PART I. Summary and Overview of Competing Approaches to Health Care Reform

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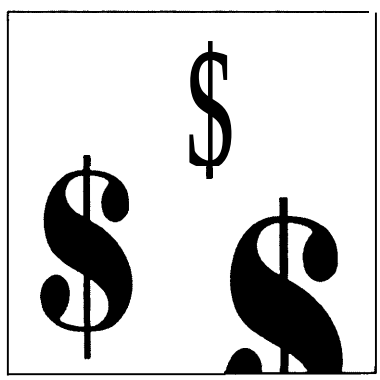
In this report, the Office of Technology Assessment (OTA) examines available analyses of the anticipated impact of selected competing approaches to health care reform—Single Payer, Play-or-Pay, Individual Vouchers or Tax Credits, and Managed Competition-on the following areas of the economy:

- national health care spending and savings;
- Federal, State and local budgets;
- employers;
- employment;
- households;
- other costs in the economy; and
- administrative costs.

The report is not a detailed critique of the analyses discussed, nor does it provide an independent OTA assessment of the economic impacts of the selected health care reform approaches. The estimates provided are those reported in the analyses without adjustment to a common year.



SUMMARY OF FINDINGS

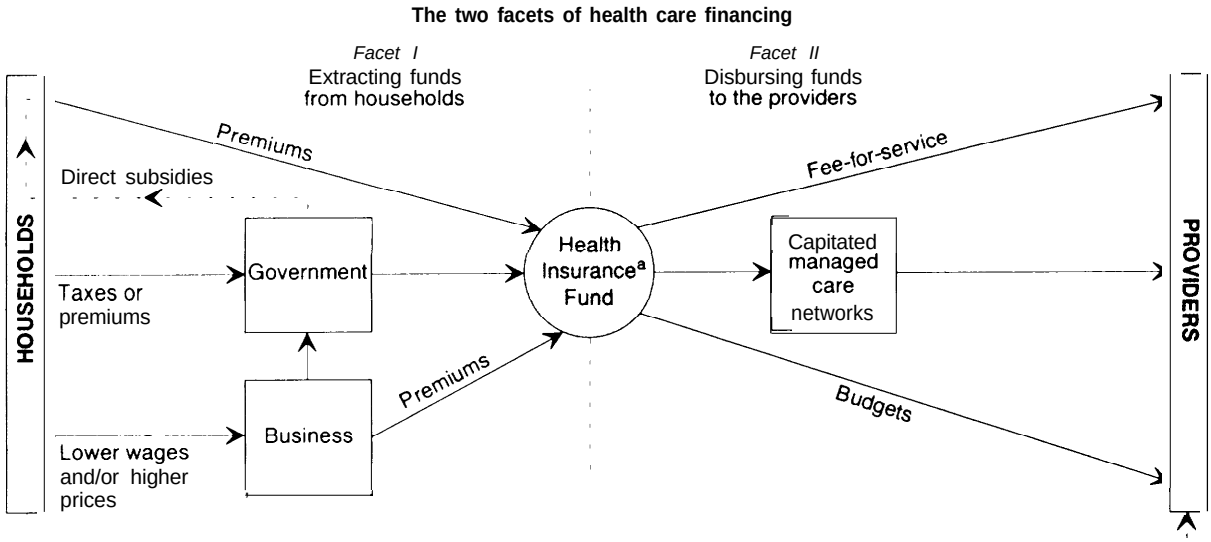
Below is a brief synopsis of the report's major conclusions:

- While the selected approaches to health care reform may be grouped together under the names Single Payer, Play-or-Pay, Individual Vouchers or Tax Credits, and Managed Competition, significant differences in specific proposals exist within as well as across these categories. Key factors contributing to these differences include what a particular approach does, if anything, with respect to: 1) extending access to coverage and/or services, and the scope of benefits provided; 2)

controlling the rate of growth in national health care spending and savings; and 3) redistributing the burden of financing health care coverage and services. The name of any one approach is not sufficient to alert policymakers—or the public-to how the approach deals with all of these key factors.

- *Regardless of the approach to health care reform, the* only way analysts appear to have been able to project savings in national health expenditures is by assuming one or more of the following:
  - —a cap on total health expenditures at a certain level and/or provider price controls at, for example, Medicare payment rates;
  - —the approach will not provide universal coverage or will provide universal coverage but will substantially cut back on the scope or depth of coverage; or
  - —strikingly high levels of savings derived from restructuring the institutions and processes related to health care delivery (e.g., managed care and/or administrative savings).
- The reasons proposals, or analyses of them, need these assumptions to achieve savings are:
  - —increased availability of coverage will likely increase the use of, and the total amount spent on, health services; and
  - —administrative reforms alone are not likely to save enough money to expand coverage, especially to those people who are currently uninsured.
- There is a startlingly wide range of estimates of the impact of the selected approaches to health care reform on the areas of the economy examined. For example:
  - —Estimates of the impact of Single Payer approaches on *national health care spending and savings in* a single year range *from* $21 billion in *increased spending* to $241 billion in *savings in 1991.*
  - —Estimates of the impact of Managed Competition approaches on *national health care spending and savings in* a single year range from *increased spending* of $47.9 billion (in the year 1993) to *savings* of $21.8 billion (in the year 1994).
  - —Estimates of the impact of Play-or-Pay approaches on *households in* a single year range from *increased spending* of $2.3 billion (in the year 1993) to $19.3 billion in *savings (in the year 1990)*.
  - —With respect to the impact of a Play-or-Pay approach on *employment,* one estimate suggested that 25,000 to 50,000 low-income workers might be displaced but others suggest much greater employment losses, for example, 710,000 jobs lost in the first year of plan implementation.
- Policymakers should be aware of the fact that the analyses of the health care reform approaches and proposals and, thus, the resulting quantitative estimates, are not comparable to one another. Therefore, policymakers should be wary of giving too much credence to any one analysis or estimate of an approach to health care reform, of comparing various analyses or estimates of an approach, and of comparing economic impacts across approaches. In order to properly evaluate such analyses, policymakers should be aware of: the specifics of the reform approach; the details, assumptions, and data used in the analysis; and, perhaps, on whose behalf the analysis was conducted. OTA suggests that policymakers use a guide containing factors likely to affect the economic impact of approaches to health care reform to assist them in reviewing analyses. OTA provides such a guide in chapter 10 of this report.
- Many analyses are based upon proprietary analytic models so that policymakers may not have all the relevant information available to them. OTA urges policymakers to request detailed information about the assumptions used by the analysts in their studies in order to avoid making inappropriate comparisons. If policymakers want to make comparisons among competing approaches to health care reform, they could facilitate the development of comparable analyses by asking analysts to compare

FIGURE 1: Flow of funds to and from areas of the U.S. economy



a In this report, the term 'health insurance" is used broadly to include various types of health pans that are designed to reimburse or indemnify individuals or families for the costs of medical care, or (as in HMOS) to arrange for the delivery of that care, including traditional private indemnity fee-for-service coverage, prepaid health plans such as health maintenance organizations, self-funded employment-based health plans, Medicaid, and Medicare.

SOURCE: Adapted from figure developed by Uwe Reinhardt, 1993. A version of this figure appeared in Health Affairs 12 (Supplement): 174, 1993.

their analytic approaches and results with those of others, as appropriate, using similar assumptions (e.g., regarding: numbers of people covered; the share of the gross domestic product (GDP) expected to be devoted to health care; ascribed Federal and State responsibilities for Medicaid, if relevant; payroll tax rate; scope and depth of the benefit package; and premiums or the actuarial cost of covered health care services).

- Policymakers should resist using estimates when they are provided for only 1 year, usually the first year of plan implementation. Such estimates, even if provided for the various areas of the economy, do not indicate the medium- or long-term impact of an approach on the economy.
- Policymakers should also be wary of making comparisons among approaches by looking only at their anticipated impact on discrete areas of the economy (e.g., Federal, State and local budgets; employers; administrative costs). Instead, policymakers need to look at all areas of the economy simultaneously and in relation to one another. While a reform approach may increase spending in one or more areas of the economy, it may decrease it in one or more other areas. For example, a proposal **may** decrease employers' health care expenses that, alone, may look quite impressive, but the same proposal may increase government expenditures tremendously. Thus, if policymakers do not look at all areas of the economy simultaneously, decisions will be made absent full information. However, the relationships between areas of the economy are complex and not fully understood, and few analyses examine the totality of change. Policymakers could use a visual aid such as that in figure 1 to help focus attention on the potential for competing impacts.

HISTORY OF REQUEST

The congressional Office of Technology Assessment is conducting an assessment entitled *Technology, Insurance, and the Health Care System.* Appendix A provides an overview of the full assessment.

Given the increased attention to health care reform in Congress, Senator Ted Stevens[1] of Alaska requested that the project provide an additional analysis related to the major health care reform approaches under congressional consideration, in terms of their anticipated economic consequences. Specifically, Senator Stevens requested that OTA assemble, and briefly describe, the findings of available analyses of the impact of basic reform approaches on:

- national health care spending and savings;
- Federal, State and local budgets;
- employers;
- employment;
- households;
- other costs in the economy; and
- administrative costs.

OTA'S METHOD OF REVIEW

For purposes of soliciting analyses, the basic health care reform approaches were initially characterized as ''single payer, '' "play-or-pay,' and ''market-based/consumer choice. ' Because the term ''market-based/consumer choice' is used to refer to a wide array of approaches, the term was broadly defined to include tax credits or vouchers for individual consumers as well as ''managed competition. ' In October 1992, OTA staff sent a letter to a wide array of individuals, think tanks, special interest groups, and government agencies requesting copies of existing analyses of these reform approaches. OTA also obtained materials identified through a literature search. A draft of this report was sent to those who provided relevant materials and other experts for review in February 1993. Those solicited demonstrated considerable interest in the project, and this report summarizes pertinent information provided to OTA staff. Appendix C lists the names of those who were particularly helpful to OTA during the development of this report.

It is important to note that this report is not intended to be a detailed critique of the analyses discussed, nor does it attempt to provide an independent OTA assessment of the economic impacts of the selected health care reform approaches. The estimates provided are those reported in the analyses without adjustment to a common year. While the report does provide some explanation of why the estimates presented differ from one another, it does not try to fully explain the bases for such variations. As noted above, OTA provides a list of key questions that policymakers might ask before accepting any reported projections (see chapter 10).

ORGANIZATION OF REPORT

This report frost describes the major health care reform approaches examined and major caveats concerning the approaches and analyses of them; these descriptions are in the next sections of this chapter. Throughout this report, the major approaches are referred to as Single Payer, Play-or-Pay, Individual Vouchers or Tax Credits, and Managed Competition. Tables summarizing the quantitative estimates of the impacts of these approaches to health care reform on the economy

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[1] Senator Stevens was a member of the OTA Technology Assessment Board at the time of his request.

[2] This paper does not address every approach to health care reform. Instead it focuses on the approaches included in the request to OTA, expanded to include major reforms of particular interest to the present Congress. Thus other approaches, e.g., Medical Savings Accounts (MSAs), agovemment-owned and -operated health care system, and the full array of approaches sometimes labeled managed competition (e.g., greater permission or encouragement for small employers to form health insurance purchasing groups), are not discussed in this report. Those interested in exploring them further may wish to look at the following sources: M! As—(21,73); H.R. 101 (Action Now Health Care Reform Act of 1993); Government-owned and -operated health care system-H.R. 3229 (U.S. Health Service Act), 1992; Managed Competition—(8,16, 17,70). Numbers in parentheses refer to OTA accession numbers for references listed at the back of this report.

follow. Part II of the report summarizes the potential effects of the implementation of the selected reform approaches, providing discussion of the findings of available analyses by area of the economy, including various issues and assumptions involved in estimating the impact of the reform approaches on that area (chapters 2 through 8). Part III of the report addresses additional policy considerations that may be of interest to those concerned with health care reform (chapter 9) and concludes with a series of key questions-in the form of a provisional checklist-that may be useful to policymakers as they contemplate health care reform (chapter 10).

MAJOR APPROACHES TO HEALTH CARE REFORM

The major approaches to health care reform attempt to address the fundamental issues of cost, access, and quality. Many factors may influence how the approaches deal with these issues (e.g., philosophy of government, belief in the effectiveness of market forces), and the approaches maybe categorized in diverse ways depending on the criterion of interest (e.g., whether and how the plan provides for universal coverage, whether and how it addresses cost containment).

An example of a strategy for categorizing reform approaches devised by Henry Aaron of the Brookings Institution addressed two objectives of health care reform and analyzed three different approaches to achieving each of the objectives; Aaron's strategy compared "national health insurance, " ''tax credits, ' and an "employment-based, public backup" system as approaches to achieving universal coverage, and ' 'competition, ' ''managed competition, ' and ''budget limits' as approaches to controlling the growth of health care costs (l). According to Aaron, "No necessary connection exists between cost control and extension of coverage, but most who advocate national health insurance espouse budget limits to control costs, and most who advocate tax credits support market competition to control costs. Advocates of extending employment-based insurance support managed competition or budget limits" (1)?

Terms Used in This Report

There is increasing agreement that the use of available terminology such as Single Payer, Play-or-Pay, Individual Vouchers or Tax Credits, and Managed Competition to describe any approach to reform is problematic. For example, the assumption may arise that the term ''play-or-pay" has a particular definition that clearly distinguishes it from other reform approaches. Marmor and Boyum, among others, have urged participants in the policy debate to question the use of such terminology:

> The classification of proposals into . . . broad categories-play-or-pay, single-payer, procompetitive--is clearly useful in organizing the debate about medical care reform. There are so many plans out there that we must group them in order to make sense of what would otherwise be hopelessly confusing. . . But if these classifications illuminate, they also obscure. Since classifications, by their very nature, stress differences *between* groups and similarities *within* them, they thus have a tendency to ignore their very opposites--that is, similarities across groups and differences within them (42).

This report continues to use the terms Single Payer, Play-or-Pay, Individual Vouchers or Tax Credits, and Managed Competition to refer to broad "approaches' to health care reform since

[3] Since Aaron arrived at his strategy for categorizing approaches to reform, some have proposed combining managed competition and budget limits (70,71). However, and in contrast to Aaron's conclusion some believe that certain components of their approaches must not be tampered with if the approach is to be successful (15).

this is the terminology typically used in the analyses examined.[4]

In contrast to the term "approaches," this report used the terms "proposal" or "plan" to refer to specific variants of the broad approaches, and the term ''analysis" to refer to an estimate of the impact of either an approach or a proposal. Most, but not all, analyses reviewed for this report resulted in estimates put in numerical, rather than narrative, terms. Most of the numbers are in dollars.

Figure 2 presents the specific proposals within the major approaches to universal coverage and cost containment.[5]

For example, the Heritage Foundation and Bush Administration *proposals are* usually considered variants of the Individual Vouchers or Tax Credits *approach* to achieving universal coverage. Various potential economic impacts of the Bush Administration's proposal were *analyzed* by several agencies andorganizations.67

It is important to note that: 1) not every proposal with a particular name includes every feature of a prototypical approach, and 2) not every analysis addresses identically every feature of similar proposals.[8] Even where similar features were included, specific assumptions about the

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[4] One exception is Individual Vouchers or Tax Credits. This title is used hereto distinguish this group of reform approaches from Managed Competition approaches. Both have been grouped together at times under the heading ''market-based/consumer choice" approaches, a term which can obscure their differences.

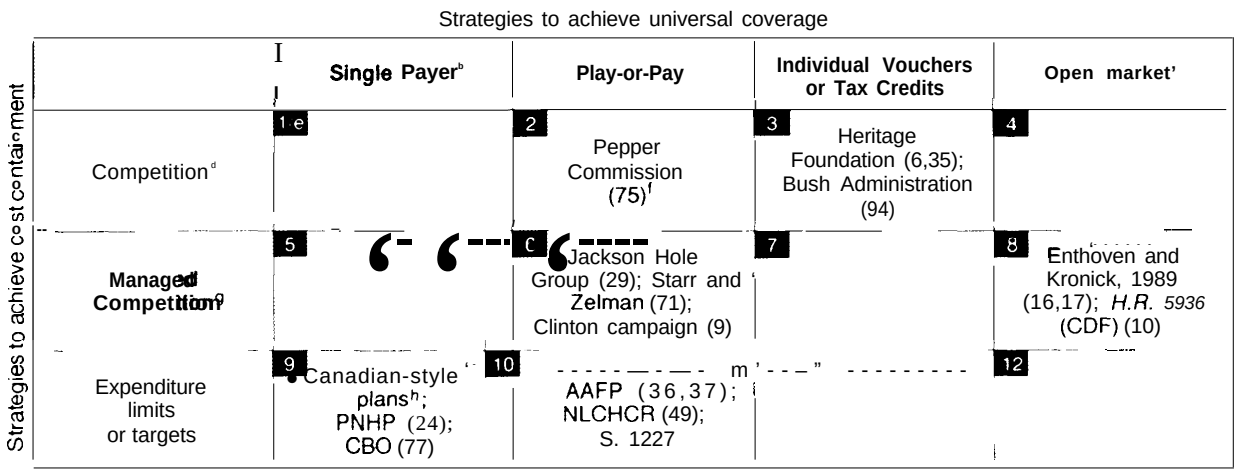
[5] OTA considers an approach 'major' if it attempts to achieve universal coverage. Nonmajor approaches, then, are reform proposals that address specific aspects of access to insurance coverage, such as efforts to increase affordability or availability for selected populations, markets, or individuals (e.g., by the rescinding of preexisting conditions provisions in insurance contracts).

6 These include: the Office of Management and Budget in the U.S. Executive Office of the President (94); the Health Care Financing Administration in the U.S. Department of Health and Human Services (93); Lewin-VHI for the Bipartisan Panel on Presidential Candidates' Health Plans, a panel convened by the organization Families USA in 1992 (3); and Silow-Carroll of the Economic and Social Research Institute (65).

[7] As shown in figure 2, the Heritage Foundation proposal would attempt to achieve *universal coverage* by subsidizing individuals' (or heads of households') purchase of health insurance through tax credits or vouchers made available directly to the individual purchaser. Cost *containment is* to be achieved through competition, according to the Heritage Foundation plan, in the following way: individual purchasers of health insurance will be more cost-conscious with respect to both their purchases of insurance coverage and the uses to which their insurance and other health care dollars are put (e.g., the purchase of health services) than they are currently. Under this theory, as insurers compete to sell health insurance at the lowest premiums, and individuals more aggressively negotiate with providers over the price and quality (i.e., the value) of health services, the rate of growth in national health expenditures will decelerate. Thus, the Heritage Foundation plan appears in the cell (cell 3) of figure 2 that combines "competition" and "individual vouchers or tax credits. ' It is important to note that the Heritage Foundation proposal-and all other proposals-includes other important features besides "competition" and "individual vouchers or tax credits. ' For the sake of relative simplicity, these features are not shown in figure 2, but they maybe of importance to any analysis comparing the Heritage Foundation plan and other specific proposals or approaches. These features may include, but are not necessarily limited to, the fact that Heritage's plan would: 1) require individuals to purchase health insurance coverage or face a fine; 2) provide subsidies at only certain family income levels; 3) have Congress develop and mandate many of the features of the benefit package; 4) have Congress rescind the current tax deduction/exclusion for employer-sponsored health insurance coverage (6,35), The level of the individual tax credit, the basic benefit package, and the rescission of the employers' tax deduction/employees' tax exclusion are all related in the Heritage plan (6,35).

8 In addition to specific variations within and across approaches and proposals, almost all major approaches to health care refol-m-except the Single Payer approach-include in some fashion the following reforms to the health insurance marketplace: 1) guaranteed issue of policies, regardless of preexisting conditions, current health status, or other factors that could potentially affect utilization and costs; 2) limitations or prohibitions on benefit plan exclusions for preexisting health conditions; and 3) an end to experience rating. However, many proposals would establish some form of risk-adjusted community rating, in which individual subscribers would all pay equal or relatively similar premiums (i.e., adjusted for family size or geographic area), but the amounts of the premium paid to insurers would reflect the risk status of their specific pool of subscribers. Other insurance marketplace reforms that are frequently suggested but that vary by approach or proposal include: requiring insurers to offer a specific benefit package; efforts to promote the use of managed care arrangements (e.g., by preempting State laws that inhibit their growth); efforts to encourage the formation of health insurance purchasing networks (e.g., by extending Employee Retirement Security Act [ERISA] preemptions that permit larger self-insured employers to avoid State-mandated health insurance benefits to small employers purchasing coverage through health insurance purchasing networks) (94). Common reforms that would reduce the administrative burdens of the current system include electronic claims processing and billing. None of these reforms are shown in figure 2.

FIGURE 2: Major approaches and specific proposals in analyses reviewed by OTA: strategies to achieve universal coverage and cost containment



[a] This figure is based upon Aaron's (1) strategy for categorizing health care reform approaches that compared approaches to achieving universal coverage and approaches to achieving cost containment. The figure shows approaches and proposals which served as the basis for analyses included in this report and categorizes them according to their approaches to universal coverage and cost containment.

[b] Names of approaches in uppercase and **BOLD** are the terms commonly used and/or used in this report to describe major approaches to health care reform. For example, **MANAGED COMPETITION**, a strategy to achieve cost containment, has been combined in several proposals with **PLAY-OR-PAY** or Open Market approaches to increase the number of people with coverage. It is important to know that both combinations are often referred to as **MANAGED COMPETITION** which obscures significant differences between these approaches and confuses debate over them.

[c] Open-Market-based approaches assume that universal (or near-universal coverage) will be achieved because market forces and limited insurance reforms will make insurance affordable and available.

[d] Competition in this context assumes some, but fairly limited, regulation aimed at reforming the health insurance market so that individuals and/or their employers will make more cost-conscious decisions in their purchase of health insurance coverage and/or services that will result in reduced health care expenditures.

[e] Numbers in the upper left hand corner of each box are cell numbers that are referred to elsewhere in this report. Some cells are empty because proposals combining these approaches to universal coverage and cost containment have not been made and analyzed although they are not necessarily mutually exclusive (1).

[f] Numbers in parentheses pertain to the references which are arranged alphabetically at the end of this report.

[g] Some **MANAGED COMPETITION** proposals also incorporate expenditure limits or targets. Starr and Zelman's approach to **MANAGED COMPETITION** does not require expenditure limits or targets (71), but, unlike Enthoven (15), they believe that broad budget limits are compatible with **MANAGED COMPETITION**.

[h] Approaches and analyses that are "Canadian-style" are based on Canada's national experience or the experiences(s) of selected Canadian provinces.

KEY: **AAFP**: American Academy of Family Physicians; **CBO**: Congressional Budget Office; **CDF**: Conservative Democratic Forum; **H.R. 5936**: The Managed Competition Act of 1992 (102d Congress); **NHE**: National Health Expenditures; **NLCHCR**: National Leadership Coalition for Health Care Reform; **PEPPER COMMISSION**: U.S. Bipartisan Commission on Comprehensive Health Care; **PNHP**: Physicians for a National Health Program; **S. 1227**: HealthAmerica: Affordable Health Care for All Americans Act (102d Congress).

SOURCE: Office of Technology Assessment, 1993, based initially on Aaron's strategy for categorizing reform approaches (1), and adapted based on findings of OTA'S review and analysis for this report.

features may have varied considerably, further affecting any estimates provided. Variations in plan features and in certain assumptions may be a function of the primary goals or the ideology of the proponents of the approach as well as, in some instances, the analyst's desire to provide numerous examples of potential effects for more purely analytical purposes.

The following descriptions attempt to provide the basic elements of the major approaches to health care reform as well as their major goals. That section is followed by a discussion of caveats that should be kept in mind as specific attempts at analysis are reviewed.

Policymakers should also note that, as approaches to health care reform continue to evolve,

they will likely be faced with new variants of existing approaches and new analyses of those modifications (20).

Single Payer Approaches

The Single Payer approach explored in most analyses proposes a system of tax-financed universal coverage with government as the sole purchaser of health services.[9] Most of the analyses reviewed for this report examined a "Canadian model' fashioned after the system operating in Canada.[10] Its key features are:

- a federally-specified health benefits package;
- universal coverage;
- tax-financed system;
- government as sole purchaser of services; and
- expenditure limits. In Canada, expenditure limits include global budgeting for hospitals and negotiated physician fee schedules and, in some provinces, controls on expenditures for physician services (e.g., expenditure targets and caps as well as limits on physician income). An approach in which government is the sole purchaser of services may or may not include expenditure limits.

Under the Single Payer approach, government would ensure that all Americans have financial access to broad health care services. Proponents of a Single Payer system believe that its implementation in the United States would:

- achieve universal coverage, because general revenues, rather than individual premiums, would be used to finance the system (a priority goal of this approach); and
- achieve a more equitable distribution of the burden of financing health care costs, to the extent that the system would be financed through general revenues (a priority goal); and
- stabilize or reduce the rate of growth in national health expenditures through the imposition of expenditure limits (a secondary goal of this approach); and
- drastically reduce administrative costs through substantially streamlined administrative procedures (a secondary goal).

Play-or-Pay Approaches

Play-or-Pay, sometimes known as the ''public-private combination' approach (88), would build upon the current system of employment-based coverage, requiring a combination of employment-based and tax-financed universal coverage with multiple purchasers of services. Its key features typically include:

- a federally -specified health benefit package that must be offered, at a minimum, by private insurers and any public backup plan;
- universal coverage (usually mandatory acceptance of insurance coverage); [11]
- financing by a combination of employer contributions, individual premiums and cost-sharing, and Federal and State monies including current Medicaid funds and general revenues;
- employers that, on behalf of their employees, make premium payments for private insurance ("play") or contribute a specified amount (e.g., 7 percent of total payroll) ("pay") to a public fund; and

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[9] Examples of legislation to establish a Single Payer system introduced in the 103d Congress include: S. 491 (American Health Security Act of 1993)/H.R. 1200 (American Health Security Act of 1993); in the 102d Congress: S. 2320 (Universal Health Care Act of 1992)/H.R. 1300 (Universal Health Care Act of 1991); S. 1446 (Health USA Act of 1991); H.R. 5514 (Health Choice Act of 1992).

[10] OTA acknowledges that different Single Payer approaches operate in other countries but since the system operating in Canada is the system most frequently discussed in terms of implementation in the United States, it is the system used by many analysts to infer what would happen in the United States under a Single Payer system.

[11] Examples of such legislation introduced in the 102d Congress include: S.1177 (Pepper Commission Health care Access and Reform Act of 1991)/H.R. 2535 (Pepper Commission Health Care Access and Reform Act of 1991); S. 1227 (HealthAmerica: Affordable Health Care for AU Americans Act)/H.R. 3205 (Health Insurance Coverage and Cost Containment Act of 1991).

- a public fund that provides coverage to all uninsured workers and to unemployed persons and their dependents, whether presently uninsured or otherwise insured.

In addition, expenditure limits are included in some proposals.[12]

Proponents of the Play-or-Pay approach believe that it would:

- achieve universal coverage, by insuring all Americans through employment-based or public-sponsored coverage, and by making coverage more affordable through health insurance marketplace reforms (the priority goals of this approach); and
- minimize the redistribution, and the potential disruption associated with it, of the burden of financing health care by building upon the current employment-based method of sponsoring health insurance (the secondary goal of this approach). 13

Approaches Employing Individual Vouchers or Tax Credits

The approaches that OTA calls Individual Vouchers or Tax Credits propose tax policy modifications and limited health insurance marketplace reforms to expand access to coverage while retaining multiple purchasers of services.[14] Their key features typically include:

- a specified (e.g., by Congress or the States) benefit package available for the amount of the maximum tax subsidy;[15]
- universal or expanded access to coverage;
- deduction, credit or voucher available to individuals to assist them primarily with the purchase of health insurance and secondarily with the direct purchase of health services;[16]
- financing by a combination of individual premiums and cost-sharing, Federal and State monies currently funding care to low-income and uninsured persons, general revenues, and employer contributions, at least initially, in some proposals;
- individuals purchase health insurance coverage directly or through their employers; and
- public programs (e.g., Medicaid, Medicare) continued with some modification possible to expand coverage to additional low-income people under Medicaid.

Proponents of the Individual Vouchers or Tax Credits approaches believe that these changes would:

- increase the affordability, accessibility, portability, and stability of health insurance, in particular for individuals[17] and small groups, thereby reducing the number of uninsured individuals (a priority goal of this approach); encourage individuals to assume a greater role than they presently do, and to be more cost-

12 Examples of such legislation introduced in the 102d Congress include: S. 1227 (HealthAmerica: Affordable Health Care for All Americans Act)/H.R. 3205 (Health Insurance Coverage and Cost Containment Act of 1991).

13 In 1990, 64 percent of insured persons underage 65 in the United States purchased insurance through an employer-sponsored group (either directly or as dependents) (89).

14 Examples examined in this report are the Heritage Foundation (6,35) and Bush Administration (94) proposals. In the 102d Congress, H.R. 5919 (Comprehensive Health Reform Act of 1992), incorporated some of the Bush Administration's proposed reforms. See also, Pauly, Danzon, Feldstein, et al., 1991 (52), 1992 (53).

15 The Heritage Foundation plan would require Congress to delineate a "basic" benefit package (6). The Bush Administration plan would have delegated responsibility for specifying the benefit package to the States (94).

16 The Heritage Foundation plan requires individuals to purchase health insurance coverage unless they already have coverage under Medicaid, Medicare or another government program (6,35).

17 Currently, some people purchase health insurance coverage directly from an insurer for themselves and their families, in particular, those ineligible for employment-based coverage, Medicare, Medicaid, Civilian Health and Medical Program of the Uniformed Services (CHAMPUS), Veterans Affairs, or military coverage (89). This is typically referred to as the "individual market' for health insurance to distinguish it from the "small group" and ''large group" markets.

conscious, with respect to their purchase of health care coverage and services (a secondary goal of this approach); and
- limit the Federal Government's regulatory role (a secondary goal).

Managed Competition Approaches

Managed Competition generally combines tax policy modifications with health insurance marketplace reforms designed to promote health care delivery system restructuring.[18] It is, according to its originator, Alain Enthoven,

> . . . a purchasing strategy to obtain maximum value for money for employers and consumers. . . Managed competition occurs at the level of integrated financing and delivery plans, not at the individual provider level. Its goal is to divide providers in each community into competing economic units and to use market forces to motivate them to develop efficient delivery systems (15).

Key common features typically include:

- a standardized benefit package (15,70), defined by a National Health Board or similar entity which must be offered by private insurers and any public backup plan;
- expanded access to coverage through sponsors (e.g., health insurance purchasing groups) authorized to structure and modify the market for competing health plans (15);[19]
- further development of integrated financing and delivery organizations (e.g., Health Maintenance Organizations [HMOs]) financially at risk for the total health care of enrollees and accountable to the public;
- limitation of the deduction from employer income and, in some proposals, the exclusion from employee income, of employer contributions for group health insurance premiums to the price of the least expensive, but minimally acceptable, standardized benefit plan in the area; and
- expenditure limits, in some proposals.

As noted above, the Managed Competition approach typically provides for health insurance purchasing groups which, by pooling large numbers of individuals together, are intended to foster competition among providers for enrollees and pool the risk of providing coverage. These group purchasing arrangements are particularly advantageous for individuals and small groups that are currently unable to achieve the economies of scale enjoyed by larger groups.

The primary purpose of this approach is to use a combination of market competition and targeted regulation of the health care insurance industry to promote change in the health care system. Some proponents of Managed Competition believe that it would:

- achieve universal access by making coverage more affordable through specific insurance and health care delivery reforms;[20]
- minimize the redistribution, and the disruption associated with it, of financing health care by retaining current arrangements, yet modify incentives related to the purchase of coverage

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18 Alain Enthoven originated the concept and the Jackson Hole Group initiated development of the framework for Managed Competition (16,17,29). Examples of such legislation introduced in the 102d Congress include: S. 3299 (Managed Competition Act of 1992)/H.R. 5936 (Managed Competition Act of 1992) (Conservative Democratic Forum); S. 3300 (21st Century Health Care Act). President Clinton has previously expressed support for this approach in principle (9).

19 Most proposals would permit large employers to continue to purchase coverage on their own—i.e., employers With 10,000 or more covered lives would deal directly with the insurers and/or providers. Some proposals would permit employers with 1,000 or more covered lives to deal directly with the insurers and/or providers (27).

20 Enthoven writes, "[b]y putting market pressure on providers to cut costs, market reforms promoting competition—if not accompanied by universal coverage—could exacerbate access problems. (This would be true of any serious cost containment program.) It would be more humane, economical, and rational simply to adopt a policy providing coverage to virtually everybody through an integrated financing and delivery organization that provides primary and preventive care as part of a comprehensive benefit package. A necessary condition for universal coverage is that everybody who can contribute to financing the system must do so" (15).

through tax modifications to encourage cost-conscious behavior on the part of individuals;[21] and

promote competition among providers on the basis of price and quality.

CAVEATS CONCERNING THE ANALYSES EXAMINED BY OTA

In reviewing analyses of approaches to health care reform, several problems arise that must be understood so that the import of the analyses for purposes of the health care reform debate is clear. These problems relate to:

- defining the various approaches to reform; and
- the content and capabilities of the analytic models used to examine the approaches to reform.

First, apparent from the descriptions of the major reform approaches is the fact that certain components of reform may appear in various approaches. Thus while the terms Single Payer, Play-or-Pay, Individual Vouchers or Tax Credits, and Managed Competition may be used in common parlance, they lack freed definitions. Therefore, the use of these terms is likely to confuse rather than enhance the debate unless the particular components under discussion are outlined and the specific combination is carefully scrutinized with respect to its unique impact.

In order to analyze health care reform approaches, analysts must decide upon a relatively specific proposal to analyze and obtain the relevant data.[22] While not a complete barrier to analysis, the age of and problems with available data have posed problems for analysts (30,45,62).

Some of the key assumptions affecting the estimates of the impact of the various reform approaches concern:

- the extent to which coverage is expanded in the population;
- the distribution of the direct burden and the means of financing health care;
- the extent to which an approach or spectific proposal incorporates specific cost-containment mechanisms and/or expenditure limits, and the assumed effectiveness of such mechanisms and/or limits;
- the content of the benefit package;
- the actuarial cost of coverage;
- employer/employee cost-sharing with respect to private insurance or enrollee cost-sharing with respect to public-sponsored coverage;
- savings or increases in spending due to modifications of the tax subsidy for health insurance premiums;
- savings or increases in spending due to modifications in administrative procedures;
- implementation of managed care; and
- cost-savings assumed from managed care.[23]

Unfortunately, available studies may not be helpful when it comes to evaluating these and other key issues. The report of an analysis may be incomplete or difficult to interpret, or the analytic model itself is proprietary. As a consequence, crucial assumptions are not available to readers.

Particularly troublesome are those analyses that do not explicitly say that new revenues will be needed to finance the proposals; however, the proposals are frequently described as "budget neutral' in summaries of the analyses. New revenues, of course, would require either new taxes or increased premiums.

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21 Some analysts maintain that Managed Competition is compatible with various financing mechanisms (e.g., alternatively, from a tax-financed approach "to an employer/employee mandate plus an individual mandate and subsidies for the nonemployed. . . . to an individual mandate' (15).

22 In many cases reviewed in this report, analysts were asked to analyze a specific proposal (35,36,37,75).

23 Note that most analyses of the costs of particular reform proposals do not deal with transition costs, that is, costs related to implementing the system, such as developing an appropriate information system, which may be significant.

An example of a very widely used proprietary analytic model is the Lewin-VHI Health Benefits Simulation Model (HBSM).[24] It has been used to analyze the impact of a wide range of proposals based on numerous approaches (3,34,35,36,37,63, 75), yet analysts who wish to check the numbers generated by the Lewin-VHl HBSM are likely to be stymied because some of the assumptions and data are not available to them.

OTHER POLICY CONSIDERATIONS

Despite the need for complicated analytic models for analyzing the potential impacts on the U.S. economy of large and simultaneous changes in financial incentives and organizational structures, leading users of these analytic models emphasize that such models cannot answer the fundamental questions about health care reform (13,39,50). These fundamental issues include:

- access to health care-Access for whom and to what? To health care coverage and/or services, and to what type of coverage or level of services?
- financing of health care-How much disruption of the current health care system, in terms of the distribution of the direct financing burden, is deemed acceptable and to what extent is equity sought? What is the appropriate role of government, employers and individuals in financing health care?
- to what extent and how should the Nation attempt to control national health expenditures, in both absolute terms and with respect to their rate of growth?
- the appropriate roles of competition and regulation.

The **estimates** provided in this report cannot independently resolve the fundamental political and social issues that are central to health care reform. However, despite this, and the caveats discussed above, a comparative review of analyses of the reform approaches may be useful in informing the policy debate to the extent that their results can be understood to:

- demonstrate the potential for a specific reform action to have an economic impact; and
- provide insight into *who or what will be* affected by, and the possible *order of magnitude* of the economic impact of, a specific reform action.

However, it is critical that such estimates be used cautiously. Policymakers need to know what an estimate refers to in some detail as well as the validity of the data used in the estimate, before relying upon it as a basis for decisionmaking.

SUMMARY OF THE ESTIMATES

Tables 1 through 5 provide a brief summary of the estimates of the economic impacts of major approaches to health care reform, in five different areas for which there was sufficient information to put in table format. It is important to note that: 1) the tables report numbers that are available publicly; 2) almost every estimate in the tables contains a footnote that provides some of the key reasons why the estimate differs from the others shown in the table; 3) additional information on the seven areas of the economy addressed in this report, and more detailed discussions of the estimates and why they vary so much, can be found in chapters 2 through 8, and appendix B, of this report; and 4) types of estimates that were not amenable to table format (e.g., impacts on other

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24 The Lewin-VHI Health Benefits Simulation Model (HBSM) was first developed in 1984 to analyze the Medicare Catastrophic proposals. Its purpose is to estimate the cost of access proposals, the impact of access proposals, distributional impacts, and to identify unintended consequences. It is a month-by-month simulation model including a household data file from the 1987 National Medical Expenditures Survey updated to the simulation year, And there is a statistical match with the Small Business Administration's survey of large and small firms (62). While the model itself is properly proprietary, to the extent that the detailed assumptions used by the analysts are not available to policymakers, analyses using the HBSM may not provide policymakers with adequate information upon which to base public policy decisions.

areas of the economy; impacts on employment; and per-capita and per-household effects) are also discussed in the appropriate chapters and in appendix B. The tables are as follows:

- Table 1 summarizes the range of quantitative estimates of the economic impacts of competing approaches to health care reform on national health care spending and savings;
- Table 2 summarizes the range of quantitative estimates of the economic impacts of competing approaches to health care reform on Federal, State, and local budgets;
- Table 3 summarizes the range of quantitative estimates of the economic impacts of competing approaches to health care reform on employers;
- Table 4 summarizes the range of quantitative estimates of the economic impacts of competing approaches to health care reform on households;
- Table 5 summarizes the range of quantitative estimates of the economic impacts of competing approaches to health care reform on administrative costs.

TABLE 1: Quantitative estimates of the impact of competing approaches to health care reform on national health care spending and savings (national health expenditures)[a]

SINGLE PAYER APPROACHES[b]

Change in expenditures (in $billions)	Estimate year(s)	Source[d]
Sing/e year estimates[e]:		
[illegible]	[illegible]	[illegible]
- $241.0 to + $[illegible]	1991	[illegible]
Estimates 0/future impacts[f]:		
-$1,300.0 to -$5.500.0	1991-2000	Meyer, et al.[j,k]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
- $ 600.0	2000	NLCHCR[n]

PLAY-OR-PAY APPROACHES

Change in expenditures (in $billions)	Estimate year(s)	Source
Single year estimates:		
+ $12.0	1990	Pepper Commission[m]
[illegible]	[illegible]	[illegible]
+ $ 1.0	1992	NLCHCR[n]
+ $[illegible]	[illegible]	AAFP[o]
- $[illegible]	[illegible]	NLCHCR[n]
+ $ 6.0	1994	Silow-Carroll & Meyer[q,r]
+ $ 1.0	1994	Silow-Carroll & Meyer[q,s]
-$ 5.0	1994	Silow-Carroll & Meyer[q,t]
Estimates 0/future impacts:		
[illegible]	[illegible]	[illegible]
- $ 111.3 to - $333.5	1993-2000	AAFP[o,u]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
- $ 600.0	2000	NLCHCR[n]

[a] Baseline assumptions of national health care spending and savings differ among analyses; that is, analyses use different starting points in terms of the year and/or amount of national health expenditures to arrive at their estimates. To the extent that these differ among analyses, the estimates are not comparable, all other things being equal.

[b] As discussed more fully in the text, terms used to describe the competing approaches to health care reform (e.g., Single Payer, Play-or-Pay, Managed Competition) may be misleading insofar as differences exist within as well as across groups. Some of these variations and specific assumptions about them that appear to affect the estimates are noted in the footnotes related to particular analyses. For more details, please refer to the report text.

[c] Estimates provided are in current dollars unless otherwise indicated. The symbol "+" signifies increased expenditures and the symbol "-" signifies decreased expenditures.

[d] Some analyses were conducted on behalf of the source by another individual or entity. Where this was indicated in the analysis, it is noted in the footnotes following this table. Reference numbers are listed at the end of each footnote. The full citations may be found in the list of references at the end of this report.

[e] Single year estimates are for the first year of implementation of the health care reform plan unless otherwise noted.

[f] Lewin-VHI analysis of Canadian-style system. Estimate equals the sum of $46.8 billion in administrative costs-savings plus $68.0 billion in increased utilization (not including $10.2 billion in increased long-term care services utilization). No change in the rate of national health spending was assumed during the first year of plan implementation (34).

[g] U.S. General Accounting Office estimate based upon the Ontario system. Estimate assumed some cost-containment and all cost-inducing factors effective in the first year, but did not take transition costs into account (82).

[h] Grumbach and colleagues' analysis of the Physicians for a National Health Program plan, a Canadian-style system. $18.0 billion savings estimate assumed that the increased costs of expanded care could be paid for initially from administrative savings. Note that PNHP projected a national health budget for the first year of plan implementation that assumed no savings in national health care spending over current policies. This budget assumed a more conservative level of savings in administrative costs (did not assume that the level of administrative efficiency in Canada was immediately achievable in the United States) and that significant savings from the adoption of cost-containment mechanisms would accrue over time. It further assumed that the $18.0 billion in savings would be consumed by new health initiatives and transition costs (24).

[i] Congressional Budget Office (77) estimates of a Single Payer approach that assumed provider payments based on Medicare rates, patient cost-sharing, and retention of a residual Medicaid program. CBO figures converted by GAO (83) from 1989 dollars (-$58.1 billion to +$7.4 billion). CBO study was revised in April 1993 (81).

[j] Meyer and colleagues' analysis of a Canadian-style system with health care spending at no more than 8.7% of U.S. GDP. Single year savings estimate: $241.0 billion; estimate of cumulative savings: $5,500.0 billion (43).

[k] Meyer and colleagues' analysis of a Canadian-style system with health care spending capped at its current share of U.S. GDP after including the cost of covering uninsured individuals. Single year savings estimate: $20.0 billion; estimate of cumulative savings: $1,300.0 billion (43).

[l] The periods for which estimates of future impacts are reported were usually provided by the analysts cited. However, in some instances, cumulative estimates were calculated by OTA by adding together multiple single year estimates provided by the analyses. In such cases, the period selected by OTA depended upon the years for which the single year estimates were provided and upon the period(s) for which other cumulative estimates of the approach were provided. Also, in some instances where estimates of the *cumulative* impact of a particular proposal were not provided by the analysts cited, estimates for additional single future years are provided [e.g., NLCHCR (49)].

[m] Lewin-VHI analysis for the Pepper Commission of the Commission's plan. Does not reflect adjustments for inflation or for cost-containment savings (75).

[n] National Leadership Coalition for Health Care Reform proposal and analysis. Analysis assumed 7% payroll tax rate and annual health care expenditures target, reducing rate of growth in health care spending (assumed to be 11% currently) to rate of growth in GNP, at a targeted rate of decrease of 2% each year. Some phase-in provided. +$1.0 billion in Yr. 1, -$36.0 billion in Yr. 2 of plan implementation (49).

[o] Lewin-VHI analysis of American Academy of Family Physicians plan for AAFP. Plan assumed 10% payroll tax rate, improved provider reimbursement for services previously covered under Medicaid, and increased utilization by previously uninsured persons (36,37).

[p] Estimate for plan with expanded Medicare through the private purchase of expanded Medigap coverage; $32.5 billion in increased costs for plan without expanded Medicare (Medigap) coverage (36,37).

[q] Silow-Carroll and Meyer analysis of S. 1227 (102d Congress) and Clinton campaign proposals (66).

[r] Estimate shown is for the analysis' "Pessimistic Scenario" that assumed no initial efficiencies; spending would increase as access expands and annual health care spending growth would decline slowly from approximately 11.3% (1994) to about 9.1% (in the year 2003) (66).

[s] Estimate shown is for the analysis' "Intermediate Scenario" that assumed initial efficiencies would result in a 2.5% reduction in spending phased in over 5 years and, over

TABLE 1: Quantitative estimates of the impact of competing approaches to health care reform on national health care spending and savings (national health expenditures)[a]—*continued*

INDIVIDUAL VOUCHERS OR TAX CREDITS APPROACHES

Change in expenditures (in $billions)	Estimate year(s)	Source
Sing/e year estimates		
-$10.8	**1991**	**Heritage Foundation**[v]
-$ 7.5	**1993**	**Bipartisan Panel**[w]
-$ 2.0	**1994**	Silow-Carroll[x,y]
-$ 6.0	**1994**	Silow-Carroll[x,z]
Estimates of future impacts.		
-$394.0	**1992-1997**	**Bush Administration**
-$954.0	1992-2000	Bush Administration[=]
-$ 72.6	**1993-1997**	**Bipartisan Panel**[w]
-$156.9	1993-2000	**Bipartisan** Panel[w]
-$158.0to -$1,000.0	1994-2(XI3	**Silow-Carroll**[x,y,z,bb]

MANAGED COMPETITION APPROACHES

Change in expenditures (in $billions)	Estimate year(s)	Source[cc]
Sing/e year estimates"		
+ $47.9	**1993**	**Sheils, et al.**[dd]
-$ 8.0	**1993**	**Long & Rodgers**[ee]
- $21.8	1994	Bipartisan Panel[ff]
Estimates of future impacts:		
-$232.0	**1994-1997**	**Bipartisan Panel**[ff]
-$745.7	**1994-2000**	Bipartisan Panel[ff]

10 years, the annual growth rate in health care would slowly decline in stages, eventually achieving a reduction of 3 percentage points, from 11.26% to 8.26% annual growth. Health care would continue to grow faster than the rest of the economy but by a much smaller margin than currently (66).

[t] Estimate shown is for the analysis' "Optimistic Scenario" that assumed plan would result in universal coverage, an initial 5% reduction in health care costs phased in over 5 years, and future health care spending growth limited to the growth rate of the economy after the fifth year of implementation (66).

[u] Estimated savings depend on the effectiveness of the expenditure limits (assumed to take effect in 1994). Analysis assumed expenditure limits would reduce per-capita health spending from projected rate of 8.6% to 7.6% and 6.6% (lower and higher cumulative savings estimates, respectively). Figure in table equals estimated cumulative savings for plan with expanded Medicare through the private purchase of expanded Medigap coverage; -$123.7 billion to -$345.9 billion estimated cumulative savings for plan without expanded Medigap coverage (36,37).

[v] Lewin-VHI analysis for the Heritage Foundation of the Foundation's plan. Proposal would eliminate tax deduction/exclusion for employment-based health insurance, require individuals to purchase insurance, and include limited refundable tax credits/vouchers as well as health insurance market reforms. Estimate takes into account the likely utilization responses of both newly and currently insured people and changes in administrative costs (35).

[w] Lewin-VHI analysis of Bush Administration proposals for the Bipartisan Panel on Presidential Candidates' Health Plans convened by Families USA. Estimates assumed the successful implementation of the proposed cost-containment measures (3).

[x] Silow-Carroll analysis of Bush Administration proposals which included limited tax subsidies and insurance market reforms (65).

[y] Estimate shown is for the analysis' "Pessimistic Scenario" that assumed that "much of the savings in the Bush plan are one-time in nature, and that after these efficiencies are achieved, the cost curve returns to its present course" (65).

[z] Estimate shown is for the analysis' "Optimistic Scenario" that assumed that in the first 5 years, "the plan's cost containment features are relatively successful in both reducing current expenditures...and slowing down the rate of spending growth" (65).

[aa] Bush Administration estimates of the President's Comprehensive Health Reform Program (Feb. 6, 1992) which included limited tax credits, deductions, or vouchers, as well as insurance market reforms intended to expand the availability of private insurance (94).

[bb] Estimate range depends upon scenario assumed. Lower savings estimate: "Pessimistic Scenario"; higher savings estimate: "Optimistic Scenario" (65).

[cc] Alain Enthoven recently estimated with respect to Managed Competition (assuming universal coverage achieved through alternative methods and no global budgets) that "[i]t is altogether possible that a very efficient competitive system could get us back to 9 or 10 percent" of U.S. GDP devoted to health care services (15). Enthoven did not provide supporting calculations nor the target date for this reduction in the portion of GDP devoted to health care.

[dd] Sheils and colleagues' analysis of a Managed Competition approach that assumed an employer mandate to contribute to employee health coverage but did not include expenditure limits. Further assumed: 2% savings from Managed Competition based upon the experience of all types of health maintenance organizations (-$4.5 billion) and administrative savings (-$11.2 billion) offset by increased utilization for previously uninsured persons (+$30.6 billion), net the change in provider reimbursement (+$27.4 billion), and the impact of reduced patient cost-sharing under the low patient cost-sharing scenario only (+$5.6 billion). Estimate equals +$42.3 billion with high patient cost-sharing (63).

[ee] Long and Rodgers' analysis, based on a draft of Sheils and colleagues' analysis (mentioned above) of a Managed Competition approach, which assumed an employer mandate to contribute to employee coverage and low patient cost-sharing but did not include expenditure limits. Further assumed 8% savings from Managed Competition based upon the experience of group-model health maintenance organizations (-$37.0 billion) offset by increased spending due to expanded access to coverage (+$29.0 billion) (40,41).

[ff] Lewin-VHI analysis of President Clinton's health care reform-related campaign proposals for the Bipartisan Panel on Presidential Candidates' Health Plans convened by Families USA. Assumed establishment of a national health budget that would restrict growth in national health spending to the rate of growth in family income (3).

KEY: **AAFP**: American Academy of Family Physicians; **BIPARTISAN PANEL**: Bipartisan Panel on Presidential Candidates' Health Plans; **CBO**: Congressional Budget Office; **GAO**: U.S. General Accounting Office; **LEWIN-VHI**: formerly Lewin-ICF; **NLCHCR**: National Leadership Coalition for Health Care Reform; **PEPPER COMMISSION**: U.S. Bipartisan Commission on Comprehensive Health Care; **PNHP**: Physicians for a National Health Program.

SOURCE: Office of Technology Assessment, 1993. Full citations can be found in the list of references at the end of this paper.

TABLE 2: Quantitative estimates of the impact of competing approaches to health care reform on federal, state and local budgets[a]

SINGLE PAYER APPROACHES[b]

Change in expenditures (in $billions)		Estimate year	Source[d]
Single year estimates:			
Total	+ $143.6	1989	CBO[f]
Federal	+ $154.7		
State	-$ 11.1		
Total	**+ S?44.0 to + $252.0**	**1991**	HIAA[g]
Federal	na		
State	na		
Total	**+ .$225.0**	**1991**	Meyer, et al.[h]
Federal	na		
State	na		
Total	**+ $ 29.0**	**1991**	Meyer, et al.[i]
Federal	na		
State	rta		

PLAY-OR-PAY APPROACHES

Change in expenditures (in $billions)		Estimate year	Source
Single year estimates:			
Total	**+ $33.6**	**1989**	Zedlewski, et al.[j,k]
Federal	na		
State	na		
Total	**+ $23.1**	**1989**	Zedlewski, et al.[j,l]
Federal	na		
State	na		
Total	+ $16.6	**1990**	**Pepper Comm.[m]**
Federal	**+ $24.0**		
State	**-$ 7.4**		
Total	**+ $17.1**	**1991**	CBO[n]
Federal	**+ $13.1**		
State	**+ $ 4.0**		
T o na a l		**1992**	**NLCHCR[o]**
Federal	**+ $34.7**		
State	**na**		
Total	+ $41.7	**1993**	AAFP[p]
Federal	**+ $34.1**		
State	**+ $ 7.6**		

[a] Baseline assumptions of national health care spending and savings differ among analyses; that is, analyses use different starting points in terms of the year and/or amount of national health expenditures to arrive at their estimates. To the extent that these differ among analyses, the estimates are not comparable, all other things being equal.

[b] As discussed more fully in the text, terms used to describe the competing approaches to health care reform (e.g., Single Payer, Play-or-Pay, Managed Competition) may be misleading insofar as differences exist within as well as across groups. Some of these variations and specific assumptions about them that appear to affect the estimates are noted in the footnotes related to particular analyses. For more details, please refer to the report text.

[c] Estimates provided are in current dollars unless otherwise indicated. The symbol "+" signifies increased expenditures and the symbol "-" signifies decreased expenditures.

[d] Some analyses were conducted on behalf of the source by another individual or entity. Where this was indicated in the analysis, it is noted in the footnotes following this table. Reference numbers are listed at the end of each footnote. The full citations may be found in the list of references at the end of this report.

[e] Single year estimates are for the first year of implementation of the health care reform plan unless otherwise noted.

[f] Congressional Budget Office analysis of a Single Payer approach that assumed provider payments based on Medicare rates, patient cost-sharing and retention of a residual Medicaid program for which States would continue to finance their portion (77). CBO study was revised in April 1993 (81).

[g] Health Insurance Association of America analysis of a Canadian-style system. Estimate assumed health care spending growth of about 10% per year and was based on HIAA's estimate of $183.0 billion to $189.0 billion in increased government spending in 1988 dollars (25).

[h] Meyer and colleagues' analysis of a Canadian-style system with health care spending capped at its current share of U.S. GDP after including the cost of covering uninsured individuals (43).

[i] Meyer and colleagues' analysis of a Canadian-style system with health care spending at no more than 8.7% of U.S. GDP (43).

[j] Zedlewski and colleagues' analysis of a Play-or-Pay approach which assumed the purchase of insurance at 1989 prices. Examined the change in government health insurance costs, not in total government health spending. Estimate represents new government funds, that is, funds not currently spent by government to fund the Medicaid program. Medicare program would continue in its current form (100).

[k] Assumed a 7% payroll tax rate (100).

[l] Assumed a 9% payroll tax rate (100).

[m] Lewin-VHI analysis for the Pepper Commission of the Commission plan. State contributions to finance the Federal program replacing Medicaid would be held to their current Medicaid contribution level adjusted for inflation. Medicare program would continue in its current form (75).

[n] Congressional Budget Office analysis of a plan combining employment-based insurance with Medicaid expansion. Estimated $13.1 billion increase in Federal expenditures equals the sum of changes in Federal outlays for Medicare (-$3.6 billion) and Medicaid (+$10.2 billion) plus the loss of Federal revenues associated with individual income taxes (+$3.0 billion) and Social Security and Medicare payroll taxes (+$3.5 billion). Estimated $4.0 billion increase in State and local expenditures equals the sum of the increase in State and local outlays (+$3.0 billion) plus the loss of State and local income tax revenues (+$1.0 billion) (76).

[o] National Leadership Coalition for Health Care Reform proposal and analysis. Proposal includes improved Medicaid reimbursement and public subsidies to low-income persons. Medicare program continues in its current form. Plan assumed fully funded at Federal level; that is, the $34.7 billion (1992) in increased Federal government expenditures would be offset by various proposed financing sources (49).

[p] Lewin-VHI analysis of the American Academy of Family Physicians' plan for AAFP.

TABLE 2: Quantitative estimates of the impact of competing approaches to health care reform on federal, state and local budgets[a]—*continued*

INDIVIDUAL VOUCHERS OR TAX CREDITS APPROACHES			
Change in expenditures (in $billions)		Estimate year	Source
Sing/e year estimates			
Total	na	1991	Heritage[q]
Federal	+ $87.9		
State	+ $ 7.6		

MANAGED COMPETITION APPROACHES			
Change in expenditures (in $billions)		Estimate year	Source
Sing/e year estimates			
Total	na	1993	Sheils, et al.[r]
Federal	+ $ 47.7		
State	na		
Total	na	1993	Long & Rodgers[s]
Federal	+ $ 41.0		
State	na		
Total	na	1994	CDF[t]
Federal	+ $106.5		
State	na		

Proposal assumed expanded Medicare coverage through the private purchase of expanded Medigap coverage, improved provider reimbursement, public subsidies to low-income persons, and increased utilization by previously uninsured persons. Plan assumed fully funded at the Federal level; that is, the $34.1 billion (1993) in increased Federal government expenditures would be offset by increased taxes on businesses and households. States would continue to pay into the public-sponsored plan in the same proportion as they currently support Medicaid (37).

[q] Lewin-VHI analysis of the Heritage Foundation's plan for the Foundation. Plan was assumed to be fully funded at the Federal level; that is, the cost of tax credits to the Federal government plus any Civil Service Plan changes and corporate income tax loss ($87.9 billion) would equal current Federal tax expenditures related to health care expenditures ($69.1 billion), plus State and local government contributions ($18.8 billion). Increased State and local government expenditures ($7.6 billion) would equal increased State and local government revenues (35).

[r] Sheils and colleagues' analysis of a Managed Competition approach with an employer mandate to contribute to employee health coverage did not assume expenditure limits. Based lowest-cost plan premium on experience of group-model health maintenance organizations (HMOs) (8% savings) but based savings from Managed Competition on experience of all types of HMOs (2%). Total public costs estimated at $120.3 billion (1993) under a low cost-sharing scenario, assuming: a 7% of payroll cap on employer costs, 2% of income cap on employee premiums, 9% of income cap on non-employment insurance spending; and subsidies of $2.2 billion to persons below 200% of poverty for patient cost-sharing expenses. Estimated $47.7 billion in net new Federal revenue requirements after recouping current Federal and State Medicaid funds, and collecting taxes on employer contributions over 75% of the lowest-cost plan and an 8% payroll tax for part-time employees, less decreased income taxes resulting from reductions in wages resulting from the employer mandate. Additional savings to the Federal Government are possible if other measures are implemented, according to the authors. Medicare program would continue in its current form (63).

[s] Long and Rodgers' analysis of a Managed Competition approach with an employer mandate to contribute to employee health coverage did not assume expenditure limits. Based on a draft of Sheils and colleagues' analysis (41), Long and Rodgers' estimate of net new Federal revenues requirements assumed universal coverage with 8% savings from Managed Competition based upon the group-model HMO experience or upon administrative costs-savings (increased spending of $41.0 billion). Long and Rodgers also provided estimates of net new Federal revenues requirements that assumed universal coverage with no savings to the Federal Government from Managed Competition (increased spending of $52.0 billion) and 16% savings based upon the group-model HMO experience plus 8% administrative-costs savings (increased spending of $31.0 billion) (40).

[t] Conservative Democratic Forum analysis of H.R. 5936 (102d Congress). Plan did not include an employer mandate to contribute to employee health coverage nor expenditure limits. Plan was projected to be fully funded at the Federal level; that is, Federal Medicaid funds, a cap on the tax deductibility of health insurance benefits, and repeal of the Medicare taxable maximum (assumed to be $130,200 per worker) would raise the revenues to fund the required Federal government expenditures (10).

KEY: **AAFP**: American Academy of Family Physicians; **CBO**: Congressional Budget Office; **CDF**: Conservative Democratic Forum; **HERITAGE**: Heritage Foundation; **HIAA**: Health Insurance Association of America; **LEWIN-VHI**: formerly Lewin-ICF; **NLCHCR**: National Leadership Coalition for Health Care Reform; **PEPPER COMM.**: U.S. Bipartisan Commission on Comprehensive Health Care; **na** = not available

SOURCE: Office of Technology Assessment, 1993. Full citations can be found in the list of references at the end of this report.

TABLE 3: Quantitative est imates of the impact of competing approaches to health care reform on employers

SINGLE PAYER APPROACHES[b]			PLAY-OR-PAY APPROACHES		
Change in expenditures (in $billions)[c]	Estimate year(s)	Source[d]	Change in expenditures (in $billions)	Estimate year	Source
Single year estimates[e]:			*Single year estimates:*		
			+ *$29.8,* + **$44.4**	1989	Zedlewski, et al.[h]
-$76.0 to -$136.0	**1991**	Meyer, et al.[f]	+ $14.7	1990	**Pepper Commission**[i]
			+ $23.7	1993	**AAFP**[j]
Estimates of future impacts[g]:			*Estimates 0/future impacts:*		
-S2,200.0 to -$3,000.0	1991-2000	Meyer, et al.[f]	not available		

[a] Baseline assumptions of national health care spending and savings differ among analyses; that is, analyses use different starting points in terms of the year and/or amount of national health expenditures to arrive at their estimates. To the extent that these differ among analyses, the estimates are not comparable, all other things being equal.

[b] As discussed more fully in the text, terms used to describe the competing approaches to health care reform (e.g., Single Payer, Play-or-Pay, Managed Competition) may be misleading insofar as differences exist within as well as across groups. Some of these variations and specific assumptions about them that appear to affect the estimates are noted in the footnotes related to particular analyses. For more details, please refer to the report text.

[c] Estimates provided are in current dollars unless otherwise indicated. The symbol "+" signifies increased expenditures and the symbol "-" signifies decreased expenditures.

[d] Some analyses were conducted on behalf of the source by another individual or entity. Where this was indicated in the analysis, it is noted in the footnotes following this table. Reference numbers are listed at the end of each footnote. The full citations may be found in the list of references at the end of this report.

[e] Single year estimates are for the first year of implementation of the health care reform plan unless otherwise noted.

[f] Meyer and colleagues' analysis of Canadian-style system. Savings to employers before taxes, due on increased income from previously deductible health expenditures, are subtracted. Lower savings estimate was based on Canadian-style system with health care spending capped at its current share of U.S. GDP after including the cost of covering uninsured individuals. Higher savings estimate was based on Canadian-style system with health care spending at no more than 8.7% of U.S. GDP (43).

[g] The periods for which estimates of future impacts are reported were usually provided by the analysts cited. However, in some instances, cumulative estimates were calculated by OTA by adding together multiple single year estimates provided by the analyses. In such cases, the period selected by OTA depended upon the years for which the single year estimates were provided and upon the period(s) for which other cumulative estimates of the approach were provided.

[h] Zedlewski and colleagues' analysis of a Play-or-Pay approach. Estimates assumed the purchase of insurance at 1989 prices, and a 7% and a 9% payroll tax, respectively, and are not adjusted for uncompensated hospital care savings. Proportionate burden borne by size of employer would vary considerably (100).

[i] Lewin-VHI analysis for the Pepper Commission of the Commission's plan. Estimate assumed a 7% payroll tax, and mandatory acceptance of insurance by employees under either an employer-sponsored or the public plan. $14.7 billion, after taxes, in increased employer costs is the sum of savings to employers who currently offer health insurance to workers and dependents (-$12.8 billion, after taxes) plus costs to employers newly insuring (+$27.5 billion, after taxes). In 1990 dollars, estimated net savings (after taxes) to large employers was $5.6 billion; net cost to small employers was estimated at $18.8 billion, if they voluntarily provide insurance, or $20.6 billion, if they are mandated to provide insurance or contribute to the public plan (75).

[j] Lewin-VHI analysis of the American Academy of Family Physicians' plan for AAFP. $23.7

TABLE 3: Quantitative estimates of the impact of competing approaches to health care reform on employers[a]—*continued*

INDIVIDUAL VOUCHERS OR TAX CREDITS APPROACHES

Change in expenditures (in $billions)	Estimate year(s)	Source
Single year estimates		
+ $7,8	1991	Heritage Foundation[k]
- $2.0	1994	Silow-Carroll[l,m]
Estimates of future impacts:		
-$35.0 to -$84.0	1994-2003	Silow-Carroll[l,m,n]
-$ 4.0 to -$10.0	1994-2003	Silow-Carroll[l,o,p]

MANAGED COMPETITION APPROACHES

Change in expenditures (in $billions)	Estimate year	Source
Single year estimates:		
+ $8.0	1993	Long & Rodgers[q]
Estimates of future impacts:		
not available		

billion in increased costs to employers is the sum of a $2.8 billion increase for all firms that currently insure plus a $20.9 billion increase for all firms that do not currently insure. Change in costs varies by employer size (37).

[k] Lewin-VHI analysis for the Heritage Foundation of the Foundation's plan. Estimate assumed private employer health care expenditures, estimated at $124.3 billion in 1991, would be, for the most part, converted to wages for the first year of the plan. Employers would be responsible for increased OASDI and HI payroll taxes of $10.9 billion, which the analysis assumed would be absorbed by employers as reduced profits. As a result, employers corporate income taxes would decrease by $3.1 billion resulting in $7.8 billion in total increased costs to employers (35).

[l] Silow-Carroll analysis of the Bush Administration proposal which included limited tax subsidies and insurance market reforms (65).

[m] Estimates shown are for the analysis' "Optimistic Scenario" that assumed that in the first 5 years, "the plan's cost containment features are relatively successful in both reducing current expenditures . . . and slowing down the rate of spending growth" (65).

[n] Estimates are in 1994 dollars, after taxes. Range depends upon distribution of savings to labor, 80% and 50%, respectively. Figures based on cumulative savings, before taxes due on increased income from previously deductible health expenditures are subtracted, of approximately $300.0 billion in current dollars (65).

[o] Estimates shown are for the analysis' "Pessimistic Scenario" that assumed that "much of the savings in the Bush plan are one-time in nature, and that after these efficiencies are achieved, the cost curve returns to its present course" (65).

[p] Estimate in 1994 dollars, after taxes. Range depends upon distribution of savings to labor of 80% and 50%, respectively. Figures based on cumulative savings, before taxes due on increased income from previously deductible health expenditures are subtracted, of approximately $33.0 billion in current dollars (65).

[q] Long and Rodgers' analysis of a Managed Competition approach. Estimate of change in business private insurance costs only. Analysis, based on a draft of Sheils and colleagues' analysis (41,63), assumed an employer mandate to contribute to employee coverage and low patient cost-sharing but did not assume expenditure limits. Further assumed 8% savings from Managed Competition based upon the experience of group-model health maintenance organizations or, in the alternative, administrative costs-savings, offset by increased spending due to expanded access to coverage. Medicare program would continue in its current form (40).

KEY: **AAFP**: American Academy of Family Physicians; **HI**: Hospital Insurance Program (Medicare Part A); **LEWIN-VHI**: formerly Lewin-ICF; **OASDI**: Old Age, Survivors, and Disability Insurance; **PEPPER COMMISSION**: U.S. Bipartisan Commission on Comprehensive Health Care

SOURCE: Office of Technology Assessment, 1993. Full citations can be found in the list of references at the end of this report.

TABLE 4: Quantitative estimates of the impact of competing approaches to health care reform on households

SINGLE PAYER APPROACHES[b]			PLAY-OR-PAY APPROACHES		
Change in expenditures (in $billions)	Estimate year(s)	Source[d]	Change in expenditures (in $billions)	Estimate year	Source
Single year estimates:			Single year estimates:		
			-$19.3	1990	Pepper Commission]
			+ $ 2.3	1993	AAFP[k]
~+ $20.0	1994	Silow-Carroll, et al.[f]			
-$10.0	1994	Silow-Carroll, et al.[g]			
Estimates of future impacts[h]:			*Estimates of future impacts:*		
-$3,000.0 to -$3,600.0	1994-2003	Silow-Carroll, et al.[f,i]	**not available**		
-$3,700.0 to -$4,400.0	1994-2003	Silow-Carroll, et al.[g,i]			

[a] Baseline assumptions of national health care spending and savings differ among analyses; that is, analyses use different starting points in terms of the year and/or amount of national health expenditures to arrive at their estimates. To the extent that these differ among analyses, the estimates are not comparable, all other things being equal.

[b] As discussed more fully in the text, terms used to describe the competing approaches to health care reform (e.g., Single Payer, Play-or-Pay, Managed Competition) may be misleading insofar as differences exist within as well as across groups. Some of these variations and specific assumptions about them that appear to affect the estimates are noted in the footnotes related to particular analyses. For more details, please refer to the report text.

[c] Estimates provided are in current dollars unless otherwise indicated. The symbol "+" signifies increased expenditures and the symbol "-" signifies decreased expenditures.

[d] Some analyses were conducted on behalf of the source by another individual or entity. Where this was indicated in the analysis, it is noted in the footnotes following this table. Reference numbers are listed at the end of each footnote. The full citations may be found in the list of references at the end of this report.

[e] Single year estimates are for the first year of implementation of the health care reform plan unless otherwise noted.

[f] Silow-Carroll and colleagues' analysis of a Canadian-style system. Estimate shown is for the analysis' "Pessimistic Scenario" that assumed that after expanding coverage to uninsured persons, the U.S. achieves a 2% reduction in spending in 1994 and, after the first 3 years, health care spending grows at a slightly faster rate than GDP (67).

[g] Silow-Carroll and colleagues' analysis of a Canadian-style system. Estimate shown is for the analysis' "Optimistic Scenario" that assumed "an immediate 10 percent reduction in spending, offset in part by an expansion in coverage, netting an 8 percent decline in total spending in 1994 . . . assumes that after the first three years, the growth in health care spending would be reduced . . . to the same rate as the economy, or about 7 percent per year" (67).

[h] The periods for which estimates of future impacts are reported were usually provided by the analysts cited. However, in some instances, cumulative estimates were calculated by OTA by adding together multiple single year estimates provided by the analyses. In such cases, the period selected by OTA depended upon the years for which the single year estimates were provided and upon the period(s) for which other cumulative estimates of the approach were provided.

[i] Range depends upon the distribution of savings to labor, 50% and 80%, respectively, by 1996 (67).

TABLE 4: Quantitative estimates of the impact of competing approaches to health care reform on households[a]—*continued*

INDIVIDUAL VOUCHERS OR TAX CREDITS APPROACHES		
Change in expenditures (in $billions)	Estimate year(s)	Source
Single year estimates:		
-$18.8	*1991*	Heritage Foundation[l]
- $ 7.0	1994	Silow-Carroll[m,n]
Estimates of future impacts:		
- $440.0 to - $700.0	1994-2003	Silow-Carroll[m,n,o]

MANAGED COMPETITION APPROACHES		
Change in expenditures (in $billions)	Estimate year	Source
Sing/e *year estimates:*		
- S6.0	**1993**	Long & Rodgers[p]
Estimates of future impacts:		
not available		

Lewin-VHI analysis for the Pepper Commission of the Commission's plan. Estimate is equal to the sum of reductions in employer and nongroup plan premiums and household out-of-pocket costs plus the increase in premium payments by nonworkers for their coverage under the public program (75).

[k] Lewin-VHI analysis for the American Academy of Family Physicians of AAFP plan. Estimate assumed expanded Medicare through the private purchase of expanded Medigap coverage, and reflects increases and decreases in various types of premiums, new tax payments, and decreased household direct payments for health care (37).

[l] Lewin-VHI analysis for the Heritage Foundation of the Heritage Foundation's plan. Estimate assumed $129.0 billion increase in households' health spending due to the direct purchase of insurance, offset by $148.7 billion in increased wages due to the conversion of the value of present employer contributions to employee health benefits to wages in the first year of the plan (35).

[m] Silow-Carroll analysis of the Bush Administration proposal which included limited tax subsidies and insurance market reforms (65).

[n] Estimates of -$7.0 billion and -$700.0 billion are for the analysis' "Optimistic Scenario" that assumed that in the first 5 years, "the plan's cost containment features are relatively successful in both reducing current expenditures . . . and slowing down the rate of spending growth" (65).

[o] Estimate of -$440.0 billion is for the analysis' "Pessimistic Scenario" that assumed "much of the savings in the Bush plan are one-time in nature, and that after these efficiencies are achieved, the cost curve returns to its present course" (65).

[p] Long and Rodgers' analysis of a Managed Competition approach. Estimate of change in household private insurance costs only. Analysis, based on a draft of Sheils and colleagues' analysis (41,63), assumed an employer mandate to contribute to employee coverage and low patient cost-sharing but did not assume expenditure limits. Further assumed 8% savings from Managed Competition based upon the experience of group-model health maintenance organizations or, in the alternative, administrative costs-savings, offset by increased spending due to expanded access to coverage. Medicare program would continue in its current form (40).

KEY: **AAFP**: American Academy of Family Physicians; **LEWIN-VHI**: formerly Lewin-ICF; **PEPPER COMMISSION**: U.S. Bipartisan Commission on Comprehensive Health Care; ~ = "about."

SOURCE: Office of Technology Assessment, 1993. Full citations can be found in the list of references at the end of this report.

TABLE 5: Quantitative estimates of the impact of competing approaches to health care reform on administrate ive costs[a]

SINGLE PAYER APPROACHES[b]			PLAY-OR-PAY APPROACHES		
Change in expend itures[c] (in $billions)	Estimate year	Source[d]	Change in expenditures (in $billions)	Estimate year(s)	Source
Sing/e year estimates[e]:			*Single year estimates:*		
-$ 69.0 to -$83.2	1987	Woolhandler & Himmelstein[f]			
-$ 18.2 to -$58.3	1989	CBO[g]			
- $ 46.8	1991	Lewin-VHI[h]			
-$ 67.0	1991	GAO[i]			
-$ 67.0	1991	PNHP[j]			
-$ 90.0	1991	Meyer, et al.[k,l]			
-$113.0	1991	Meyer, et al.[k,m]			
			-$2.8	1993	AAFP[o]
Estimates of future impacts[n]:			*Estimates of future impacts:*		
not available			-$40.1	1993-2000	AAFP[o]

[a] Baseline assumptions of national health care spending and savings differ among analyses; that is, analyses use different starting points in terms of the year and/or amount of national health expenditures to arrive at their estimates. To the extent that these differ among analyses, the estimates are not comparable, all other things being equal.

[b] As discussed more fully in the text, terms used to describe the competing approaches to health care reform (e.g., Single Payer, Play-or-Pay, Managed Competition) may be misleading insofar as differences exist within as well as across groups. Some of these variations and specific assumptions about them that appear to affect the estimates are noted in the footnotes related to particular analyses. For more details, please refer to the report text.

[c] Estimates provided are in current dollars unless otherwise indicated. The symbol "+" signifies increased expenditures and the symbol "-" signifies decreased expenditures.

[d] Some analyses were conducted on behalf of the source by another individual or entity. Where this was indicated in the analysis, it is noted in the footnotes following this table. Reference numbers are listed at the end of each footnote. The full citations may be found in the list of references at the end of this report.

[e] Single year estimates are for the first year of implementation of the health care reform plan unless otherwise noted.

[f] Woolhandler and Himmelstein's estimates for a Canadian-style approach. Study compared insurance overhead, hospital administration, nursing home administration, and physicians' billing and overhead expenses in the U.S. and Canada. Estimates based on calculations of per-capita costs of health care administration in both countries (96).

[g] Congressional Budget Office analysis of a Single Payer approach that assumed provider payments based on Medicare rates, patient cost-sharing, and retention of a residual Medicaid program. Administrative costs defined as overhead expenses of providers and insurers, including public payers. Alternatives modeled to produce range of savings differed with respect to the maximum potential savings in providers' overhead expenses which would be realized and claimed for payers through lower payment rates (77). CBO study was revised in April 1993 (81).

[h] Lewin-VHI analysis of a Canadian-style system. Estimates based upon impact of a Canadian-style system on individual cost centers, e.g., billing, admitting, dietary (34).

[i] U.S. General Accounting Office analysis of costs and savings for the U.S. under a Canadian-style system based upon Ontario's health insurance system which "imposes minimal administrative and billing costs on the third-party payer, physicians, and hospitals" (83).

[j] Grumbach and colleagues' analysis of the Physicians for a National Health Program plan, a Canadian-style system. Estimate assumed that the level of administrative efficiency in Canada is achieved, but the authors conceded that this was not likely in the near term (cf. table 1, PNHP) (24).

[k] Meyer and colleagues' analysis of a Canadian-style system. Administrative costs included were savings related to private insurance overhead, hospital administration, and physicians' billing and overhead expenses (43).

[l] Estimate assumed a Canadian-style system but initial reform efforts focus on reducing administrative costs only (43).

TABLE 5: Quantitative estimates of the impact of competing approaches to health care reform on administrative **costs**[a]—*continued*

INDIVIDUAL VOUCHERS OR TAX CREDITS APPROACHES			MANAGED COMPETITION APPROACHES		
Change in expenditures (in $billions)	Estimate year(s)	Source	Change in expenditures (in $billions)	Estimate year	Source
Single *year estimates:*			*Sing/e year estimates:*		
+ S2.1	1991	Heritage Foundation[p]			
-$0.87	1993	Bush Administration	-$11.2	*1993*	Sheils, et al.[s]
-$4.3	1993	Bipartisan Panel[r]			
Estimates of future impacts:			*Estimates of future impacts:*		
- S60.5	1993-2000	Bipartisan Panel[r]	not available		
- S74.4	**1993-2000**	**Bush** Administration[q]			

[n] Estimate assumed a Canadian-style system with health care spending at no more than 8.7% of U.S. GDP (43).

[r] The periods for which estimates of future impacts are reported were usually provided by the analysts cited. However, in some instances, cumulative estimates were calculated by OTA by adding together multiple single year estimates provided by the analyses. In such cases, the period selected by OTA depended upon the years for which the single year estimates were provided and upon the period(s) for which other cumulative estimates of the approach were provided.

[p] Lewin-VHI analysis for American Academy of Family Physicians of AAFP plan. Estimate equals sum of savings from insurance market reforms and electronic claims processing plus increased administrative costs related to insuring previously uninsured individuals (36,37).

[p] Lewin-VHI analysis for the Heritage Foundation of the Foundation's plan that would replace the current employer/employee tax deduction/exclusion with limited refundable tax credits/vouchers for individuals to purchase their own insurance. Insurer administrative costs only. Assumed administrative costs would be the same as under current policy for employees whose employers now arrange payroll deductions for health benefits payments. For others directly purchasing individual insurance, assumed that administrative costs would be 21.9% of claims (6,35).

[q] Health Care Financing Administration (USDHHS) analysis of the Bush proposal embodied in the Medical and Health Insurance Information Act of 1992 related to automating health care information. Assumed that administrative costs would grow at the rate of total health care expenditures (93).

[r] Lewin-VHI analysis of the Bush Administration proposals for the Bipartisan Panel on Presidential Candidates' Health Plans convened by Families USA. Savings estimate for 1993 of $4.3 billion is the sum of $0.3 billion in savings from insurer and provider electronic claims processing reforms plus $4.0 billion in savings associated with insurance marketplace reforms. Estimate of future impact combines single year estimates for the same categories for 1993 through the year 2000 (3).

[s] Sheils and colleagues' analysis of a Managed Competition approach that assumed an employer mandate to contribute to employee health coverage but did not assume expenditure limits. Assumed insurer administrative costs would equal 3.6% of covered claims. Estimate includes insurer administrative costs only; estimate is the same under both high- and low-cost-sharing scenarios (63).

KEY: **AAFP**: American Academy of Family Physicians; **BIPARTISAN PANEL**: Bipartisan Panel on Presidential Candidates' Health Plans; **CBO**: Congressional Budget Office; **GAO**: U.S. General Accounting Office; **LEWIN-VHI**: formerly Lewin-ICF; **PNHP**: Physicians for a National Health Program; **USDHHS**: United States Department of Health and Human Services.

SOURCE: Office of Technology Assessment, 1993. Full citations can be found in the list of references at the end of this report.