cited in Health Care Reform Proposals (cont'd.)

Proposal	Analysis[a]	Design of expenditure limit	"Effectiveness rating" for expenditure limit	Criteria for rating limits as effective in meeting target	Criteria for rating limits as ineffective in meeting target
			Non-Medicare category 25%	Not discussed,	Participation in the national health claims network would be voluntary. The data needed to determine compliance with expenditure limits would be incomplete and would not be available in a timely fashion. The calculation of the states' option to operate their own systems would be very difficult to make and specific data on states would not exist in usable form for at least several years, The bill would exempt federally qualified HMOs from rate-setting, including some types of HMOs that have not been shown to be cost-effective.
Health Security Act (H.R. 3600/s. 1757)	CBO	Premium limits for regional alliance expenditures	100%	Little discussion,	
	Clinton Administration	*Premium* limits for regional alliance expenditures	100%	Not documented	

TABLE 2–2: Key Assumptions and Criteria for Judging Effectiveness of Expenditure Limits for Selected Health Care Reform Proposals (cont'd.)

Proposal	Analysis[a]	Design of expenditure limit	"Effectiveness rating" for expenditure limit	Criteria for effectiveness ratings: Criteria for rating limits as effective in meeting target	Criteria for effectiveness ratings: Criteria for rating limits as ineffective in meeting target
	Lewin-VHI	Premium limits for regional alliance expenditures	85%	The bill is specific and "specified adequately the means by which cost controls will be implemented. "[c]	Health alliance premiums would grow at higher rates than allowed under the act due to the advancing age of the baby boom population. Health alliances would experience losses in excess of the premium limits due to plan failures.
Universal Health Care Act of 1991 (H.R. 1300)	**CBO**	National budget	*75%*	A single payment mechanism. A uniform system of reporting by all health care providers. Prospective budgets for hospitals and nursing homes. Prohibition of balance billing for covered services.	Physicians and other institutional providers would continue to be paid on a fee-for-service basis, with no prompt feedback mechanisms to assure that increases in the volume of services would not offset restrictions on fees.

a Full citations for analyses are in appendix B

bCBO analyzed this bill but did not analyze H R 200, which is Identically named and was Introduced in the 103d Congress.

CJ. F. Sheils, Jan. 21, 1994 (143) Full citation is at the end of the report

KEY CBO = U S Congress, Congressional Budget Off Ice, HCFA = Department of Health and Human Services, Health Care Financing Administration, HMO = health maintenance organization

SOURCE Off Ice of Technology Assessment, 1994

TABLE 2–3: Approaches to Government Cost Controls in the Health Security Act (H.R. 3600/S. 1757)

Government cost controls	Characteristics of controls	Details of controls
Expenditure limits	**Initial-year regional alliance premium limits**	A NHB would establish per capita regional health alliance premium limits for the standard benefit package for the initial year of the plan implementation. A fine would be imposed on each health plan whose accepted bid caused the regional health alliance to exceed its premium limit and on providers receiving payment from the health plan.
	Regional alliance premium growth limits	Growth in health alliance premiums would be limited through national and regional inflation factors. On average, allowable premium increases above **CPI** would be reduced over subsequent years such that by 1999, average premium growth would equal CPI growth. For the year 2000 and beyond, the average national premium would be allowed to increase at the rate of change in the **CPI** plus the average rate of change in real per capita **GDP** unless Congress approves another rate. If a health alliance's actual weighted-average accepted premium exceeds' its premium limit in a given year, the inflation factor would be reduced for the following 2 years to recover excess spending. Corporate alliances would have to adopt similar methodologies to determine their premiums.
Price controls	Schedules for fee-for-service services	Health alliances would negotiate with providers to establish a fee schedule for the fee-for-service component of all health plans and for fee-for-service health plans. States could adopt a statewide fee schedule or permit providers to negotiate collectively with a health alliance. Balance billing would be prohibited.
	Medicare program	Payment rates to providers for Medicare services would be lower than under current law. In addition, the new Medicare pharmaceutical benefit involves strict price controls, including the right of the Secretary of DHHS to negotiate special prices for new outpatient prescription drugs deemed to be overpriced or to exclude them from coverage. The Secretary would also appoint an advisory council on breakthrough drugs that would examine the reasonableness of the price of new drugs that represent a breakthrough or significant advance over existing therapies.
	Medicaid program	Federal payments to regional health alliances for Medicaid beneficiaries would be lower than under current law.
Optional payment methods	**State single-payer option**	States could choose to opt out of the health alliance system and establish a single-payer system of health care financing, under which states would pay all health care providers directly. The NHB would also establish premium limits for single-payer states. If per capita spending for the standard benefit package in those states exceeded the limits, those states would be required to reduce payments to providers correspondingly.
	Prospective budgets for fee-for-service health plans	States would have the authority to impose prospective budgets on fee-for-service health plans offered through regional health alliances.

[a]Fee-for-service component refers to the consumer's option to seek services from providers outside of hls or her health plan's network These providers would be paid according to the fee schedule established by the state or regional alliance

KEY: CPI = consumer price index; DHHS = Department of Health and Human Services, GDP = gross domestic product, NHB = National Health Board

SOURCE. Off Ice of Technology Assessment, 1994

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

The American Health Security Act would establish a state-based single-payer system of national health insurance similar to the Canadian system (171). The national health insurance system would replace most current public and private health insurance,[6] and provide universal coverage to all citizens and legal residents. Besides its tax-based financing mechanism and universal coverage, the American Health Security Act includes a national/state budgeting system for the national health insurance program that could grow no faster than the percentage increase in GDP for the previous year, plus population growth.[7] The act also contains several category-specific cost-control strategies (e.g., on prescription drugs, hospitals, nursing homes) (see table 2-4).

Health Care Cost Containment and Reform Act of 1993 (H.R. 200)

The Health Care Cost Containment and Reform Act of 1993 (H.R. 200) would expand the Medicaid program, retain the existing Medicare program, and encourage managed competition in the private health insurance market, all operating under a national limit on expenditures (table 2-5). The national health budget would be divided into a Medicare category and a non-Medicare category of expenditures. The national health budget would not apply to all sources of national health expenditures. For example, expenditures for health services by the Department of Veterans' Affairs, the Department of Defense, and the Indian Health Service would be excluded from the national health budget.

H.R. 200 is similar to an identically named act introduced in the 102d Congress (H.R. 5502).[8] Both have two key government cost-containment features:

- A limit on health expenditures, covering most public and private health spending, would be applied to services covered by Medicare and to services not attributable to Medicare. Expenditures for each category would be required to grow no faster than the rate of growth GDP by 1999.
- Payment rates for each category of personal health services would be set at levels calculated to keep health expenditures within the national health budget. Rates would be set separately for Medicare and for non-Medicare health spending (168).

In addition, the 1992 act provided for Medicaid payment rates to be raised gradually to 90 percent of Medicare rates (168). Other key government cost-containment features of the Health Care Cost Containment and Reform Act of 1993 are listed in table 2-5.

Summary

Proposals often include more than one government cost-control mechanism. Proposals may also set a growth target or limit in legislation, although none of the proposals applies such a target or limit to NHE in the aggregate. As described below, analysts often examine the array of cost-control mechanisms and other aspects of a particular proposal and come to a global judgment about the effectiveness of the cost-control provisions in meeting a particular limit on health care expenditures.

ANALYSES OF REFORM PROPOSALS

Several analyses—by the Clinton Administration, CBO, and Lewin-VHI—incorporate as-

[6] The Department of Veterans Affairs' system and the Indian Health Service (in the Department of Health and Human Services (DHHS)) would remain.

[7] CBO noted that the American Health Security Act defines the limit on the growth of health expenditures in two different ways. The alternative definition would limit the growth of health spending to the rate of increase in GDP for the previous year (171).

[8] CBO analyzed the bill H.R. 5502 from the 103d Congress, but did not analyze H.R. 200.

TABLE 2–4: Approaches to Government Cost Controls in the American Health Security Act of 1993 (H.R. 1200/S. 491)

Government cost controls	Characteristics of controls	Details of controls
Expenditure limits	**National and state budgets for the national health insurance program, limited to growth of GDP in previous year plus population** growth.	The national budget would be allocated to states, with the federal contribution to states set between 81 and 91 percent of approved state budget amounts, averaging 86 percent. States develop budgets broken down by function and categories of services. States are responsible for funding the other 14 percent of budgets, as well as any additional spending in excess of approved state budgets
Prospective budgets	Institutional and facility-based care (e.g., hospitals and nursing homes).	Negotiated prospective budgets to pay for operating expenses for institutional and facility-based care, including hospital services and nursing facility services. Budgets include payments for outpatient care and non-facility-based care furnished by the facility. Budgets can be amended before, during, or after the year if there is a substantial change in any of the factors relevant to budget approval.
	Comprehensive health service organization.	CHSOS would be paid either through a prospective budget or through a basic risk-adjusted cavitation payment for each of its enrollees.
Price controls	Independent health care practitioners (e.g., physicians).	Negotiated prospective fee schedules for physicians and other professional services, designed to provide Incentives for practitioners to choose primary care medicine over medical specialization, States are allowed to adjust fees depending on whether expenditures under the fee schedule will exceed the state budgeted amount with respect to such expenditures.
	Pharmaceuticals,	A Security Standards Board could determine or negotiate prescription drug prices with the pharmaceutical industry.
Optional payment methods	**Community-based primary health services.**	Payments would be based on a prospective budget, on a basic primary care cavitation amount for each enrollee, or on a fee schedule.
	Other facility-based services (e.g., hospice care, outpatient services, home-, school-, and community-based services).	Payments would be based on a prospective budget, cavitation for each enrollee, a fee schedule, or other payment method.

KEY: CHSO = Comprehensive Health Service Orgaanization, GDP = gross domestic product

SOURCE Office of Technology Assessment, 1994

TABLE 2–5: Approaches to Government Cost Controls in the Health Care Cost Containment and Reform Act of 1993 (H.R. 200)

Government cost controls	Characteristics of controls	Details of controls
Expenditure limits	**National health budget, by 1999 required to grow at the average annual percentage Increase in GDP during the five-year period ending with the second previous year.**	**The national health budget would be divided into a Medicare category and a non-Medicare category of expenditures, each required to grow at the average rate of** GDP by 1999, the Medicare and non-Medicare categories would be allocated to separate "classes" of health services (e g., inpatient hospital services, outpatient hospital services, physician services, and mental health services).
Price controls	Non-Medicare payment rates (for services not subject to state provider payment systems or provided by staff- or group- model HMOS).	Maximum payment rates would be set for each class of health service for non-Medicare services at levels estimated not to exceed the share of the non-Medicare budget for the relevant class. Rates would generally be set using Medicare methods (e g , DRGs for Inpatient hospital services, Providers would not be allowed to charge more than the maximum payment rates.
	Medicare payment rates	Rates under the Medicare program would be based on existing provisions of Medicare law and reduced as needed to assure that payments to providers conform to the Medicare budget
Optional payment methods	**Staff- and group-model HMOS**	Services provided by group- or staff-model HMOS would be exempt from the maximum payment rates. These HMO models could negotiate rates with hospitals and physicians directly.
	State provider payment systems	States could establish payment programs for hospital and/or physician services, or for all services. The maximum payment rates established by the Secretary of DHHS would not apply to providers m states with approved programs Expenditures for services covered under the state payment system should not be more than what expenditures would be if the maximum payment rates applied in the State

KEY DRG - diagnosls-related group, DHHS = Department of Health and Human Services, GDP = gross domestic product, HMO health maintenance organization

SOURCE Office of Technology Assessment, 1994

sumptions about key government cost-control mechanisms into their estimates of NHE for the proposals described above. Analysts have also estimated NHE for previous proposals with similar cost-control provisions (the Universal Health Care Act of 1991 and the Health Care Cost Containment and Reform Act of 1992, both introduced in the 102d Congress).

Analyses of the Health Security Act

To estimate the effect of the Health Security Act premium limits on changes in NHE, analysts generally consider:[9]

- The share of NHE that would be subject to the health alliance premium growth limits in 1995, the year before the premium growth limits would become effective. This assumption is based on estimated costs of the standard benefit package and the number of people estimated to be served by health alliances. Analysts must estimate initial-year premiums for those health services covered under the standard benefit package. The Health Security Act does not specify what the initial-year premiums must or should be, but it provides a formula for calculating premiums (section 6002).[10]
- The effectiveness of the various cost-containment provisions for limiting premium growth rates to those specified in the legislation. The assumed growth rates are applied to the portion of NHE subject to the premium growth limits.

Clinton Administration's Analysis of the Health Security Act

Premium levels

According to Administration officials, the average premium in the regional alliances for a single person would be $1,932 in 1994 (32,135). Average premiums in the regional alliances would be $3,865 for a couple, $3,894 for a one-adult family with children, and $4,361 for a two-adult family with children (1 35). Rivlin and colleagues note that premium estimates could change slightly as economic forecasts and National Health Accounts baselines are updated (135). The Administration estimates are lower than comparable premium estimates by CBO and Lewin-VHI. [11,12]

Premium growth rates

The Health Security Act specifies the maximum rate of growth in the cost of the per capita regional alliance premium targets. In 1994 and 1995, costs would grow at a rate fair] y consistent with private health insurance. Growth would be at the rate of change in the CPI plus 1.5 percent in 1996, CPI plus 1 percent in 1997, CPI plus 0.5 percent in 1998, and CPI in 1999 and 2000.

The Administration's analysis assumes that the premium growth limits would be 100 percent 'effective" (i.e., that increases in the portion of NHE covered under the premium growth limits would equal the rate of growth set out in the legislative language from 1996-2000) (see table 2-2).[13]

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9 Analysts also estimate how changes m the government payment formulae for Medicaid and Medicare would influence NHE. This part of the analysis is not reviewed in this chapter.

101nl[laI. year premium estimates, therefore, partially determine whether analysts estimate that health expenditures in the first few years of the plan will be higher or lower than projections of NHE under the current system (i.e., baseline spending). As noted above, the premium limits apply only to a portion of national health expenditures. In addition the premium limits do not apply to Medicare or Medicaid expenditures. They also would not apply to such categories of spending as research and construction, some government administrative expenses, or government public health activities. For example, Lewin-VHI estimated that expenditures under the regional health alliances would account for approximately 33 percent of NHE in 1998 (89).

11 This chapter does not explore the underlying assumptions and data used by the different analysts that have caused differences in initial-year premium estimates.

12 In a meeting with office of Technology Assessment (OTA) staff, Administration officials stated that the regional alliance premiums, assuming the limits, would account for approximately one third ($321 billion) of NHE in 1994(155).

13 The Administration has stated that all Administration analyses assume that the act's premium limits will be 100 percent effective (200).

Lewin-VHI's Analysis of the Health Security Act

Premium levels

Lewin-VHI's premium estimates for 1998 are about 15.4 percent higher, on average, than comparable Clinton Administration estimates (145). For individuals, Lewin-VHI estimated that a premium of $2,732 would be required to cover the costs of the standard benefit package in 1998. The comparable Administration average premium, according to Lewin-VHI, would be $2,336 (143).14

Premium growth rates

Although it is not entirely clear from the documentation, Lewin-VHI estimated that savings achieved through the alliance premium growth limits would not equal the full difference between projected health spending growth rates under the current system and the growth rates specified in the act (143). Lewin-VHI did not assume that premium growth limits would be fully effective because, according to Lewin-VHI, two "loopholes" in the proposal would allow alliance premiums to increase above the 1imits.

First, Lewin-VHI concluded that the act would permit alliances to adjust premium growth rate limits for "material changes in the demographic composition" of the covered population. [5]Lewin - VHI assumed that the advancing age of the baby boom population would cause alliance premiums to increase at higher rates than envisioned by the act (by about 0.6 percent per year) (143).

Second, Lewin-VHI assumed that the health alliances would experience losses in excess of the premium growth limits due to plan failures. Lewin-VHI approximated that the addition to premium levels in each year from this loss would equal the guarantee fund reserve premium assessments of 1 percent a year. These two adjustments to premiums resulted in Lewin-VHI's implicit assumption that the growth limits would be about 85 percent effective (143).

Lewin-VHI did not specifically discuss how prospective budgets or fee schedules for fee-for-service plans might affect the likelihood of meeting the regional alliance premium limits (see tables 2-2 and 2-3). In general, Lewin-VHI assumed that the law would be implemented and enforced as long as it was technically feasible to do so (144). Lewin-VHI has decided that it is not the role of analysts to make adjustments on the basis of political feasibility (i.e., pressure on Congress to change or overturn the premium limits); rather, analysts should try to evaluate the impact of the legislation as written (1 43).

CBO'S Analysis of the Health Security Act

CBO has produced several documents that, taken as a whole, illustrate its general approach for estimating NHE under health reform proposals with expenditure limits and supporting mechanisms. CBO'S approach involves assigning an effectiveness rating to the specific legislated expenditure limit in the bill using analysts' judgments and an array of criteria. It then projects health spending for the share of NHE subject to the limit at the growth rate implied by the limit in combination with its effectiveness rating. However, there is no one place in which CBO describes an overall set of criteria that it uses for assigning an effectiveness rating to a particular set of cost containment mechanisms (box 2-2).

Premium levels

CBO estimated that the national average premium for the standard benefit package for a single person would be $2,100 in 1994 (172). Its premium estimate is 15 percent higher than the Administration's for 1994, and virtually identical to Lewin-VHI'S estimate for 1998 (1 72).

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[14]Lewin. VHI calculated the Administration's 1998 premium by adjusting the Administration's 1994 average premium estimate forward to 1998 (143).

[15]According to John Sheils, the legislation is not clear whether this allowance, as we]] as others, must be a neutral adjustment among all health alliances. Discussions between Lewin-VHI and the Clinton Administration about the legislative language did not resolve the issue (143).

BOX 2–2: CBO's Method and Criteria for Rating the Effectiveness of Expenditure Limits

The CBO's use of effectiveness ratings is regarded as a conceptual advance in estimating procedures. However, some policymakers have expressed concern that CBO's (and others') methods and criteria for rating the effectiveness of their proposals may be difficult to decipher. As a result, CBO (and others) may appear to use differing methods and criteria to rate the effectiveness of apparently similar policies intended to change national health expenditures (NHE) under reform. This box reports the general method and criteria that CBO has reported using to "score" different proposals with expenditure limits that apply to a large portion of NHE.

CBO's General Method

In testimony in 1993 and elsewhere, CBO has described its general method for assigning an effectiveness rating to expenditure limits contained in legislative proposals (130,205):

- **First, CBO examines the proposal** with respect to: 1) the stringency of the expenditure limit, 2) the specified enforcement mechanisms, and 3) the administrative structure of the controls (see discussion of criteria below).
- **Second, based on its best judgment, CBO assigns an "effectiveness rating" to the expenditure limit based on the set of cost control mechanisms contained in the proposal and related administrative and other criteria** (see below).

In essence, CBO makes an assumption about the likelihood that the package of cost-containment levers in the proposal will succeed in reducing the share of health expenditures subject to the expenditure limit to the level and/or growth rate specified in the legislation. According to CBO, "[b]ecause the choice of an effectiveness rating is difficult and imprecise," CBO limits effectiveness ratings to 100 percent (fully effective), 75 percent, 50 percent, 25 percent, and 0 percent (completely ineffective).

- **Third, CBO estimates savings from the expenditure limits.** Savings are equal to:
  a. the difference between:
     1. CBO's projected growth rate for the relevant expenditures under health reform *without* the limit and
     2. CBO's assumed growth rate for the relevant portion of NHE under health reform *with* the legislated expenditure limit applied; which is
  b. multiplied by the effectiveness rating.

  CBO then projects the portion of NHE subject to the expenditure limit forward by its assumed growth rate.
- **Fourth, CBO estimates the growth rate for the portions of NHE not subject to the expenditure limit,** applies that growth rate to the relevant portion(s) of NHE, and aggregates the separate categories of NHE to arrive at its total estimate of NHE under a given health reform proposal.[1]

CBO's Criteria for Assigning Effectiveness Ratings to Expenditure Limits

As noted above, in order to arrive at a particular effectiveness rating for the portion of NHE subject to the expenditure limit in a proposal, CBO applies certain criteria. The ways in which CBO applies specific criteria are not always apparent from CBO's published estimates of specific proposals. According to CBO, the relative importance or weights for each supporting criterion are not fixed, and "the process is judgmental" (133). Further, CBO has acknowledged that the effectiveness ratings stemming from the criteria it uses are "crude." CBO takes these criteria into consideration in an attempt to "rationalize the process" but notes that any weights it assigns to the criteria are based on CBO's analysts' judgments. CBO stresses further that the effectiveness ratings obtained in part through the use of these criteria are "imprecise and subjective" (133). Finally, CBO considers all provisions of a reform proposal in their entirety (131).

The following section presents briefly some of the criteria CBO has provided as general criteria or has used in different analyses to rate the effectiveness of expenditure limits.

BOX 2-2: CBO's Method and Criteria for Rating the Effectiveness of Expenditure Limits (cont'd.)

General criteria or beliefs. In response to a previous draft of this OTA report, CBO said that "The general criteria CBO considers are listed on pp. 11-12 of the July 1993 paper [168], and the specific criteria considered important are discussed for each bill with an expenditure limit as part of CBO's cost estimate" (133).[2] However, CBO's July 1993 paper does not list "general criteria" per se. Rather, the paper notes what CBO "believes" are factors that will increase "the likelihood of success" of limits on expenditures, as follows:

> Based on its assessment of the evidence of the effectiveness of limits on expenditures as they have been applied in the United States and in other countries, CBO believes that the likelihood of success increases with uniform payment levels and centralized claims processing, restrictions on the ability to purchase health care outside the regulated system, and global budgeting for hospitals and other institutions. In addition, a continuously adjusting mechanism for paying physicians, as has been used in Germany and in some Canadian provinces, and budgeting or rate setting that applies to all providers and services would be most effective in enforcing the limits. A good data system with uniform reporting by all providers to allow quick feedback would also be an important component of an effective strategy for limiting health expenditures (168).

In July 1993 document, CBO also notes that "To be effective, . . . legislation would have to include specific details on the mechanisms for setting, monitoring, and enforcing the limits. . . In the absence of specific information that would be used to enforce expenditure limits, it would not be possible to estimate the impact of the limits included in legislative proposals." (168).

Specific criteria. In analyses of specific proposals and elsewhere in CBO's published works, CBO has referred to the following specific criteria that would enhance the effectiveness of statutory expenditure limits. CBO often refers to specific criteria quite briefly, referring people with additional questions about the derivation and meaning of the criteria to previous CBO publications. OTA searched for, and found, other apparent explanations of some of CBO's criteria in various of CBO documents. These apparent explanations are included in footnotes accompanying the various criteria.

- Scope of current NHE covered by expenditure limits (128,162)[3]
- The difference between the prescribed expenditure limit and projected spending assuming current law (162)[4]
- An all-payer system or uniform payment levels (130)[5]
- A single-payer system (130)[6]
- Experience by the rate-setting authority in setting payment rates and estimating provider responses (168)[7]
- Stringency of penalties (162)[8]
- Penalties regarding quantity (volume), as well as price (162)[9]
- Mechanisms or penalties to recover excess spending that might occur under an expenditure cap or target (130,162,171)[10]
- Concurrent introduction of other cost control measures (162)[11]
- Global budgeting for hospitals and other institutions (130,160)[12]
- Required, rather than voluntary, changes in provider behavior (129)[13]
- Involvement of providers in the process of setting and monitoring expenditure caps (162)[14]
- Prohibition of balance billing (171)[15]
- A complete, timely, usable, and uniform data and utilization monitoring system (130,162,168)[16]
- Required, rather than voluntary, participation in a national health claims network (168)[17]
- Exemption of HMOs from rate-setting[18]

(continued)

BOX 2-2: CBO's Method and Criteria for Rating the Effectiveness of Expenditure Limits (cont'd.)

[1]It is not always clear, however, how CBO estimates growth rates for portions of NHE not subject to an expenditure limit. CBO may project expenditures for health services not subject to the limit based on projected growth rates of those categories of spending under current law, or its projections may depend on reforms to those categories of spending contained in the health reform proposal.

[2]CBO's July 1993 paper was a compilation and comparison of estimates of four bills introduced in the 102d Congress.

[3]"Limits applied to one segment of the market, one geographic area, or one type of health service could reduce spending for the affected group or service. But they would have less effect on national health expenditures because of substitutions among services and other compensating adjustments within the system" (162). "Policies that extend to all consumers, payers, and providers generally produce a greater impact on national health spending" (128).

[4]"[A] method [for establishing expenditure limits] that set an expenditure cap that was only slightly less than projected spending would probably not provide sufficient incentives to change the behavior of providers" (162).

[5]"[G]overnment regulation could set maximum prices for physician services that all payers would have to follow. . . Under such an all-payer system, providers could increase volume to offset some, but probably not all, of their lost revenue. Administrative costs would decline somewhat . . . In addition, the authority that determines prices would also control their rate of increase. If the legislation included rules that would limit the growth in prices to less than the projected rate, then price controls in all all-payer system could generate lower national health expenditures than would otherwise occur" (130).

[6]"Price controls carried out through a single-payer system could also reduce reimbursements and sharply cut administrative costs for insurers and providers" (130).

[7]"Expenditure limits enforced by rate setting could be reasonably but not totally effective in controlling Medicare spending [under H.R. 5502]. The Health Care Financing Administration collects most of the data necessary to set rates and track spending relative to the budgeted amounts. It also has considerable experience in setting payment rates and estimating the responses of providers" (168).

[8]"The impact of expenditure limits on national health spending would also be determined by . . . the stringency of the penalties that would be imposed if spending exceeded the limits that had been established" (162).

[9]"[P]enalties for exceeding the allowed expenditure levels would need to address both the price and the quantity of services provided" (162).

[10]"To achieve the level of health spending specified by an expenditure cap or target would require that, if the goal were exceeded in one period, offsetting adjustments would be made in subsequent periods" (162). "A continuously adjusting payback mechanism for physicians, as has been used in Germany and in some Canadian provinces, . . . would be effective in enforcing the [expenditure] limits" (130). Under H.R. 1200, "[n]o penalties would apply, however, if a state failed to live within the budget, and some states may therefore opt to spend more on health care services than the budget provides. As a result, the expenditure limit is unlikely to be fully effective in controlling the growth of national health expenditures" (171).

[11]"The potential effectiveness of expenditure limits would depend on the choice of cost control mechanisms that would be introduced into the health care system. Those mechanisms could include price controls, utilization review and management, increased cost-sharing for consumers, changes in the tax treatment of employment-based health insurance, greater efficiency in the administration of public and private health insurance, and assessment of the value and appropriateness of new technologies before their adoption" (162).

[12]"CBO believes the likelihood of success [of expenditure limits] increases with . . . global budgeting for hospitals and other institutions" (130). "Global budgeting for hospitals' operating costs and expenditure caps for overall spending or specific types of spending will limit the level and rate of growth of health care spending, if they are strictly applied. If a specified amount of money is allocated, and no other source of funding is available, then the health care system is constrained to cost only that amount" (160).

[13]"Proposals that encourage, rather than require, changes in the behavior of providers, insurers, or consumers, and that do not include strong incentives or penalties, have little effect [on cost containment]" (129).

[14]"Other countries that have used expenditure limits as part of a national health policy have involved providers in the process of setting and monitoring expenditure caps. . . . That approach [used in Germany] might be more effective in achieving behavioral changes that would control costs than a policy that involved providers only minimally" (162)

[15]"H.R. 1200 contains many of the elements that, CBO has concluded, would make its expenditure limit reasonably likely to succeed. . . . [B]y prohibiting participating providers for billing [patients] for covered services, it makes it unlikely that people would purchase health care outside the regulated system" (171).

BOX 2-2: CBO's Method and Criteria for Rating the Effectiveness of Expenditure Limits (cont'd.)

[16]"A good data system with uniform reporting by all providers to allow quick feedback would also be an important component of an effective strategy for limiting expenditures" (130). "In both an all-payer and a single-payer system, legislation that included provisions for uniform monitoring of providers' patterns of care would have an even greater impact than price controls alone" (130). "[T]he availability of timely data to monitor performance under the expenditure controls" could increase the effectiveness of expenditure limits (162). [T]he data needed to determine compliance with the expenditure limits would be incomplete and would not be available in a timely fashion. . . . States would be permitted to operate their own systems as long as the growth in health care spending did not exceed what it would have been under the maximum rates. This calculation would be very difficult to make, and specific data on states would not exist in usable form for at least several years" (168).

[17]"The limits on non-Medicare spending [under H.R. 5502] are likely to be subject to much greater leakage and to be far less effective [than the Medicare spending limits]. Participation in the national health claims network would be voluntary...." (168).

[18]"The limits on non-Medicare spending [in H.R. 5502] are likely to be subject to much greater leakage and to be far less effective [than the Medicare spending limits] . . . . The bill exempts federally qualified HMOs from rate setting. Federally qualified HMOs are more broadly defined than group- or staff-model HMOs and include organizational forms that have not been shown to be cost-effective" (168).

SOURCE: Office of Technology Assessment, 1994.

Premium growth rates

For the purposes of making its estimates, CBO assumed that "the proposed methods for constraining the rate of growth of premiums for the standard benefit package would be complete] y effective" (1 72). With little accompanying discussion about its rationale, CBO assumed that the portion of NHE subject to the premium growth limits would increase at the legislated growth rates over the period 1996-2004, and that the mechanisms for limiting growth of premiums would be implemented as intended. [16]

CBO acknowledged that the premium growth limit "could have unintended consequences for the health care system that would affect its overall acceptability, and, hence, the sustainability of the limits," and that "[t]he fact that limits on the rate of growth of premiums might begin to bite at different times and in different ways in each of the various alliances raises the issue of the political sustainability of those limits" (172).

In addition, CBO discussed at length the difficulty agencies would have in developing the experience and the administrative and data systems needed to undertake their assigned tasks in the time frame envisioned by the Health Securit y Act. For example, CBO stated that "[t]he Administration's proposal would depend critically on timely information, much of which has never been collected. Notwithstanding the ongoing and rapid development of information technology in the health care industry, it is uncertain whether the data essential for decisionmaking would be available in a timely fashion. If they were not or if important information was of poor quality, the functioning of the system could be compromised." (172)

CBO nevertheless assumed in its NHE calculations "that the limits on the rate of growth of premiums would be sustained even though they are likely to create immense pressure and considerable tension" (172).

Because CBO has used similar criteria to assign less than 100 percent effectiveness ratings to expenditure limits in other health reform proposals, its 100 percent effectiveness rating for the pre-

16 OTA assumes that CBO used the default inflation factor defined in the legislation to estimate premium growth beyond the year 2000. CBO included an additional increase of 5 percent m 2001 to cover the expansion of dental and mental health benefits scheduled in that year (172).

mium growth limits may be perceived as an inconsistent application of its criteria (see table 2-2). However, the consistency with which CBO rates different legislative proposals is difficult to judge because its method for assigning effectiveness ratings is somewhat unclear.

Analyses of the American Health Security Act of 1993 and the Universal Health Care Act of 1991

CBO'S *Analysis of the American Health Security Act of 1993*

CBO provided estimates of NHE under both House and Senate versions of the American Health Security Act (H.R. 1200/S. 491) (170,171).[17,18] To estimate the impact of the national budget limit on NHE, CBO:

- Estimated the amount of NHE that would be subject to the national/state budget limit in 1996, the year before the new program would take effect.
- Added the estimated amount of additional health services that would be demanded under the new program in the absence of the national/state budget limit on a large portion of NHE, and subtracted estimated administrative savings.
- Estimated NHE for 1997 through 2003 by projecting out the expenditures subject to the national/state budget limits based on the growth limits specified in the bill and CBO'S assumptions about their likely effectiveness (17 1) (see box 2-2). [19]

CBO assumed that the limit on the growth of the national/state health budget would be only 75 percent effective (i.e., the act's cost-containment mechanisms would produce 75 percent of the maximum savings possible from the prescribed expenditure limit) .20 In arriving at that figure, CBO concluded that the American Health Security Act contains many of the elements that "would make its global expenditure limit reasonably likely to succeed" (171) (see table 2-2). However, CBO concluded that the expenditure limit would not be 100 percent effective because a state would not be penalized if it failed to live within its budget. States might therefore choose to spend more on covered health care services than provided under the national health budget (171).

CBO did not document whether or how it took into account all of the government cost-control mechanisms contained in the American Health Security Act. For example, CBO did not explain how payment rates for health care practitioners (e.g., physicians and dentists) based on negotiated

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17 The bill's sponsors provided an estimate Of NHE under the plan ($1 .47 trillion by the year 2000, representing an estimated savings Of $203 billion, compared with projected spending under the current system). Moreover, they estimate that the plan would save money compared with the current system in each year over the period 1995-2000 (193). However, the sponsors did not provide documentation that would permit observers to deduce how assumptions about government cost controls were derived.

18 CBO estimated that the Senate version Of the American Health Security Act (S.491), with a 75-percent effectiveness rating for the national budget limit, would increase spending by an additional $4 billion by the year 2000 (see table 1-l in chapter 1), for a total NHE estimate of $1.62 trillion.

19 CBO estimated that enactment Of H.R.1200 (the House version of the legislation) would raise NHE over the period 1996 through 1999 above projected baseline spending, but the proposal would reduce spending by about 6 percent below the projected baseline by 2003. CBO estimated that the bill would initially raise NHE primarily as a result of the cost of providing additional services due to expanded insurance coverage. Over the longer run, however, the limit on the growth of the national health budget—assumed by CBO to be 75 percent effective—would reduce the rate of growth of spending on covered services below the projected NHE baseline growth rate (17 I). The same CBO methodology and estimates apply to the Senate version of the American Health Security Act, except that CBO estimated that enactment of the Senate version would reduce NHE by about 5 percent by 2003, as a result of lower cost-sharing requirements for patients in S. 491 and differences in dental benefits between the two bills (1 70).

20 The estimated maximum potential savings from the expenditure limits equals the full difference between CBO's projected NHE growth rate under the act in the absence of the national/state limits and the estimated growth rate in NHE after applying the expenditure limits in the legislation (i.e., GDP growth in the previous year plus population growth).

fee schedules might have influenced its effectiveness rating (see table 2-3). In addition, CBO did not incorporate the potential response of providers to mechanisms such as fee schedules for physicians and prospective budgets for hospitals in its cost estimates of unconstrained demand for these services (203).[21]

CBO explicitly stated that it assumed that the open-ended nature of state budget shares would likely cause 25 percent of the potential savings from a fully effective limit to go unrealized. However, it seems equally plausible to assume that excess state spending would cause 50 percent of potential savings to go unrealized if states face strong political pressure to fund more services. Alternatively, since states must fund any excess spending from their own revenues they would have a strong incentive to stay within their share of the national health budget, Therefore, it also seems plausible to assume that the national budget limits might be 100 percent effective. CBO acknowledges these plausible alternatives at the same time that it gives its best guess of "75 percent effective ."

According to CBO, "because the United States has no experience with a program like the one envisioned in [the American Health Security Act], the assumption about the effectiveness of the spending limit in the bill is highly uncertain" (17 1). CBO therefore provided five alternate estimates of NHE for the legislation based on its five possible effectiveness ratings for expenditure limits.

CBO'S range of NHE estimates demonstrates that its alternative assumptions about effectiveness substantially affect its projections of savings. If the limits on NHE are assumed to be fully (100 percent) effective, CBO estimated sayings over projected baseline spending of $257 billion in 2003-$143 billion more **than** if the expenditures limits are **assumed to be** only 75 percent effective.[22,23] If the expenditure limits turned out to be only 50 percent effective, the American Health Security Act would not lead to any savings in the year 2003, but rather would increase NHE by *$42* billion, according to CBO.

CBO'S Analysis of the Universal Health Care Act of 1991

CBO used the same approach and very similar assumptions to project NHE under the Universal Health Care Act of 1991, introduced in the l02d Congress as H.R. 1300, that it used to analyze the American Health Security Act. Both acts propose a single-payer system. The two proposals also contain almost identical growth limits on a large portion of NHE and cost-control mechanisms for specific categories of health spending.

One important difference between the American Health Security Act and the Universal Health Care Act appears to be the states' role in administering and funding the system. Both bills would establish annual national and state budgets for covered health services and various other components of NHE.[24] The Universal Health Care Act appears to leave funding at the national level, although states could administer their own programs. Under the American Health Security Act, the federal government would transfer the majority of funding for state budgets to states, which would be responsible for funding the other portion

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[21] CBO did incorporate such behavioral responses in its estimates of potential single-payer and all-payer systems contained in its document CBO *Single-Payer and All-Payer Health Insurance Systems Using Medicare's Payment Rates* April 1993. However, the systems modeled were based on Medicare payment rates and did not include expenditure limits that applied to a large portion of NHE. In addition, CBO only estimated the immediate effects under those systems and did not estimate growth rates in NHE over a longer period.

[22] CBO estimates cited here are based on the bill's higher expenditure growth limit of GDP growth plus population growth.

[23] CBO's estimate of House version of the American Security Act (H.R.1200).

[24] For example, the national budget would include funding for capital-related items for hospital and nursing facilities and for dir@ medical education expenses.

of their budgets and for making all provider payments.

CBO assigned a 75 percent effectiveness rating to the national budget growth limits in both the Universal Health Care Act and the American Health Security Act, and it lists many of the same criteria in support of both effectiveness ratings but different rationales for the 1ess-than-100-percent rating (see table 2-2). Without the possibility of states spending beyond the federally set budget under the Universal Health Care Act, one might have expected CBO to have concluded that the national health budget limits would be 100 percent effective. However, CBO asserted that the national budget limit was unlikely to be completely effective because "[physicians and other non-institutional providers would continue to be paid on a fee-for-service basis, and the bill fails to provide any prompt feedback mechanism to assure that increases in the volume of services would not offset fee restrictions on their price" (168).

It is not clear from CBO'S documents whether the above criterion also influenced its 75 percent effectiveness rating for the national budget limits in the American Health Security Act. It is also not clear whether it should have been a factor. The Universal Health Care Act specified that payments for physicians and the services of other professionals would be based on a fee schedule using a national relative value scale consistent with the national health budget (Universal Health Care Act of 1991, section 2123 (a) and (b)). Similarly, the American Health Security Act states that health care practitioners would be paid through negotiated prospective fee schedules, designed to provide incentives for practitioners to choose primary care medicine over medical specialization, and that states could adjust the payment schedule amounts to meet their budgets (American Health Security Act of 1993, section612 (a) and (b)).[25] The wording in the two acts seems too ambiguous to determine whether the payment method for physicians (and other independent practitioners) was intended to be the same under both acts. Specifically, it is not clear whether the American Health Security Act includes provisions for a prompt feedback mechanism to assure that increases in the volume of services would not offset fee restrictions for physicians, or whether the Universal Health Care Act precludes such a mechanism-—the rationale CBO gave for not assigning a 100 percent effectiveness rating to the Universal Health Care Act.

The above comparison of CBO'S effectiveness rating criteria for the two acts demonstrates some important points about CBO'S method for assigning effectiveness ratings to health reform proposals that contain limits on a large portion of NHE:

- It may not be clear to people outside of CBO what factors cause a proposal expenditure limits to be rated more or less effective by CBO.
- Because of some ambiguities in legislation, CBO (and other analysts) must make assumptions about how to interpret the legislation and make subsequent assumptions about how to incorporate such interpretations into effectiveness ratings.
- Two different criteria for "ineffectiveness" were given the same weight, perhaps because of the restricted range of intermediate ratings CBO uses. However, it is not obvious that the two factors would be equal in causing higher spending growth than stipulated in the two acts. This problem is not necessarily a defect in CBO'S approach. It arises from the complexity of estimating the impact of major reforms on the current U.S. health system, and the difficulty of assigning a precise effectiveness rating to expenditure limits.

25 This wording applies to the House version of the bill, H.R. 1200. The Senate version, S. 491, is more clear about the inclusion Of volume feedback provisions.

CBO'S Analysis of the Health Care Cost Containment and Reform Act of 1992

To date, no organization has provided estimates of NHE under the Health Care Cost Containment and Reform Act of 1993 (H.R. 200). CBO did, however, estimate NHE under the Health Care Cost Containment and Reform Act of 1992 (H.R. 5502 in the 102d Congress), which was very similar. However, CBO emphasized that its estimate of H.R. 5502 does not apply to H.R. 200 (168). Although CBO had not yet completed an assessment of H.R. 200, it expected "that its expenditure limits will be more effective than those in H.R. 5502" (130).

To estimate the impact of the national expenditure limit on NHE under either of the two acts, analysts typically would:

- Estimate the amount of baseline NHE that would be subject to the national budget limits and the share of those expenditures determined to be Medicare and non-Medicare expenditures.
- Estimate changes in NHE from projected baseline spending due to changes in health insurance coverage, administrative costs, and other provisions of the legislation.
- Make assumption about the growth rate to be applied to Medicare and non-Medicare expenditures based in part on the legislated national budget limits, and in part on assumptions about the ability of the cost-containment mechanisms in the legislation to support the stipulated growth rates for each of the above spending categories. The assumed growth rates for each spending category are then used to project future health expenditures for those spending categories.

CBO'S analysis of NHE under H.R. 5502 concluded that the limit on Medicare-related spending would be 75 percent effective, but that the limit on non-Medicare spending would be only 25 percent effective **(168).** According to CBO, "[e]xpenditure limits enforced by rate setting could be reasonably but not totally effective in controlling Medicare spending" (168).

CBO'S stated reasons for assigning a relatively higher effectiveness rating to the Medicare limit focus on Medicare's data-collection capabilities and rate-setting experience (see table 2-2). CBO also asserted that "the history of cost-control efforts both in this country and abroad strongly suggests that setting payment rates is not sufficient for achieving full control over health expenditures" (168). Table 2-2 also lists CBO'S criteria for not assigning a 100 percent rating to the Medicare expenditure limits.

CBO assumed, for several reasons, that "[t]he limits on non-Medicare spending are likely to be subject to much greater leakage and to be far less effective" than the Medicare spending limit. Most of the reasons have to do with administrative and data-collection difficulties that would be encountered in enforcing the limits on non-Medicare expenditures (see table 2-2).

CBO'S approach to formulating assumptions about separate growth rates for Medicare and non-Medicare expenditures illustrates its broad selection of criteria for developing effectiveness ratings for expenditure limits. The factors CBO considered most important include not only the payment methods or cost-containment mechanisms, but also the data-collection and administrative support systems available for setting, monitoring, and enforcing the limits. These considerations seem intuitively reasonable, but difficult to apply in a precise quantitative fashion.

Summary

Several health reform proposals include limits on how much at least a portion of NHE would be allowed to grow. To estimate how these proposals would affect NHE, analysts make assumptions about the likelihood that the legislated limits actually would be achieved, based on the strength of the proposed cost-containment mechanisms.

Generalizing about analysts' assumptions underlying effectiveness ratings is difficult because proposals may have different types and levels of limits and different mechanisms to support proposed limits on expenditures. However, some

mechanisms are similar across proposals, and OTA's comparison of analyses suggests that there are some inconsistencies in effectiveness ratings across analysts for the same proposal, as well as inconsistencies in effectiveness ratings by the same analysts for similar proposals and mechanisms. Some inconsistencies are to be expected since analysts acknowledge that their effectiveness ratings are based on their best judgment at the time they perform an analysis. However, the paucity of documentation of criteria in specific analyses makes it difficult to judge the actual extent of the inconsistencies, the reasonableness of some judgments, and the meaning of many of the ratings. Different analysts have judged different proposals' sets of government cost controls to be 25, 75, 85, and 100 percent effective in meeting various proposed statutory limits on spending (table 2-2).

REVIEW OF THE EVIDENCE

Reductions in health spending growth can be achieved only by decreasing growth in the volume of services, reducing growth in the price or average payment per unit of service, or both (8). Instead of allowing markets to determine the allocation of funds to health services, governments can regulate the amount of funds flowing to the health care system (e.g., expenditure limits such as federal or state health budgets for single-payer systems), to health plans (i.e. premium limits), or to different categories of health care services (i.e., physician or hospital payment controls such as prospective fixed budgets or fee schedules).

This section reviews empirical evidence from experiences of the United States and other countries with government controls for limiting growth in health spending. The empirical literature is reviewed to answer whether:

- a particular growth rate for health expenditures can be reliably assigned to a set of cost-containment mechanisms; and
- the evidence supports assumptions that particular government cost-containment mechanisms would reduce growth in health spending compared with the current system.

Research literature on expenditure limits, premium limits, and provider (hospital and physician) payment controls is reviewed. In general, the review in this chapter relies on a combination of previous reviews of literature on these topics, and selected key studies.

In combination, boxes 2-3 and 2-4 provide a framework for evaluating the evidence on government cost controls. The boxes also explain that studies of the effects of government cost controls may be difficult to interpret. The studies are not conducted using experimental designs and vary in methodological rigor.

As described in box 2-4 there are many ways to measure the effects of particular interventions. In reviewing the evidence, this chapter focuses on the broadest possible measures of expenditures. For example, if a study reports results in terms of total hospital expenditures and expenditures per patient day, the former result will be emphasized. Moreover, the review emphasizes the effects of interventions on expenditures by users and payers, rather than costs that providers incur in providing the service. Finally, the review highlights how interventions affected the growth rate of health expenditures by examining growth rates before and after the intervention. In some cases, the review presents results of comparisons of the growth rates of expenditures in areas that had the intervention to other areas that did not.

Evidence on Expenditure Limits Applied to Large Sources of Funding

Legislated expenditure limits that apply to designated sources of health funding (e.g., the federal government, state governments, private insurance) specify a desired goal for the future rate of increase for that portion of NHE.

The United States has had little experience with setting health expenditure limits that apply to designated sources of funding for large shares of NHE and designing mechanisms to meet those limits. For example, the U.S. Medicare and Medicaid programs are "entitlement" programs; they do not receive a specific appropriation for a fiscal year, and until recently neither program had explicit

BOX 2-3: Standards of Evidence

Interpretations of studies on the effectiveness of policy instruments, such as government cost controls, are often complicated by a problem of causality. Many studies on international and U.S. government cost controls provide observational evidence on the effectiveness of government controls, correlating general patterns or trends in aggregate health expenditure data with particular cost-containment features of the country's health care system. However, observational studies often do not take into account important aspects about each country's or region's economic, social, legal, demographic, and political systems that might significantly affect the level or growth of health spending. Each country also has a set of unique features that interact with each other and that may contribute to spending patterns observed for a particular category of health care spending.

For example, a study may find that the introduction of a new payment method for hospital services is associated with a reduction in the growth of hospital expenditures. However, expenditures on hospital services are affected by many factors, such as economy-wide or hospital price inflation, the demand for medical care, and the introduction of new medical technologies. Observational studies generally are not able to sort out the separate effects of these different factors and therefore may provide limited evidence about the impact of specific cost-containment mechanisms or a combination of mechanisms on expenditure patterns. Observational studies without sufficient controls for plausible alternative causes of increases and decreases in expenditures are commonly more useful for generating hypotheses about possible spending effects of different mechanisms than for providing strong evidence about actual spending effects.

A more rigorous method of assessing various government interventions is to analyze the effects of shifting to a particular government intervention (e.g., from per diem reimbursement for hospital services to prospective budgeting) while controlling for, through statistical techniques, other factors that simultaneously may have affected spending trends or patterns. Such studies (i.e., multivariate econometric analyses) generally provide stronger evidence about the actual impact of government cost controls than do uncontrolled observational studies. The multivariate econometric studies are not, however, tantamount to the randomized, controlled clinical trials often used to test the effectiveness of medical interventions.[1] Econometric analyses do not control for the influence of different factors on the variable of interest during the intervention, but must try to account for the effects of important determinants using archival data. The validity and comparability of multivariate economic analyses may depend in large part on the control factors and statistical methods they use (71).

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[1] Randomized, controlled trials "control for" different factors of interest by randomly assigning study targets (e.g., individual patients) to either one or more "experimental" interventions (which are the interventions of interest, such as drug dosages) or one or more "control conditions" (e.g., no treatment or standard treatment). Random assignment prevents selection effects and may be better able to control for unobserved differences between the "experimental" and "control" group than can econometric analysis. In addition, in a randomized controlled trial, care is taken not to contaminate the experimental or control conditions during the study (cross-over effects).

SOURCE: Office of Technology Assessment, 1994

BOX 2–4: Measures of the "Effectiveness" of Government Cost Controls

In some studies and in most popular accounts, government cost controls are often described as "successes" or "failures" without much attention to how these terms are defined. Yet any evaluation of government cost controls depends greatly on how success and failure are defined. The following lists several metrics for evaluating the effectiveness of government cost controls:[1]

- Regulatory interventions can be evaluated in terms of their success in *slowing the growth rate in spending* after the implementation of the government interventions (a longitudinal study) or in terms of their success in *producing lower levels of expenditures compared with other regions or institutions* without the government cost control (a cross-sectional study). For example, the success of prospective hospital budgets might be evaluated by measuring the change in spending growth rates from the previous trend in a single country before and after the policy change, or by examining the difference in expenditure levels between a country that uses prospective budgets to fund hospital services and a country that funds hospital services through other payment methods.
- According to the General Accounting Office (GAO) (176), determining the effectiveness of a government intervention requires *a comparison of actual spending growth under the cost control with spending growth that would have occurred without the intervention.* However, in some cases, it may be difficult to estimate what spending growth would have been without the government intervention.
- Definitions of success or failure are also sometimes based on *the magnitude of the change in spending* after a shift to a new government cost control or on *the magnitude of the difference in spending* between two regions or institutions that use different cost control strategies. Sometimes it is left to the author's or reviewer's discretion to decide whether the magnitude of the change represents a success or failure of the government intervention. Other times, the shift to greater government intervention is determined to be effective if it had a *statistically significant impact on health spending levels or trends*.
- The effectiveness of a government cost control can also be assessed in terms of its success or failure in *achieving a target level or growth rate of expenditures* set by a particular entity, typically a government. An objective determination of whether or not a mechanism is successful by this standard depends on knowledge of the target.
- The effectiveness of a cost-containment strategy can also be assessed in terms of its *impact on different components of health spending* (e.g., the prices of services or the volume of services). For example, even though the use of prospective per-diem rates to pay for hospital services would be expected to affect charges for a day of inpatient care, if hospitals increase the number of inpatient days, total hospital costs or charges would not be fully controlled. In this example, the per-diem rate-setting strategy would be considered successful if hospital charges per day fell after implementation of the new method of funding hospital inpatient services, but might be evaluated as unsuccessful if effectiveness of the payment method were measured in terms of its effect on total hospital expenditures. Similarly, government cost-containment strategies aimed at reducing expenditures for a specific category of services (e.g., hospital or physician services) or for specific payers (e.g., Medicare or Medicaid) may be successful for constraining *category- or payer-specific expenditures* but would not be evaluated as effective for controlling *broader measures of health expenditures, such as NHE,* if cost-shifting to other categories of services or payers occurs.

BOX 2–4: Measures of the "Effectiveness" of Government Cost Controls (cont'd.)

- Another fairly common metric of the success or failure of a specific government intervention, especially for government cost controls aimed at specific categories of services or specific payers, is a *comparison of the trend in expenditures for those categories of services, or by those payers, as a share of NHE or gross domestic product (GDP).* For example, if outlays for hospital services decline as a share of NHE after implementation of a new government cost-containment strategy, the strategy might be evaluated as successful. However, there are problems with using ratios to assess the effectiveness of government cost controls because changes in the denominator of the ratio also affect trends in the ratio. For example, the reason that hospital expenditures might have declined as a share of NHE may be more attributable to large increases in spending on other categories of health services than to a decline in the growth rate for hospital expenditures.
- The same type of difficulty exists for assessing the effectiveness of government cost controls in terms of *NHE-to-GDP ratios,* another common metric for assessing whether a country's health care system has been more or less successful in controlling national health spending. First, it is not always clear that the country wanted to constrain the rate of growth in expenditures to the rate of growth in GDP. Second, one country may have a lower growth rate in its NHE-to-GDP ratio than another because the first country's growth in GDP was higher than the second country's over the period studied. However, both countries may have had similar NHE growth rates over the period.

[1] Government cost controls can also be evaluated on the basis of criteria other than their ability to constrain outlays for health services. The success of a government intervention can also be measured in terms of its effect on the quality of services, access to services, queuing for health services, the efficient production or allocation of health services, the solvency of health care providers or health plans, or other effects. Since this report concentrates on how analysts have estimated health expenditures or outlays under different health reform proposals, this chapter confines its measure of government cost-control effectiveness to effects on health expenditures.

SOURCE: Office of Technology Assessment, 1994

limits on any program expenditures .26 In contrast, other countries are perceived as having explicit limits on government or combination public-private sector spending and international experience might provide some evidence of whether an explicitly legislated expenditure growth limit, set by a political entity, can be achieved. However, there are several reasons why international experience cannot directly answer the question of whether expenditure limits for a large portion of NHE will be met.

Although some countries link the rate of growth of NHE to macroeconomic variables (e.g., the general inflation rate, growth in GDP, or growth in wages and salaries), they have not done so through explicit legislated 1 in-tits.

Germany is often used as an example of a country that has legislated expenditure 1imits for a large portion of its NHE. However, until 1993, Germany established annual *targets or goals* for expenditures for most categories of health services covered under its federal insurance system. Un-

26 It wasn't until passage of the Omnibus Reconciliation Act of 1989 (OBRA 89) that the federal government included a mechanism to adjust Medicare physician payment fee updates based on how annual increases in actual expenditures compared to previously determined performance standard rates of increase (122). The implementation of this expenditure limit is relatively recent (see below), and it applies only to physician payment m the Medicare program.

like limits, as defined in this report, the targets were nonbinding on the negotiations between sickness funds (Germany's quasi-public "insurance" companies) and health care providers.[27] Because Germany's overall expenditure targets only represented a desired goal, its experience provides little evidence of whether proposals with stronger government cost controls are more or less likely to achieve legislated spending limits.

Another reason international comparisons do not provide much evidence on expenditure limits is that proposals to reform the U.S. health care system that include government cost controls and limits do not exactly mirror the system of any particular country. For example, although many of the cost-containment elements in the American Health Security Act (H.R. 1200/S. 491) are similar to those in the Canadian system, the average share of federal funding for state health expenditures in the act is markedly higher than the average share of federal funding for provincial health spending in Canada.[28] The larger federal share in the American Health Security Act might constrain state health expenditures more effectively than has been the case in the Canadian provinces (even though both the act and Canada tie the federal share to the growth in GDP).

Thus, the experience of other countries does not provide a clear-cut answer to the question of how quickly or slowly health expenditures would grow given a legislated growth rate for some share of NHE. Most countries do not have explic it legislated limits similar to those specified in the proposals. Moreover, differences between cost-containment mechanisms in health care systems of other countries and those proposed in health reform proposals might limit the lessons that could be learned from other country experiences with legislated limits.

Some information on the United States experience with expenditure limits affecting large health systems and multiple payers may become available if the state expenditure limit provisions of the State of Minnesota's 1993 MinnesotaCare health reform legislation are implemented. MinnesotaCare 1993 created limits on total health care spending for the state.[29]

Evidence on Premium Limits

As discussed above, the Health Security Act would limit the growth of health alliance weighted-average premiums for the standard benefit package of health services defined in the

27 Between 1977 and 1993, Germany operated under broad federal guidelines set by a national committee designed to reduce spending growth for different categories of health services (e.g., hospital and physician services). The purpose was to stabilize payroll tax rates, which finance the majority of health expenditures (45,180), During the annual bargaining sessions, the regional German sickness funds and providers (e.g., individual hospitals or regional associations of physicians) might agree on a greater or smaller increase than contained in the guidelines for that category (43). The expenditure targets, as well as the category-specific cost controls (see below), in the German health system may have contributed substantially to Germany's ability to hold health expenditure growth rates fairly close to the rate of GDP growth (180). However, average payroll tax rates have not remained constant, increasing from approximately 8.2 percent in 1970 to 13.4 percent in 1993 (139). Because Germany has not achieved its recent spending targets, the government initiated a 3-year emergency measure in 1993 to stabilize and equalize sickness fund payroll contribution rates. The temporary emergency measure imposes mandatory global limits on spending for physician, hospital, and dental services, and for prescription drugs. The limits are to closely track revenue growth of the sickness funds (180). Data are not yet available to evaluate the effectiveness of Germany's more binding expenditure limits.

28 The federal/provincial financing scheme in Canada ties increases in federal financial support for provincial health plans to increases in GDP (45). This scheme is similar to the federal/state financing scheme proposed in the American Health Security Act, in which the federal government's financial support to the states also would grow at the rate of GDP. However, the Canadian federal government financed only about 22 percent of provincial health care budgets through transfer payments in 1991 (60), while under the act the federal government would finance 86 percent of approved state health care budgets on average.

29 State officials estimated that the limit and other features of the MinnesotaCare reforms would yield a total of $7 billion in savings by 1997 (19).

act. Strictly enforced premium limits such as those in the Health Security Act are designed to effectively limit regional and corporate alliance expenditures, while giving health plans flexibility to determine how best to achieve the spending goals.

No direct empirical evidence is available from the United States or other countries to assess whether limits on premiums can constrain increases in health expenditures, or whether premium limits can be sustained over the long term. No country has tried to control the amount of money spent on health care by directly controlling the growth of premiums (66).

Some have suggested that health insurance premium regulation by state insurance commissions could provide some evidence about sustainability of the premium limits. In particular, state experience with premium regulation might illustrate how the political system works when insurance companies or health plans either become insolvent or threaten to go out of business when regulated rates are considered too strict to cover costs. Such experiences might also provide evidence about the effects on health insurance coverage and access to health services when plans withdraw from the market, issues that could be important for judging the political feasibility of premium limits.[30] However, empirical evidence about states' ability to enforce premium limits would not definitively answer the question of whether the Health Security Act premium limits are technically or politically feasible. States do not have the same enforcement powers or mechanisms as those provided under the Health Security Act.

In the future, empirical evidence on the effectiveness of premium limits may be provided as a result of Washington State's recent health reform legislation. In April 1993, Washington passed legislation that is similar in some respects to the Health Security Act in that it includes near-universal coverage, managed competition, and premium limits (23). The premium limit is a phased reduction in the maximum premium a certified health plan may charge for a community-rated uniform benefit package. The premium growth rate will be restrained while the plan is being phased in until increases in premiums equal growth in state per capita personal income, and premiums will be restrained in the future by the rate of growth of personal income (23). While neither the design of Washington's premium limits nor the incentives for health plans to meet the limits are entirely the same as under the Health Security Act, the two may be similar enough to provide some useful empirical evidence about the economic consequences of a system that attempts to restrain health expenditures by limiting premiums.

No empirical evidence is available, either from the United States or other countries, to directly assess the effectiveness of controlling the flow of funds for health services specifically through premium limits.

Evidence on Provider Payment Controls

The above two sections have concluded that there has been little direct experience with expenditure limits applied to comparable systems of government cost controls to assess analysts' assumptions about the effectiveness of expenditure limits. Similarly, there has been little direct experience with premium limits to assess the various assumptions about their potential effectiveness for controlling spending on health care services. However, this does not mean that there is no evidence about the effectiveness of government cost controls for constraining health care spending. Many countries, including the United States, have used government regulations to limit outlays for certain categories of health services. The extent to which the available evidence is applicable to contemporary national reform proposals is often unclear, however. Furthermore, the fact that many states and governments of other countries continue to refine their approaches to regulatory cost controls suggests that no system is perfect. The

[30] To OTA's knowledge, analysts do not now quantitatively rate proposals in terms of their political feasibility.

next section examines the effectiveness of some government controls on payments for hospital and physician services. Outlays for these two categories of services together account for approximately 50 to 60 percent of NHE in most developed countries (120).

Hospital Payment Controls

The amount of money available to fund hospital services can be controlled in a number of ways, either less comprehensively through price controls alone or more comprehensively through controls over the total amount of revenues hospitals receive for their services.[31] Different variations of price and revenue controls have been used in this country and abroad. For example, programs in the United States and other countries have prospectively established prices for inpatient hospital admissions (e.g., prices based on diagnosis-related groups), for a day of inpatient care (e.g., per diem rates), and for individual hospital services. Under these forms of price controls, an individual hospital's total revenues are not limited. That is because the number and coding of admissions, the number of inpatient days, and the number of hospital services provided are still variable under each of these controls respectively.

To limit total revenues, price controls have been combined with budgets that prospectively fix the total amount of revenues an individual hospital receives. For example, in Germany, a prospective lump sum daily rate is calculated after determining a prospective yearly budget for individual hospitals. To arrive at the daily rate, the budget is divided by the projected number of inpatient days. This per diem rate then functions as the payment unit of most third-party payers (85).

New budgets are often based largely on approved budgets from the previous year, with allowable adjustments depending on a variety of factors. These can include new programs or services, anticipated wage settlements, projections of economy-wide inflation, changes in bed capacity, and changes in the size and composition of the population.

This section reviews empirical evidence about the effects of various forms of hospital payment controls on expenditures and costs.[32] Evidence from the United States is reviewed first, followed by evidence from other countries. U.S.-based evidence includes that from the Economic Stabilization Program of the early 1970s, the Medicare Prospective Payment System introduced gradually between 1984 and 1987, various state mandatory hospital rate-setting programs introduced at different times, and Rochester's Hospital Experimental Payments Program of 1980 to 1987. Foreign evidence includes studies of various types of hospital payment controls in Canada, France, Germany, and the Netherlands.

Empirical evidence from the United States

Economic Stabilization Program (ESP). IMP was a broad-based system of wage and price controls designed to deal with inflation perceived to stem from increases in wages and other input costs (44). ESP was introduced in several phases. In phase I (August 1971), President Nixon imposed a 90-day freeze on all wages and prices, including prices in the hospital industry (25,44). Phase II controls, introduced late in 1971, consisted of specific inflation targets for each major sector of the economy. However, regulations specific to hospitals were not issued until December 1972 (25). ESP

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31 *Price controls* are defined as government involvement in determining the level or growth m input prim (resource costs) or output prices (charges) for medical services, including fee schedules and fee updates for physician services and per diem, per case, or per service rate-setting for hospital services.

32 In th, context of health care, *expenditures* are typically defined as monies spent on the acquisition of health care coverage and/or services. in contrast, *costs* are defined as expenses incurred in the provision of services or goods. Hospital expenditures w (mid refer to those funds spent by some individual or entity to acquire hospital services.

controls were lifted in April 1974 (44). The December 1972 regulations imposed a ceiling of 6 percent on price increases for institutional health care providers, including hospitals, and required all price increases to be "cost-justified" (25).

Although the literature indicates that ESP was able to moderate hospital cost inflation, reviewers note that the fact that hospital cost inflation had already started to decline when ESP was introduced complicates the evaluation of the program effect (44).

Uncontrolled studies of the effects of ESP found that the rate of growth of *hospital room and board costs* declined by 50 percent during ESP (25,44, 152).33 Similarly, rates of increase in *costs per adjusted patient day* and *costs per adjusted admission* declined by 25 percent (25,44,152). However, multivariate econometric analyses found annual reductions in the rate of increase in *total hospital costs and expenditures* per admission to be much smaller, ranging between O and 3 percent, according to a 1981 review by Steinwald and Sloan (1 52).

Once the controls under ESP were lifted, hospital cost inflation returned to its former level, suggesting that ESP had some effect. The CPI *for hospital service charges* rose from 4.6 percent when ESP controls were in effect to 14.6 percent immediately after controls were lifted (44). Similarly, after ESP was discontinued, *Medicare hospital expenditures* increased at an even faster rate then they had prior to the imposition of controls (25).

Medicare Prospective Payment System. In 1983, Congress enacted the Medicare Prospective Payment System (PPS) to control inpatient hospital expenditures for Medicare beneficiaries and to reduce rates of increase in overall hospital cost inflation (4,22,25,44).[34] The fundamental characteristic of PPS is a fixed payment per case admission, determined in advance by the federal government. The payment covers all inpatient hospital services furnished during a Medicare beneficiary's stay in a hospital (4).[35]

Under PPS, hospitals are rewarded through surpluses when their costs of providing care for a particular diagnosis-related group (DRG) falls below the Medicare payment level. Hospitals with higher costs than the adjusted national average must bear the penalty of a loss. This section focuses on the evidence regarding the effects of PPS on Medicare expenditures, total NHE, and cost-shifting to other third-party payers. Because of concerns about spillover of expenditures to other health care settings, Medicare outpatient and total expenditures as well as inpatient hospital expenditures are also examined.

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33 The reviews of ESP by Davis and colleagues, Gold and colleagues, and Steinwald and Sloan were based primarily on four or five empirical studies.

34 S_{eVera}] other federal programs to reduce Medicare hospital cost inflation were tried before the PPS program was adopted (112).

35 The fixed payment per case is based on the patient's diagnosis; patients are classified into a diagnosis-related group (DRG). DRG prices reflect in part the average cost experience of all hospitals in the United States for the particular DRG, rather than the hospital "s own cost of treating a patient classified into that DRG (4). The actual DRG payment to an individual hospital is adjusted for several characteristics particular to the hospital and for differences in local wages (112).

A number of problems exist for evaluating the effectiveness of the PPS program, including data limitations and the prevailing use of a simplistic research design (pre/post studies) (22,188).36

This OTA review relies heavily on previous reviews and analyses by Coulam and Gaumer, Gold and colleagues, and the Prospective Payment Assessment Commission (ProPAC) (22,44,127). ProPAC reports regularly on the impact of PPS as part of its congressionally mandated mission (e.g., ProPAC (127)).

Coulam and Gaumer's 1991 review of studies of the first 3 or 4 years of PPS concluded that the main purpose of PPS—to control the growth of total and inpatient Medicare benefit costs (expenditures) without increasing costs to beneficiaries-appeared to have been accomplished (22). Coulam and Gaumer noted a clear reduction in historic rates of growth in *total Medicare spending* (hospital and nonhospital, federal and beneficiary[37]), from an adjusted average annual growth rate of 6.9 percent between 1980 and 1984, to only 4.0 percent annually from 1984 through 1987.[38,39] Coulam and Gaumer attributed these early reductions in total Medicare expenditures to historically low growth rates in spending for *Medicare inpatient hospital benefits,* citing as an example a 4.6 percent inflation-adjusted increase in inpatient hospital benefit payments in fiscal year 1986(51).

More recently, ProPAC observed that *total Medicare expenditures per enrollee* declined after PPS was implemented in 1984, from a growth rate of 6.9 percent between 1980 and 1983, to average annual rates of growth of 3.0 percent between 1983 and 1987 and 4.0 percent between 1987 and 1992 (127) (figure 2-1).[40] The Commission suggests that the decline was attributable primarily to inflation-adjusted per-enrollee spending on *inpatient care,* as shown in figure 2-2.[41] The Commission's figures also show, however, that the decline in the growth rate observed in the phase-in period of PPS (1983 to 1987) was not entirely maintained between full implementation and 1992 (1987 to 1992), although it was lower than in the pre-PPS period (figure *2-1).* Growth in Medicare expendi-

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~ As of the date of Coulam and Churner's review (199 I), the bulk of the published literature on PPS effects was based mainly on the first 3 or 4 years of PPS experience, generally allowing only for evaluations of the initial effects of the program (22). The pre/post design of most of the available empirical studies does not control for other factors that may have influenced trends in hospital spending. The widespread adoption of medical technologies that can be used on an outpatient basis, widespread implementation of managed-care programs in the private sector, and liberalization of home care, nursing home care, and hospital benefits for Medicare in the early 1980s all could independently have caused Medicare or total inpatient hospital expenditures or costs to decline (22). An additional problem with analyzing the cost-containment effects of PPS is that DRG rates were set too high in the first year of the program. Because of the generosity of payment rates in the first year of PPS, hospitals may have had fewer pressures to reduce costs in the early years. After the first year of PPS, very restrictive updates to DRG rates were made to reduce initial hospital windfalls (22). Finally, the PPS system was phased in over several years to allow hospitals time to adjust their behavior. The actual phase-in to full national DRG rates was not completed until November 1987 (11 2). Given the gradual phase-in and initially high DRG rates, it is striking that hospital costs declined during the early years of PPS.

37 In the national health accounts, premiums paid by Medicare beneficiaries for supplementary medical insurance (Medicare Part B) are counted as Medicare program expenditures, not as individual out-of-pocket expenditures.

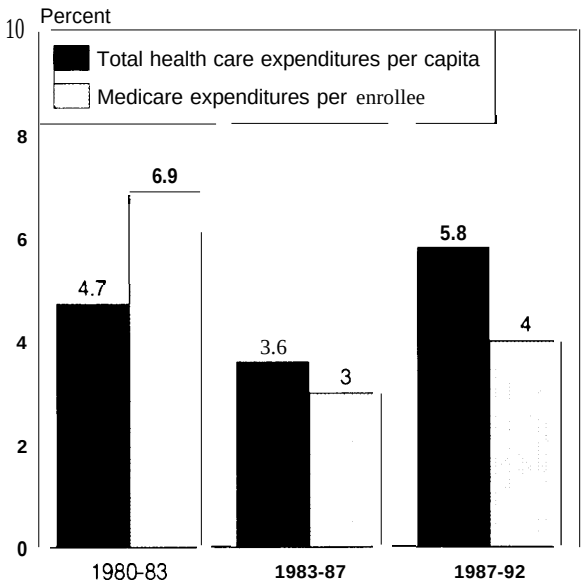
38 Coulam and Gaumer cited studies by Long and Welch (93) and Guterman and colleagues (51) in support of this conclusion. The studies adjusted for inflation, changes in Medicare enrollment, and changes in the mix of Medicare beneficiaries (22).

39 This comparison should be somewhat tempered by the fact that PPS began to be phased in during 1984; however, inclusion Of the growth rate for 1984 would tend to dampen the growth rate for the 1980-84 period.

40 The Commission adjusted its figures for growth in the number of Medicare enrollees.

41 Coulam and Gaumer's report of estimates Of total Medicare growth rates in the 1980-87 period are not totally comparable to those Of the Commission because. Coulam and Gaumer present estimates for the periods 1980 to 1984 and 1984 to 1987. Nevertheless, the direction of results is similar in the two reports.

FIGURE 2-1: Average Annual Change in Total Health Care Expenditures Per Capita and in Medicare Expenditures Per Enrollee, 1980–92



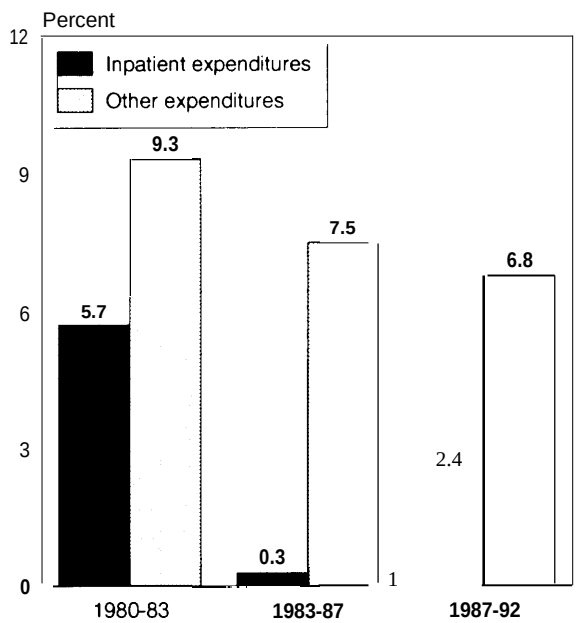
SOURCE: Prospective Payment Assessment Commission (127), based on data from Department of Health and Human Services, Health Care Financing Administration, Office of the Actuary. The full citation is at the end of the report.

tures remains somewhat greater than general inflation, but lower than overall growth in NHE.[42]

According to one study reviewed by Coulam and Gaumer, a 10 percent increase in outpatient visits in the very early years of PPS was attributable to PPS (54). In contrast, ProPAC could not conclude that PPS was the cause of observed growth in *Medicare noninpatient spending* following PPS, although the data were suggestive (4). Rapid technological changes favoring outpatient treatment, as well as policy changes favoring other nonhospital treatments (e.g., nursing homes, home health) (22) may also be contributing to the growth in Medicare expenditures for nonhospital services (4).

PPS could affect *total and hospital-related health expenditures* in several ways. Because Medicare hospital spending accounts for 11 percent of personal health expenditures (86), making Medicare the largest single source of inpatient hospital payments, PPS'S success in this sector could have had a dampening effect on total personal health expenditures and NHE. However, PPS could also stimulate hospitals to increase their prices to other payers to compensate for

FIGURE 2-2: Inflation-Adjusted Average Annual Change in Medicare Inpatient and Other Medicare Expenditures Per Enrollee, 1980–92



SOURCE: Prospective Payment Assessment Commission (127), based on data from Department of Health and Human Services, Health Care Financing Admmistration Offlce of the Actuary. The full citation is at the end of the report.

[42] General inflation was approximately 3.0 percent in 1992 using the CPI (195). Using the GDP implicit price deflator (percent change from the preceding year), inflation was approximately 2.7 percent in 1992 (201).

losses of Medicare revenues (i.e., cost-shifting), resulting in no overall change in growth in NHE.[43] Coulam and Gaumer's 1991 review and ProPAC's June 1993 report provide some data relevant to evaluating PPS'S impact in these terms.

According to Coulam and Gaumer, there had been little containment of *overall growth in U.S. health care expenditures* in the very early years of PPS (the period they examined), but also little evidence of hospitals' *cost-shifting* between payers (22).[45]

ProPAC found some decline in the *growth rate of national (Medicare and non-Medicare) health care expenditures* (adjusted for population size) during the implementation of PPS in 1984 through 1987 (relative to 1980 to 1983) (figure **2-1).** However, the Commission also found that the growth rate of national health care expenditures increased relative to the 1980-83 period from 1987 through 1992 (figure 2-1) (127).

In contrast to Coulam and Gaumer, ProPAC found evidence of *cost-shifting* between payers. Through 1991, hospitals had been able to generate gains from private insurers (as a group) that nearly mirrored hospitals' total losses from Medicare, Medicaid, and uncompensated care (127). According to the Commission, in 1991 the Medicare program covered 88 percent of the cost of treating its patient load (inpatient and outpatient), down from 94 percent just 3 years earlier; in contrast, hospitals obtained payments from privately insured patients covering almost 130 percent of their costs.

In summary, reviewers of the literature on PPS'S impact on expenditures (Coulam and Gaumer, ProPAC, and Gold and colleagues) all came to conclusions similar to ProPAC's of June 1993. That is, to date, PPS had been effective in reducing growth in Medicare expenditures (especially inpatient expenditures). However, "to beeffective in controlling *overall* health care expenditures, the set of cost containment strategies used must be comprehensive in terms of the types of services or providers covered, the payers included, and the control of both price and volume" (127).

State mandatory hospital rate-setting programs. Since the early 1970s, several States have adopted diverse forms of hospital mandatory, regulatory rate-setting programs, in some cases covering only some third-party payers and in others covering all payers (Maryland, New Jersey, Massachusetts, and New York) (25).[46] A very large volume of literature has attempted to evaluate the effects of these hospital rate-setting programs. Although a great majority of the studies have suggested that the programs can be effective in taming the growth of state hospital spending (44), it may be difficult to draw unambiguous conclusions for the purposes of assessing the impact of a particular reform proposal.

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43 Coulam and Gaumer stress that measuring cost-shifting is difficult. According to Coulam and Gaumer, "Price differences by payer are not, ipso facto, evidence of cost shifting [but are] consistent with profit-maximizing price discrimination by hospitals that have some degree of monopoly power" (22). "Moreover," according to Coulam and Gaumer, "profit-maximizing hospitals will not cost shift when a payer with monopsony power demands lower prices, because prices to other payers will already have been set at their profit-maximizing level. " However, these authors note that "hospitals might not maximize profits; in that event, cost-shifting can occur." Further, there would have to be a systematic relationship between the stated cause and effect (e.g., between decreases in Medicare payment and increases in prices paid by third parties) (22).

44 Coulam and Gaumer did not cite specific evidence on this point. However, NHE had grown at least faster than inflation for decades before the Coulam and Gaumer review in 1991.

45 According to Coulam and Gaumer, Morrisey and Sloan found evidence of cost-shifting for urban hospitals but found that rural hospitals lowered their prices to other payers following PPS (1I 4). Three other studies failed to find evidence of cost-shifting, according to Coulam and Gaumer (53,II6,215).

46 Generally, the concept of state-level regulation of hospital rates involves an external authority (usually the state or a state agency but occasionally a private entity such as Blue Cross) that monitors each hospital's rates (25).

Many of the studies failed to account for the complexity and diversity of the state programs and may have overstated or understated the effect of rate regulation. Combining all rate-setting programs into a single category does not account for the many different characteristics of the various state programs. Different factors may help explain differences in effects on hospital expenditures across states. These different characteristics may include whether the unit of payment under rate regulation is per service, per diem, per case, or with a fixed budget or volume adjustment; and whether the payment rates are determined by a state-level formula or by reviewing hospital or departmental level costs and budgets; and political factors.

Some early studies (1 3, 1l0a, 196) of state hospital rate-setting programs simply compared hospital expenditures across states. All of these earlier studies found that the growth of hospital spending per day, per admission and, to a lesser degree, per capita, was less in States with mandatory hospital rate-setting programs than in states without such regulation. However, these early observational studies were questioned because they failed to isolate the effects of rate regulation from other factors that might have affected hospital expenditures (30).

Later studies attempted to statistically control for different aspects of states' hospital regulatory schemes as well as coexisting regulatory efforts. For example, in a 1983 multivariate analysis that statistically controlled for both the specific regulatory nature of the state hospital rate-setting programs as well as other coexisting regulatory programs, Sloan found lower hospital costs per admission and costs per patient day in states with mature mandatory hospital rate-setting programs, than in states without rate-setting programs (150). He also found no change in profit margins, suggesting that expenditures were also lower.

It is plausible that a self-selection process is at work under which states with high hospital cost inflation are more likely to adopt regulatory programs than those with low hospital cost growth. Two studies have attempted to statistically account for this effect (29,82). One study found a modest but measurable effect of rate regulation on hospital cost inflation after controlling for historically high cost inflation (29), and another study found that mature hospital rate-setting programs were associated with lower per capita hospital expenditures (82).

Other studies have examined the effect of state hospital rate-setting programs by examining the rate of growth of hospital costs per discharge before and after the program was implemented. Thorpe and Phelps studied the impact of hospital rate-setting in New York State in 1983 (1 56). They found that the all-payer rate-setting program reduced real inpatient cost per discharge (i.e., from 7 percent in the period 1980 and 1982, to 4 percent in the period 1982 and 1985).

Gold and colleagues concluded that "mandatory State rate setting for all or most payers of care has been successful in restraining hospital spending" (44). However, Gold and colleagues also cautioned that:

> The outstanding issue is whether this approach is feasible on other States and whether it would create the same effect. Rate setting States are atypical, and only a few States have seriously tried to implement broad-based mandatory approaches (44).

Only Maryland maintains all-payer hospital rate-setting today (although other states maintain less comprehensive forms of rate-setting).

Some have questioned whether hospital rate regulation slows the growth of a state's *total spending* for both hospital services and other categories of health services. For example, Mitchell argued that the effectiveness of hospital rate-setting programs should be measured by their effects on per capita total health expenditures, not just hospital expenditures (11 1). However, the available evidence is not able to provide a clear verdict on the issue. A Lanning, Morrisey, and Ohsfeldt study that found lower per-capita hospital expenditures in states with mandatory hospital rate-setting programs also found lower per capita non hospital expenditures (82), but few other studies provide a direct measurement of the effect of hospital rate-setting programs on total nonhospi-

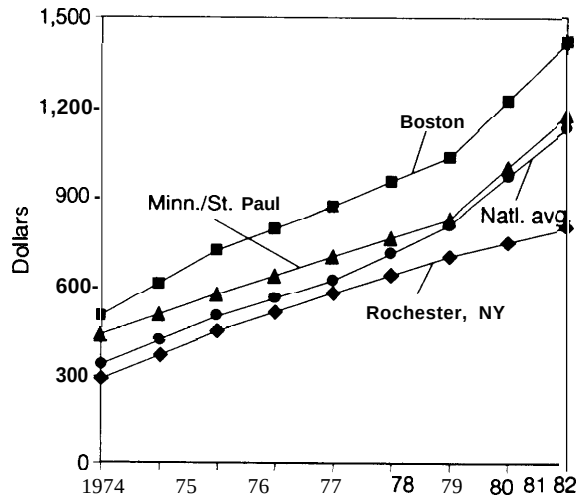
tal expenditures. Several studies examining the impact of state hospital rate-setting programs on physician expenditures have presented a mixed picture as to whether the level and growth of physician expenditures is affected by hospital rate-setting programs (6,1 11,1 15).

In order to use the findings of these studies to estimate the effects of similar cost control provisions in reform proposals, it would be important to understand the features that contribute to successes and failures in states that have used hospital rate-setting (44,82, 150).

Rochester's Hospital Experimental Payments (HEP) Program. The United States has had only limited experience in using budgets to pay for hospital services. The main U.S. experience comes from the voluntary Health Care Financing Administration (HCFA) demonstration project called the Hospital Experimental Payments (HEP) program in Rochester, New York. Between 1980 and 1987, government representatives, insurers, and providers in the Rochester area worked together to manage community-wide hospital revenues and to improve the solvency of area hospitals through the HEP program (179). In addition to cost control, another goal of the program was assuring the financial viability of area hospitals, some of which were in jeopardy in the late 1970s (14).

The main features of the HEP program were a community-wide prospective revenue cap on inpatient and outpatient hospital services. Blue Cross Blue Shield of New York State, and HCFA provided hospitals with an annual budget. All hospitals agreed voluntarily to operate under the community-wide revenue cap. Hospital revenues were limited to costs in a base year (the year 1978) and updated by an annual inflation factor. Cost increases above the cap were not funded but individual hospitals could retain surpluses. Capital investment (including medical technology) decisions were made by the hospitals as a group and financed from a common capital fund (14,179). HEP was administered by the Rochester Area Hospitals Corporation, a nonprofit corporation comprising area hospitals and the University of Rochester School of Medicine and Dentistry (179),

FIGURE 2–3: Hospital Expenditures per U.S. Medicare Recipient by Place of Residence (Age, Sex, and Wage Adjusted), 1974–82



SOURCE Reprinted with permission from Block, Regenstreif, and Griner, 1987 (14) Full citations is at the end of the report

Both Block and colleagues and the General Accounting Office (GAO) found lower growth rates in expenditures or costs. However, confidence in some of their findings is limited by aspects of their study designs (e.g., use of unadjusted data in some comparisons).

Block and colleagues compared Rochester Medicare hospital expenditures post-HEP (1980 to 1982), controlling for age, sex, and wages, with Medicare hospital expenditures in Boston, Minnesota/St. Paul and nationally, and found that the other locales' Medicare hospital payments increased more sharply than Rochester's Medicare hospital payments (figure 2-3). Similarly, a GAO report of Medicare hospital expenditures for a longer period of time (1980 to 1987) found that Medicare payments to Rochester hospitals rose at an annual rate of 7 percent, compared with 12.6 percent for the nation as a whole (179).

Similarly, GAO's comparison of Rochester's, New York State's, and the nation's total (Medicare and non-Medicare) hospital costs for 1980 to 1987, after adjusting for inflation and population growth, found that real hospital costs per capita

for Rochester hospitals grew at an annual rate of 2.1 percent, compared with 4 percent in New York State[47] and 4 percent nationally (179).

As with ESP, the effectiveness of HEP is further suggested by the increase in hospital costs per capita observed after HEP was terminated. Between 1987—when budgeting under HEP ended—and 1990, Rochester hospitals experienced real annual growth of 7.3 percent in costs per capita, compared with 6.1 percent in New York State and 4.9 percent in the nation (179).[48]

Accordingly, Rochester's experiment with voluntary community-wide hospital budgeting under HEP appears to have been successful for constraining hospital costs. However, GAO conjectured that HEP's savings to the *entire* Rochester health system may be limited since the program did not address the growing segment of health care costs incurred outside of hospitals. OTA is aware of no studies of HEP's effects on total health spending in Rochester.

GAO noted that key participants in Rochester's health care system emphasized that no single factor was responsible for the community's performance and Rochester's experience may not be transferable to other states or to the Nation, for several reasons (14,179). Rochester has a long history of community-based health care planning and cooperation. Unlike other states, for example, New York has continued to require hospitals to obtain approval for many capital investments through a certificate-of-need process. Finally, Rochester has continued to establish most insurance premiums based on community-rating principles, a situation made possible because Blue Cross Blue Shield and one large health maintenance organization (HMO) have dominated the health insurance market in Rochester.

Summary. In summary, some limited U.S. experience in setting hospital payment rates has demonstrated that government (or combination government and private sector) cost controls can reduce the rate of growth in hospital expenditures while they are in effect. Average annual growth rates for *hospital expenditures* of 4.6 percent (44), 4 percent (22, 127)), 3 percent (127), and 7 percent (179) have been reported for various programs and different payers at various times; all have been lower than national averages at the time of the comparisons. None of the programs has been easy to implement, however, and only PPS for Medicare and the State of Maryland's all-payer program survive in their entirety.

Empirical evidence from international experience

International experience may provide evidence as to the effects of different types of regulated hospital payment. During the 1980s, several countries shifted from a retrospective budgeting process, or from price controls, to various forms of prospective budgets.[49] The shift occurred in part because countries experienced continued growth in hospital expenditures, suggesting that previous controls were not considered strong enough and that countries that use government cost controls continue to modify and revise those controls.

While the shift from retrospective payment or looser controls such as price controls to prospective budgeting for hospitals may provide insight into this approach to controlling hospital expenditures, the empirical evidence on the impact of prospective budgets is limited. In a review of the available literature on prospective budgeting in the Organisation for Economic Co-operation and Development (OECD) countries, Wolfe and Mo-

47 New York State operated under an all-payer hospital rate-setting system for part of this period.

48 According to GAO, hospital budgeting under HEP ended for several reasons. HCFA had implemented its PPS system. Although Rochester could have requested permission to continue the experiment, area hospitals recognized that they could make more money under PPS than under HEP budgeting. Moreover, one area hospital had already withdrawn from HEP in 1987.

49 Prospective budgets are overall limits on the funds to pay for a specific category of health care services, fixed in advance of the payment period, regardless of where the funds originate.

ran concluded in 1993 that "during the course of this work, it quickly became clear that the literature is largely descriptive, and presents little evidence of rigorous empirical assessment of the effects of the [prospective] budgeting schemes employed in comparison to other alternatives" (21 1).[50] According to Wolfe and Moran, one of the main reasons is that "[prospective] budgeting schemes are typically employed as elements of a country's overall approach to financing health benefits and controlling expenditures and are not generally structured as experiments that would permit . . . evaluation" (211).

OTA's review of the empirical literature on the effectiveness of prospective hospital budgeting in other countries focuses on several of the OECD countries for which some empirical evidence is available: Canada, France, Germany, and the Netherlands.

Hospital payment in Canada. Canada's method of paying hospitals has undergone a number of changes over the years. Beginning in 1961, funding of hospitals was characterized either by "line-by-line" budgeting or per diem reimbursement (10). Under the former, individual institutions negotiated specific budgetary line items with provincial Ministries of Health, with the overall budgetary allocations being the aggregation of the line items. Per diem reimbursement involved retrospective adjustments to hospital operating budgets according to patient loads, which left Ministries of Health with a large open-ended line in their budgets.

The old line-by-line budgeting approach has largely disappeared (10). The move away from this approach to prospective, aggregate budgeting began in the late 1960s. Under this system funding for the next year was based on a series of mechanical adjustments to previous expenditures. Special provisions were made for new programs, unanticipated and justifiable volume increases, or other unforeseen circumstances. However, during the 1970s, cost overruns were often picked up by the Ministries of Health. Only in the more fiscally constrained late 1980s and the 1990s have the Ministries of Health become more forceful in developing institutional expectations that budgets are not a starting point, but a binding constraint.

There has been surprisingly little analysis of the effect of prospective budgeting in Canada. According to Barer, the growth rate of hospital expenditures mirrors the shift to prospective budgets and stronger enforcement of those budgets. Hospital expenditures increased by 10 percent per annum during the 1960s, declining sharply to just under 6 percent in the 1970s, and declining further to 4.6 percent in the 1980s (all figures in inflation-adjusted terms) (10). However, these figures may mask a substantial amount of variation among provinces.

In a 1983 study, Detsky and colleagues compared hospital expenditures in Ontario under a system of prospective budgeting to hospital expenditures in the United States (26). The authors found that for the period 1968-80 the cumulative increase in inflation-adjusted total hospital expenditures in Ontario was 86 percent, compared with 130 percent in the United States.[51] The authors caution that their results are only suggestive and that "[a] full statistical analysis of differences between the United States and Ontario would require examination of other variables that affect costs" (such as demographic characteristics and the use of price and wage controls in the United States between 1971 and 1974 and in Canada between 1976 and 1978). Moreover, cross-country comparisons fail to control for other potentially important factors such as cultural differences and different forms of government.

Hospital payment in France. Beginning in 1984, the French government replaced its fixed per diem payment system for hospital services with expenditure targets for total public hospital

[50] Wolfe and Moran (210) list almost 80 publications they found that were relevant to their study.

[51] Detsky and colleagues defined *hospital expenditures* as total gross operating revenues.

spending (176). In the French system, budgets are negotiated separately for each public hospital. About t we-thirds of all hospital beds in France are in public hospitals (176).52

To enhance compliance with the category-wide spending targets, each public hospital negotiates its proposed budget with the predominant sickness fund in its region and with the national government (176). Sickness funds are organizations that administer national health insurance. The negotiated budget covers operating costs as well as debt service for construction and high-cost medical equipment (176). Hospitals are paid in monthly installments, divided among France's sickness funds according to their share of total patient days in each hospital (211).

Not all individual public hospital budgets increase at the category-wide target growth rate (176). Some are allowed to grow more and others less (176). However, the government is able to use its influence with negotiating parties to restrain the growth of aggregate hospital spending (176), Although some additional funds exist to supplement individual hospitals' budgets under exceptional situations, unlike Canada's hospitals, publicly owned hospitals in France cannot supplement their budgets through collect ion of fees from privately insured patients (211). Therefore, France's budgets for public hospitals represent a more binding constraint on the hospitals' total revenues.

GAO conducted a multivariate econometric analysis of the effects of changes in payment methods for hospitals in France, and also compared the effects of the French changes to the effects of Germany's hospital payment system (176).[53]

GAO's econometric analysis found that the change in payment systems reduced growth in hospital expenditures by a statistically significant amount, even after statistically controlling for the effect of GDP growth.[54] Moreover, GAO estimated that the spending targets and prospective budgets reduced France's 1987 level of inflation-adjusted inpatient hospital care spending (both public and private) by about 9 percent below what would have been spent had price controls alone (i.e., per diem reimbursement) remained in place over the period 1984 to 1987.

However, GAO's analysis of the French system was based on only a few years of data for the new payment system; therefore, its results should be interpreted with caution .55

Hospital payment in Germany. Beginning in 1986, Germany shifted from regulating hospital expenditures through price controls alone (i.e., prospective per diem payments) to per diem payments combined with "flexible" prospective budgets for individual hospitals and aggregate spending targets for hospital spending (85,1 76). Germany required all hospitals to adopt flexible prospective budgets, based on expected occupancy rates for the following year (45). Hospitals were compensated for days of care exceeding the annual projection, but at a reduced rate (211). Flexible budgets were coordinated with existing nonbinding targets for annual hospital spending determined by Germany's national health committee, Concerted Action in Health Care (1 76).

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52 Private hospitals in France are still paid per diem rates (2 I I).

53 In GAO's regression equations, a nominal total health variable expenditures was the dependent variable. Independent variables included the government cost control in effect, the country's national income and population, and a measure of resources in the particular health care sector (e.g., the number of practicing physicians for Germany physician payment equation and the number of inpatient medical care beds for France's and Germany's hospital payment equations) (176).

54 Growth in GDP had an independent, positive effect on growth in public hospital expenditures, as expected.

55 French hospital spending targets were in effect for only 3 full years at the time of GAO's anal ysis.

However, according to GAO, the new system did not include an enforcement mechanism (176). The overall hospital spending targets served only as informal guidelines during individual hospital budget negotiations between hospitals and regional sickness funds (176).[56]

GAO's econometric analysis of Germany's change in hospital payment systems found no statistical evidence that the combination of aggregate hospital spending targets and flexible budgets was more effective at limiting hospital spending increases than the previous price controls (per diem rates) used alone. However, since GAO's finding was based on very limited data, it should be viewed with caution.

Based on the different results for France and Germany, GAO concluded that stringent enforcement with formal mechanisms to ensure compliance could make budget controls more effective (176). It hypothesized that the French government's participation in each hospital's budget negotiations encourages observance of the targets. As stated earlier, the German targets were guidelines that lack an enforcement mechanism to reconcile actual spending with the targets (176).

Even if inpatient spending were constrained through prospective budgets and technology planning in Germany, the possibility of shifting services to other clinical settings where spending is unconstrained or only partially constrained may make hospital budgeting in Germany less effective for restraining national health expenditures. German physicians have been allowed to buy high-technology medical equipment for their private offices, allowing hospitals to shift some inpatient care to outpatient care in physicians' offices (2).[57] However, as discussed under physician payment controls, Germany appears to have had success in placing controls on spending for physicians' services.

Hospital payment in the Netherlands .58 The system of hospital payment in the Netherlands underwent various changes in the 1980s. The most radical change took place in 1983, when the traditional system of per-service reimbursement was replaced by a system of prospective budgeting that covered almost all of a given hospital expenditures.[59,60]

Under the new "historical" budgeting system introduced in 1983, when expenditures exceeded a hospital's budget limit, the hospital was held financially responsible for the deficit. On the other hand, if a hospital spent less than its budget, it could add the surplus to its reserves. Retrospective budget adjustments to solve financial problems of individual hospitals were no longer expected.[61] The primary goals of the new pay-

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56 Beginning in January 1993 the German government initiated a 3-year emergency measure that imposes mandatory limits on spending for physician, hospital, and dental services, and for prescription drugs. The new limits are more closely linked to revenue growth of the sickness funds (180).

57 Hospitals can contract to use expensive medical equipment in doctors' private offices (2).

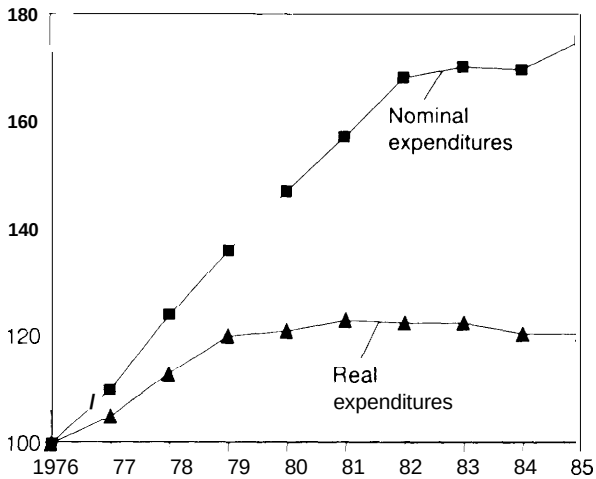
58 The description of the hospital payment system in the Netherlands is taken from two articles by Maarse and colleagues (96,97).

59 Interest and depredation remained fully reimbursed on a retrospective basis, and fee-for-service charges by medical specialists were not included in the hospital budget.

60 Prior to 1983, hospitals were reimbursed for each medical activity (output), with inpatient per diem charges as the most important source of revenue. Budgetary deficits of hospitals could be solved by retrospective temporary increases in inpatient per diem charges.

61 Prospective hospital budgets are negotiated with the Netherlands' sickness funds and private insurers (211).

FIGURE 2–4: Index of Hospital Expenditures in the Netherlands, 1976–85 (1976 = 100)



SOURCE: Reprinted with permission from Maarse, 1989 (96) Full citations at the end of the report

ment system were to curb the rapid growth of hospital expenditures, promote efficient production of hospital services, and increase the autonomy of hospital management.[62]

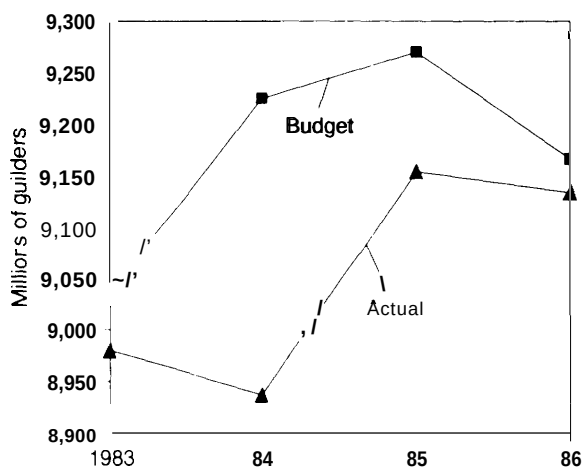
Based on observational studies of hospital expenditures in the Netherlands over the period 1976-89, Maarse and colleagues found that growth in inflation-adjusted hospital expenditures increased between 1976 and 1981, stabilized, and then became negative after 1983 (96,97) (see figure 2-4). From 1984 to 1986, actual hospital expenditures remained below the allowed budget limits (see figure 2-5). In real terms, growth was negative (-0.4 percent) during the period 1986-89 (not shown in figure).

The trend in hospital admissions over the period supports the finding that costs were contained by "historical" budgeting **(96).** The average length of stay was already declining before the adoption of budgeting and continued to decline after 1983 (96).[63]

As for ambulatory care, expenditures had already been rising and the shift to hospital budgeting does not appear to have accelerated that trend, despite the intentions of the government (figure **2-6) (96).**

Based on the trends in hospital spending before and after introduction of hospital budgeting and on the basis of actual expenditures compared with allowed budget limits-two measures of the effectiveness of government cost controls-the indications are that "historical" hospital budgeting in the Netherlands controlled hospital spending

FIGURE 2–5: Hospital Expenditures in the Netherlands, 1983–86

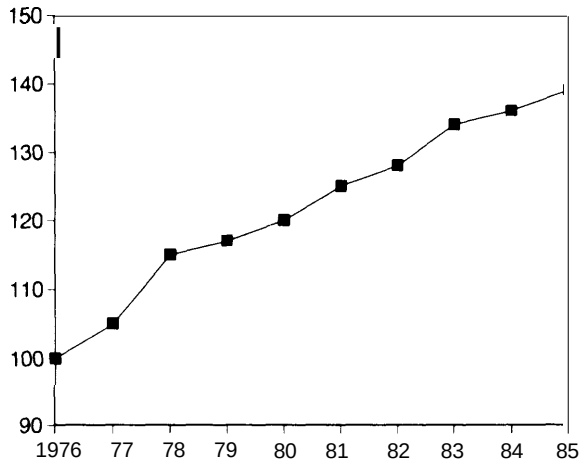


SOURCE: Reprinted with permission from Maarse, 1989 (96) Full citation is at the end of the report

62 Another major revision of the budgeting system took place in 1988 when the Netherlands shifted from a system of "historical" budgeting to one of "functional" budgeting. Historical budgeting had frozen certain inequities and inefficiencies in place (97). The purpose of functional budgeting was to have hospitals get the same budget when performing equal tasks. Functional budgeting is considerably more complicated than historical budgeting, using a formula that takes into account the size of the population in a hospital's catchment area, a hospital's capacity (including specialty units), a hospital's predictions of their productivity in the coming year, and additional agreements for strew high-cost treatments (e. g., cardiac surgery and renal dialysis). While historical budgeting operated as a negative incentive with respect to admissions, functional budgeting may stimulate hospitals to increase the number of admissions (97).

63 However trends in length of stay reversed somewhat after the Netherlands' transition from historical to functional budgeting (96,97).

FIGURE 2–6: Index of Ambulatory Care in the Netherlands, 1976–85 (1976 = 100)



SOURCE Reprinted with permission from Maarse, 1989 (96) Full citation is at the end of the report

more successfully than the previous system of open-ended funding. Maarse, however, pointed out that the observational studies by him and his colleagues lead only to a provisional conclusion because many factors that may have affected hospital spending were not controlled for through statistical techniques.

Summary. In summary, during the 1980s several countries moved from less comprehensive controls on hospital prices or budgets (i.e., line-by-line budgeting in Canada, per diem payment in France, Germany, and Netherlands) to more comprehensive and stricter systems of hospital budgeting. Limited research on these changes suggest that most countries appear to have been successful in reducing the rate of growth in hospital expenditures relative to previous trends. However, successful and unsuccessful countries continue to experiment with additional measures to either reduce expenditures further (e.g., Germany (180)) or to make their systems more equitable across hospitals (e.g., Netherlands (97)).

Evidence on Physician Payment Controls

A variety of payment methods have also been used in this country and abroad to regulate spending on physicians' services. The United States has had only limited experience with using fee schedules to control spending on physicians' services; other countries have used fee schedules combined with spending targets (goals) or spending caps (limits). The main problem with trying to constrain health expenditures with price-based strategies (such as fee schedules) is that they target only one aspect of health expenditures—prices. Increases in the quantity of services delivered can therefore dilute some of the cost-containment potential from price controls.

Volume may not be constrained under price controls for two reasons. First, when payment rates are reduced below current rates, or when the growth in payment rates is constrained below what it might have been without price restraints, providers may be able to increase the volume of services to offset potential income losses (1 37). However, even if provider volume offsets occur, it does not mean price controls are totally ineffective. Price controls would be completely ineffective only if volume offsets were sufficiently large to fully negate price reductions.[64]

The second reason volume might increase without direct controls such as utilization review is that patients needs and wishes for services may cause an independent increase in the use of health services. It is difficult to separate consumer demand from physician-induced demand in empirical studies. Overall, however, fee controls alone might temporarily reduce expenditures, but longer-term spending control may not be achieved if volume growth partially or completely counteracts the effects of price restraints.

64 It is also argued that providers can also make up for potential losses in revenues in other ways. For example, physicians may increase income by recoding patient short-term visits that receive a lower fee to intermediate visits that receive a higher fee.

Concerns about potential increases in volume have stimulated some countries to limit physician payment, for example, by combining price controls with more comprehensive expenditure tar- , gets or limits. Under physicians' expenditure targets, governments generally fund a portion of excess billings above the predetermined target. In contrast, under expenditure limits, providers cannot expect to receive any additional monies above the predetermined limit.

Future health outlays under expenditure limits or targets depend in part on allowed increases in revenue under the limit or target from year to year. If allowed increases accommodate increased costs from the previous period because of higher input prices, higher utilization, higher service intensity, or newly established services or technology, expenditure caps or targets may not constrain outlays for physicians' services any more effectively than fee controls alone.

Empirical evidence from the United States

Economic Stabilization Program (ESP). Under the Economic Stabilization Program (ESP) (between 1972 and 1974), noninstitutional health care providers were allowed aggregate weighted-average price increases of 2.5 percent, if justified by cost increases (44, 137). Voluntary compliance was assumed, with enforcement 1imited to cases in which patients complained of increases that exceeded the limits (44).

Research on ESP'S effect on physician spending appears to be more limited than that on hospital spending, perhaps because controls were less complex or demanding on physicians (44). A particular shortcoming of the available research is that it tends to focus on Medicare and Medicaid, perhaps because those databases were readily available. For example, using econometric analysis, researchers at the Urban Institute investigated the effects of ESP on Medicare and Medicaid physician payments in California. They found that controls limited Medicare fees to around the ESP target of 2.5 percent per year, but that the quantity and complexity of services supplied to California Medicare patients increased, causing physician incomes to rise more under the controls than when they were lifted (11, 44).[65] Once controls were lifted, Medicare unit prices increased and volume dropped (44).

The Urban Institute investigators found that ESP had little or no impact on California's Medicaid program expenditures, presumably because Medicaid fees were controlled effectively prior to the introduction of ESP (11).

Thus, the ESP price controls do not appear to have reduced either Medicare or Medicaid expenditures for physician services. The Urban Institute concluded that "simply limiting average fee growth by itself may not effectively limit undesirable growth in expenditures on physicians' services, at least over a short time period" (11).

Medicare fee schedule for physician services. In response to growth in Medicare physician payments, and to address perceived payment inequities between expensive, high-technology services and basic services, Congress included a reform of the methods by which Medicare pays for physician services in the Omnibus Budget Reconciliation Act of 1989 (44,11 2). The payment reforms were designed to be budget-neutral in the initial year of implementation of the program (i.e., Medicare physician expenditures under the new system would match what they would have been under the previous system) (44). The 1989 Medicare physic i an payment reforms consisted of three parts:

- *The Medicare Fee Schedule (MFS), effective January 1, 1992.* MFS is based on a relative value scale (RVS) that established national uniform relative values for different physician services based on physician work, practice expenses, and the cost of professional liability insurance (11 2,123). The overall payment level

[65] The authors raised the possibility that the results could partly reflect the substitution of Medicare patients for private patients while price controls were in effect (44).

under MFS is determined through a conversion factor that translates the relative value units for individual physician services established under RVS into actual dollar payments (123). The transition to MFS is scheduled to be fully phased in by 1996 (123).

- *Volume performance standards (VPS), established as a mechanism to update physician fees (123).* VPS sets an expenditure target for physician expenditures that are used 2 years later to update fees under the MFS to levels consistent with the target (44). Future payment rate updates are based in part on the comparison of actual expenditure increases with the target (123). If actual Medicare physician expenditures increase faster than the target, the rate at which the Medicare program raises physician fees is reduced. Alternatively, if spending grows at a rate below the target, fee increases are enhanced. Thus, VPS adjusts rates of increase in fees, rather than directly controlling expenditures (67). The program was implemented in 1990, and the first year that fee updates were subject to the limits was 1992. Theoretically the national Medicare physician expenditure targets provide weak incentives for individual physicians to modify their behavior because physicians are not likely to believe that their individual responses will have much effect on whether aggregate Medicare physician expenditures rise above or remain below the VPS (67).
- *Limits on the ability of physicians to bill patients above Medicare's fees (123).*

Research on the effects of the Medicare physician payment reforms is limited because the program has not yet been fully implemented (44). It is still too early to determine conclusively whether the reforms will constrain spending for physician services (44).

The most recent data from Physician Payment Review Commission (PPRC) show that in 1990 and 199 1—the 2 years after VPS was implemented but before the VPS fee updates and the MFS when into effect—actual growth in Medicare phy - sician expenditures was higher that the VPS targets (10.6 percent actual growth versus the VPS of 9.1 percent in 1990, and 8.6 percent actual growth versus the VPS of 7.3 percent in 1991) (124). In contrast, for 1992 and 1993—years in which VPS fee updates and the MFS affected Medicare physician fees—actual growth in Medicare physician expenditures fell substantially short of the VPS targets (3 percent actual growth versus a 10 percent VPS target in 1993) (124). According to PPRC, a substantial portion of the difference between the 1992 VPS target and actual expenditure growth in that year was due to a lower rate of increase in the volume of services than anticipated in setting the target, as well as a decline in the average Medicare fees over the period 1991-92 (65).

Medicare payments for physician services have also been growing more slowly in recent years under the VPS program than in previous years. Growth in Medicare expenditures for all physician services was 3.3 percent lower in 1991 (final data) and 5.9 percent lower in 1992 (preliminary data) compared with historical trend growth rates over the period 1986-89 (123).

PPRC cautions, however, that the recent trends in Medicare physician expenditures, as well as trends in volume growth rates that largely determine the patterns in physician expenditures, do not yet lead to any firm conclusions about the effectiveness of VPS for controlling Medicare outlays for physicians' services or volume growth. A host of possible explanations account for the recent lower volume growth rates. These explanations include a possible return to the long-run trend of declining rates of increase in volume temporarily interrupted by relatively large volume increases in response to payment rate reductions legislated in 1987, 1989, and 1990and anticipated fee adjustments under MFS; Medicare beneficiary access problems; general trends in medical practice to reduce the volume of services; and physician response to the VPS incentives (124). PPRC'S analyses did not allow them to directly confirm or reject any of these possibilities for explaining recent trends in physician expenditures

(124). PPRC concluded that the absence of an appropriate comparison group and the effects of other policy changes that have occurred since implementation of VPS make it impossible to draw any definitive conclusions about the effectiveness of VPS for controlling Medicare physicians' expenditures or volume growth (123).

Empirical evidence from international experiences

Physician payment in Canada. Since 1971, by which time all provinces had adopted the Federal Medical Care Act covering physicians' services, every province has reimbursed physicians according to province-wide uniform, binding fee schedules established by direct bargaining between professional physician associations and their respective provincial Ministries of Health (11). Canada's experience with fee schedules provides useful information on the effectiveness of both long-term and broadly based price controls.[66]

Based on an observational study of Canadian and U.S. physician fees and expenditures for the period 1971-85, Barer and colleagues found that since 1971 physicians' fees in all provinces have risen less rapidly than general inflation in Canada (i.e., the CPI), and in some provinces and/or periods have lagged well behind general inflation (1 1). This is in marked contrast not only to the U.S. pattern of consistent increases in inflation-adjusted physician fees, but to Canada's experience before 1971. Inflation-adjusted physician fees in Canada fell by 15.9 percent between 1971 and 1985, while rising 15.6 percent in the United States. Over the period 1960 to 1971, when Canadian physicians set their own fees, inflation-adjusted physician fees in Canada rose by 6.3 percent (11).

The Canadian experience with physician payment controls also illustrates some of the measurement issues described in box 2-4. One's conclusions about its effects in controlling physician expenditures can depend upon the measure used. For example, Barer and colleagues found increasing divergence between the United States and Canada in *aggregate physician expenditures* between 1971 and 1985 using *physician expenditures as a percentage of GDP as the measure (11).* In contrast, using a different measure *(inflation-adjusted physician expenditures per capita,* derived from the OECD datafiles), OTA found that the divergence between Canada and the United States remained quite stable between 1971 and 1985 (figure *2-7).*[67]

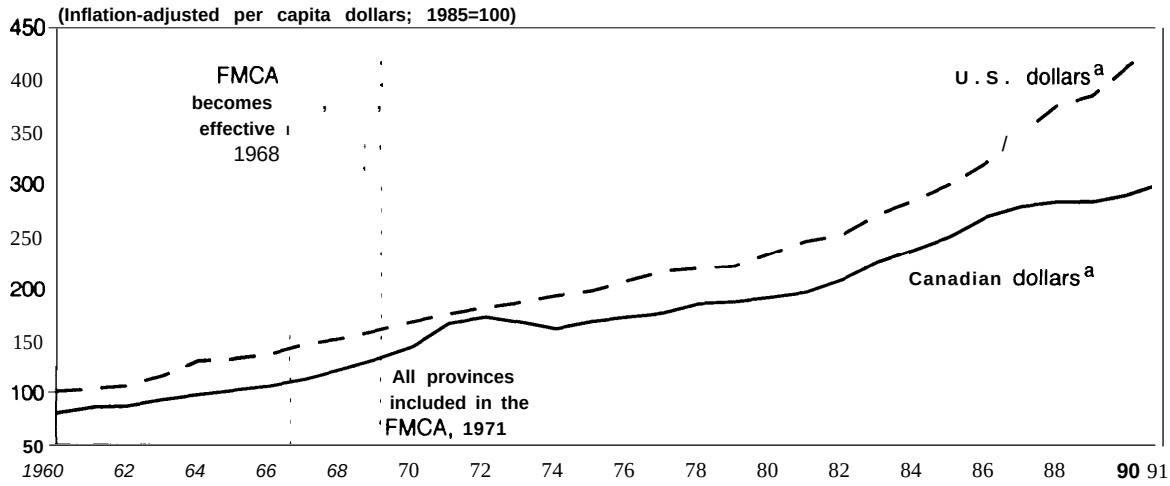
Nevertheless, both Barer's and OTA's analyses show that Canada's physician expenditures have consistently remained below those of the United States (figure 2-7). The OTA analysis of OECD data suggests that, recently, Canada appears to have been more successful than the United States in reducing the average growth rate in physician expenditures per capita (figure 2-7).

However, the firmness and comprehensiveness with which fee and volume controls have been applied have varied across provinces and over time within Canadian provinces and studies have

66 Some have argued that price controls in the United States have had limited success because they have been applied only over short periods, or have not applied to all payers.

67 The U.S.-Canada difference found by Barer and colleagues could have been the result of variations in the GDP (the denominator) or physician expenditures (the numerator). In addition, differences between Barer and colleagues' analysis and OTA's based on OECD data could be attributable in part to differences in physician expenditure data cited by Barer and colleagues and the data in the most current OECD datafiles (l **20).**

FIGURE 2–7: Physician Expenditures Per Capita for Canada and the United States, 1960–91



KEY FMCA = Federal Medical Care Act (Canada).

a If Canadian per capita physician expenditure data were converted to U S dollars, the Canadian figures would be lower. On average, one would divide the Canadian dollars by 1.23 in order to adjust for purchasing power parity, OTA did not make such a change, because such an adjustment would introduce a distortion into the Canadian trend The point of the figure is to show that the rate of Increase in total physician expenditures has been different in Canada and the United States, particularly since 1986

SOURCE Organisation for Economic Co-operation and Development, 1993 (120) Full citation is at the end of the report.

shown differences in the growth of physician expenditures across the provinces (1 1,69,90).[68] For example, Hughes and colleagues' examination of data for Quebec, Ontario, and British Columbia for 1975 and 1987 found that Quebec had the lowest percentage increase (24.4 percent) in inflation-adjusted physician expenditures per capita between 1975 and 1987. Hughes suggested that, despite a rapid rise in the Quebec physician-to-population ratio, physician expenditures in Quebec were able to be kept in check in the later years of his analysis as a result of two factors: 1) holding the fee schedule considerably behind inflation until 1983, and to inflation in the period 1983-87; and 2) a unique system of quarterly billing caps for general practitioners and income targets for specialists that began to take full effect in 1981 (69).

Hughes's comparison of total and per capita physician expenditures (both adjusted for inflation) in Quebec with those of British Columbia and Ontario[69] led him to conclude that fee schedules were only successful when the provincial governments "could exercise the political will to respond to accelerated utilization with aggressive fee reductions, utilization controls, or both" (69). According to Hughes, Quebec was most successful in exercising such political will.

Physician payment in Germany. Physician payment in Germany has been subject to different

68 Generally, the provincial governments use one of three ways to recoup expenditures above a stated expenditure target: reduce next Year's fee increase, temporarily reduce fees for a set period, or discount current fees to counteract the anticipated size of the volume increase for the year (I I ,69,90). Until last year only a few provinces used caps.

69 Hughes found that, in British Columbia, total and per capita physician expenditures rose rapidly until 1983, but were stabilized thereafter by not allowing fee increases to keep up with inflation. Between 1985 and 1987, for example, British Columbia used expenditure limits that triggered temporary fee reductions whenever the limits were exceeded. In contrast, in Ontario, the provincial government and the medical association (negotiating on behalf of physicians in the province) had not been able to come to agreement on utilization and expenditure controls between 1982 and 1987. Hughes found that Ontario showed the most dramatic increases in total and per capita physician expenditures as consequence of more generous increases in inflation-adjusted fees (69). Three measures of percentage change in physician expenditures between 1975 and 1987 showed Ontario to experience higher growth than the United States in the same period (69).

kinds of government intervention. In 1977-78, Germany switched from paying physicians for ambulatory services[70] on the basis of fee controls only, to a system of fee controls combined with aggregate regional physician expenditure targets. Then, in 1985-86, Germany switched from a system of aggregate spending targets to fee controls combined with regional physician expenditure caps (209).[71]

Sharp increases in the mandated health insurance payments through payroll deductions from workers' and retirees' pay or monthly pensions triggered an additional round of German health care reforms in 1993 (180).72 Under the 1993 reforms, which are scheduled to be in effect for a 3-year period, total spending by sickness funds for office-based physician services will not be permitted to grow faster than sickness fund revenues (180).73'74 These approaches are described in more detail below, as is the research on the effects of the 1977-78 and 1985-86 policy changes.

The 1977-78 policy was based on fee schedules combined with aggregate physician expenditure *targets* for each region in Germany. These targets were based on spending in the previous year, anticipated changes in service volume, and changes in the wage base of sickness funds (180). When physician billings exceeded the target, sickness fund expenditures in the following year was to be reduced.

In 1985-86 the method for paying ambulatory physicians in Germany was again altered. The method established can be understood by examining the main aspects of the process that determines the amount of health care dollars allocated each year for physician services (43,70,1 41 ,209). The national health committee (Concerted Action in Health Care) develops annual guidelines for how much physician expenditures should increase. Regional sickness fund associations then negotiate with regional physician associations to determine the expenditure *cap (i.e.,* aggregate budget) for physician services in that region, based on the recommendations of the national health committee. Then the sickness fund association and the physician association negotiate physician fees, based on t he projected volume of services for t he coming year, such that the aggregate budget will not be exceeded.[75]

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70 Ambulatory services are prov l& inphysicians' offices and do not include physicians' services provided in a hospital. In Germany, office-based physicians are ordinarily not allowed to provide inpatient hospital w-vices, and hospital-based physicians are generally not allowed to provide ambulatory care (141).

71 This system of physician payment is not new to Germany, where it was the prevailing system in Germany from 1932 to the mid-1960s. The 1986 expenditure caps were to be temporary, intended to keep spending under control during a period of other health reforms (43).

72 The budget fo of ffice-based physic ians beg inning in 1993 follows a pattern similar to that produced voluntarily through past negotiations; the details of the arrangements are reviewed in GAO's July 1993 report (180). The difference, however, is that the increase in physician expend] ures from year to year is now strictly limited by the German government, albeit on a temporary (3-year) ha\ Is,

73 Sickness fund revenues depend (m both the payroll tax rate and the wage level.

74 Imposition of the gov ~mnicnt-s,et caps was accompanied b, several structural health care reforms designed to further reduce excess utilization as well as rigidities in the current system (180). These would address demographic changes, trends in major diseases, and the introduction of new medical technologies (lW). Reforms specific to the physician sector include establishing procedures to identi fy and impose firm cial sanctions on physicians who exceed standards for drug prescribing, and procedures to align the supply of physicians and dentists with fixed physician-to-population ratios for each geographic area (180).

75 The regional sickness funds collect payroll taxes and tum the budgeted amount over to the regional physician association. The physician association distributes the budget to individual doctors on the basis of each doctor's billings, according to the fee schedule. Physicians are paid at the negotiated fee dun ng the first quarter. I f the group of physicians subject to the regional budget delivers more services, or more costly services (i. e., services with higher fees), causing total physician expenditures to exceed the first quarter's share of the annual budget. fees are reduced during the second quarter. Similar adjustments are made during the third and fourth quarters, so that the regional physician ass ic I ation's budget is met at the end of the year. I f the group of physicians delivers fewer services than expected, actual fees w III be higher than negotiated rates. In this way, the aggregate budget acts as a binding expenditure cap for physician services.

In summary, since the late 1970s, Germany has seen a progression from fee controls combined with regional expenditure targets, to fee controls combined with regional expenditure caps, to fee controls combined with national expenditure caps. The 1993 reforms were intended to be temporary, and the German advisory board is to suggest alternative reforms by the end of 1994 (180).

Several studies have assessed the reforms of 1977-78, and, more tentatively, the 1985-86 reforms, and reported somewhat conflicting results (43,72,176,180). For example, a 1991 study by GAO indicated that the tougher budget controls on physician spending introduced in 1977-78, plus one year's experience with the 1985-86 expenditure caps, together helped reduce inflation-adjusted spending on physician services by as much as 17 percent between 1977 and 1987, compared with what expenditures were projected to be under the previous price controls (176,1 80).

GAO also compared the effectiveness of the regional expenditure targets (introduced in 1977-78) to the regional expenditure caps (introduced in 1985-86).[76] GAO reported that caps appeared to be more effective than targets in decreasing the rate of growth,[77] although other concomitant policy changes, and the short period of time for which GAO had data on the caps (1986-87) made it difficult for GAO to conclude that the caps alone caused the relatively greater decline in growth rates beginning in 1986 (176). Further, GAO's analysis produced some apparently counterintuitive results.[78]

Subsequent OECD data on physician expenditure growth rates do not clearly show whether expenditure caps checked the rate of growth more effectively than expenditure targets (120).[79]

Summary. In the United States, there has been less experience with regulation of physician expenditures than of hospital expenditures and it may be difficult to draw conclusions from the U.S. experience. There was 1ittle research on the impact of the Economic Stabilization Program on physician expenditures but the work that was done suggested that it had little effect. In 1989, Medicare began to implement significant changes in Medicare physician payment, intended, in part, to control future expenditure growth by regulating both fees and volume. It is too early to tell how these controls have influenced physician expenditures although future studies should be informative. Other countries have had more experience with controls on physician expenditures than has been the case in the United States. Some research on the experiences of Germany and Canada suggests that these controls have been effective in constraining spending on physician services.

All of the physician payment regulations reviewed evolved from a focus on physician fees to

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76 GAO asserts that allowable spending was not reduced when spending exceeded the target (180). However, another expert, William Glaser, asserted that when the expenditure targets were in effect, the federal government and the sickness funds imposed relatively small annual increases in expenditures on the physicians' associations (43). The associations in turn administered claims with member physicians such that expenditure targets resembled the later, more strict expenditure caps. For example, in many regions, the sickness funds and physician associations agreed that if unpredicted increases in utilization and service intensity exceeded expenditure targets, the associations would pay discounted fees during the final months of the year (43).

77 Spending for physician services showed 2 percent annual growth between 1985-86 and 1987, compared with 7 percent average annual growth from 1977-78 to 1985-86 (176).

78 For example, GAO's results for the effects Of targets and caps on physician spending in Germany indicate that increases in the Population led to a decrease in physician expenditures, which would not generally be expected. A more important counterintuitive result was their finding that their "point estimates indicate that with caps in place, increases in national income led to decreases in physician care spending rather than to the moderation in spending increases that would be expected." (176). GAO explained these findings as short-term effects of the caps and concluded that they would probably not continue (176).

79 OECD data indicate that the rate of growth between 1986 and 1990 (years of regional expenditure caps) was 5.6 percent, or only slightly lower than the annual growth rate in physician expenditures between 1978 and 1985 (5.8 percent) when expenditure targets were in effect (120). Moreover, some year-to-year growth rates were larger during the period of expenditure caps than during the period of expenditure targets (120).

regulating both fees and the volume of service (e.g., through expenditure caps and targets). Research showing that physicians respond to fee controls by increasing volume (e.g.,Rizzo(137)), as well as research showing that volume is a principal factor in driving up expenditures for physician services (123), suggests that controlling volume may be important for reaching a satisfactory level of cost containment.

Whether physician expenditures controls will result in cost-shifting to other payers (e.g., individual patients, private health insurers in the United States) and spillover to other services will depend on how they are implemented and whether other payers or services are reimbursed at a higher rate. These effects have not been well studied.

Although, the research reviewed in this chapter does not detail the political issues involved in implementing regulations on physician payment, in the past the imposition of fee and utilization controls has been the focus of contention between payers and providers (69, 100).

Findings and Policy Implications

Findings

This chapter examined assumptions made by analysts attempting to estimate the impact of various types and levels of government cost controls on national health expenditures in proposals that include such controls. Government cost controls were defined as measures by which federal, state, or local governments play a direct or indirect role in financing and paying the facilities and providers through which health care services are delivered. The chapter then examined the empirical research literature on previous attempts at government cost controls. Thus, this chapter set out to answer two questions:

1. **Can any savings be attributed to government cost controls and, if so, is it possible to quantify the savings resulting from a particular set of government cost controls?**

   The empirical evidence, while imperfect, suggests that government controls on the amount of funds available for specific types of health care services can reduce the growth rate in health care spending for the targeted services.

Studies of experience from several countries and states in the United States suggest that government cost controls with more "teeth" (i.e., that put providers at more financial risk through strictly enforced expenditure caps) are, logically, more successful than government cost controls with less teeth (i.e., that set fee schedules and "targets" rather than caps), However, there appears to be a continuous search for new and more effective ways to reduce the growth rate of health care expenditures.

It is difficult to draw overall conclusions about the magnitude of potential savings from government cost controls. Several factors appear to be important variables affecting success versus failure: the extent to which both prices and volume of services are regulated, the regulator's will and ability to enforce controls, decisions about the level and increase in the category of spending subject to the controls, supporting mechanisms designed to enforce the controls such as penalties and rewards, the ability and incentives for providers to offset controls on one category of health expenditures or one payer by shifting services or costs to other health care settings or payers, and interaction with other aspects of the government cost control program. In addition, success and failure may be defined differently in different studies and by different observers. Knowledge of the ways in which success is defined and of the factors that may contribute to or confound success and failure is necessary to accurately estimate the magnitude of the impact of a particular government cost control on NHE. In most cases, this information is difficult to obtain, model, and synthesize.

2. Is **empirical evidence available to support the assignment of an effectiveness rating to a set of government cost-control strategies?**

As discussed earlier, an "effectiveness rating" is sometimes "assigned" by analysts when a proposal provides for a limit on spending for a specific payer (e.g., federal or state government), service (e.g., hospitals), or proposed combination (e.g., a health plan). The rating depends on analysts' judgment of how successful the array of supporting government cost control mechanisms

(and other measures) in a reform proposal will be in achieving the proposed statutory rate of growth for the portion of NHE subject to the limit. Effectiveness ratings might be easier to assign if a reform proposal incorporated a package of government cost controls identical to some other system, *and* if there were documented evidence about the effectiveness of that system in controlling health expenditures. However, none of the current legislative proposals to reform the U.S. health care system mirrors the cost-containment mechanisms of any other country or previous U.S. experience in their entirety. Moreover, the evidence for specific mechanisms similar to those proposed may be nonexistent (e.g., premium limits), methodological y flawed (e.g., the plethora of uncontrolled stud ies), or marginally generalizable to current proposals (e.g., hospital budgeting in France[80]). Perhaps most important, previous studies may report results in ways that do not allow judgments about whether specific mechanisms reached a specified target. This chapter suggests, however, that analyses of previous experiences can provide some general guidance about the direction of the effects of specific mechanisms.

Theoretically, the concept of effectiveness ratings may constitute an advance over all-or-nothing judgments about the effectiveness of proposed policy changes. It may require analysts to think more carefully about the possible effects of given cost controls. However, given the paucity of data and the difficulty in determining the effects of complex systems, contemporary analysts appear to have no choice than to assign effectiveness ratings using subjective judgment. In the policy arena a problem arises when the evidence or uncertainty behind such ratings is neither provided nor explicitly acknowledged in an analysis. Assigning overall numerical ratings of effectiveness, without providing further quantitative justification or sensitivity analyses,[81] may lend analysts' estimates an unwarranted aura of precision. In addition, it is not always clear what these effectiveness ratings mean.

Policy Implications

Most analysts' qualitative assumptions that government cost controls slow the rate of growth in the sectors to which they have been applied seem reasonable. However, because of the amount of judgment required to make assumptions about growth rates for the portion of NHE subject to expenditure limits under alternative reform proposals, policymakers should be aware of the rationales for particular ratings before ranking health reform proposals in terms of their relative savings.

In addition, because assumptions about exact effectiveness ratings for expenditure 1imits cannot be based entirely on the empirical literature but are subjective, analysts may aid policy makers by providing a range of NHE estimates based on a range of plausible alternative effectiveness ratings. In addition, analysts should clearly document how they arrive at their assumptions about the effectiveness of cost controls so that other people can more easily independently assess those effectiveness ratings. This would allow outsiders who are interpreting NHE estimates or proposing legislation to have a clearer idea of how analysts formed, or would likel y form, an effectiveness rating for an expenditure limit for a particular proposal.

Finally, as with other chapters in this report, policymakers and others may find it useful to think beyond the issues raised by reviewing analysts' assumptions about only the cost implications of reform. Other considerations may not be amenable to modeling of NHE, but may be just as important to reform decisions.

In summary, the empirical evidence appears to support the direction of most analysts projections about potential savings from adopting a health system that includes more extensive government cost controls than are currently used in the U.S. health care system, but no particular quantitative rating of effectiveness is possible.

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80 France's hospital budgeting approach is chosen as marginally general izable because it involves a system in which two-thirds of the hospitals are public, and for which governments and French sickness fund representatives negotiate budgets individually with each covered hospital.

81 Sensitivity analyses provide an indication of the effect of variations in analysts' judgments or m the available evidence.