The Regional Impact of Health Care Reform—with a Focus on New England

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The United States has begun the huge task of reforming its health care system. In fact, given the momentum of change in the private sector and at the state level, it seems clear that the U.S. health care system will never be the same again, with or without federal legislation. Thus, many people have already begun to consider the likely impact of health care reform on their state's economy even though a national reform package has yet to pass the Congress. Because New England is the U.S. region most dependent on employment in health care services, concerns about the impact of health care reform are particularly acute in this area.

Accordingly, this article will present a preliminary analysis of the regional impact of health care reform. Although such an effort may appear premature, given the state of the congressional debate, the bills making their way through the Congress generally represent a set of variations on themes set out in the Clinton Administration's proposal. Overall, the country's concerns seem clear enough and its financing options are limited enough to permit examining the regional impact of reform using the Clinton Administration's Health Security Act as an illustrative example.

After briefly reviewing the conditions that have brought health care to the top of the nation's political agenda, this article will provide a bare-bones sketch of the Administration's approach to reform, followed by a short description of health care's role in the New England economy. It will then explore the regional impact of addressing the Administration's major health care goals—providing universal access, and bringing our soaring health care costs under control. Because the Health Security Act mandates universal access by 1998, the resulting bulge in the demand for health care services dominates the short run. Not until early in the next century, according to U.S. Congressional Budget Office (CBO) projections, is the impact of cost control measures likely to offset the near-term spike in demand. Accordingly, this article will consider

both the short- and long-run impacts of reform on the region's health care industries, its (largely local) health care services, and other health-related industries, like medical equipment and insurance, that serve national markets. After a brief look at the impact of reform on the region's non-health industries, the article will then focus on the regional income shifts likely to accompany reform. On the basis of CBO estimates of national average insurance premiums and its projections of the federal outlays and revenues associated with reform, the study estimates the state subsidies and the redistribution of income among states that would result from implementing the Health Security Act.

The regional impact of health care reform will depend on how productively New England's state governments and wage earners invest the savings achieved.

The study concludes that reform under the Health Security Act or any other viable plan could lead to a not insignificant shift of economic resources and activity away from most New England states, in large part because this generally high-income region will help fund improved access and subsidized premium payments in other parts of the country.[1] Because the Administration plan relates each state's contribution to funding health reform to its current Medicaid efforts, the relative size and generosity of this region's Medicaid programs also contribute to this result. Indeed, examining health reform from a regional perspective highlights the proposals' treatment of Medicaid and suggests that building on the current inequities in that program produces some perverse results. Accordingly, the article argues that federal reformers should discontinue Medicaid as a separate program and suggests an alternative way of maintaining state government contributions to financing health care.

While the risks inherent in reform may be relatively large for New England, the partially offsetting savings and opportunities accruing to other sectors of the regional economy should also be above-average. Ultimately, thus, the regional impact of these changes depends on how productively New England's state governments and wage earners use the savings achieved through health care reform.

I. Why the Demand for Reform?

According to data published by the Organisation for Economic Cooperation and Development (OECD), the United States spends more on health care per capita and as a share of GDP than any other industrialized country (OECD 1993). As one might expect, rich countries tend to spend more per capita on health care than poor countries, as shown in Figure 1. Even so, the United States appears to be a clear outlier—we spend a lot more per capita on health care than our relative income would suggest, given the behavior of similar countries.[2] Moreover, according to survey data cited by the OECD (1993, pages 35–36), despite these above-average expenditures, Americans are much less satisfied with their health care system than are the citizens of most other industrialized countries. What is the source of our discontent?

Cost

Americans are concerned about the cost of U.S. health care and about the pace at which these costs have been rising. Health care expenditures are seen to be crowding out spending in other areas generally considered important. Workers suspect, with considerable justification, that the rising cost of health care benefits was partly responsible for the decline in their real wages during the 1980s.[3] And, health care is absorbing ever-rising shares of state and federal budgets, thereby undermining those governments' ability to invest in education, R&D, and public infrastructure. In the federal budget, Medicare and Medicaid, the social insurance programs providing health care

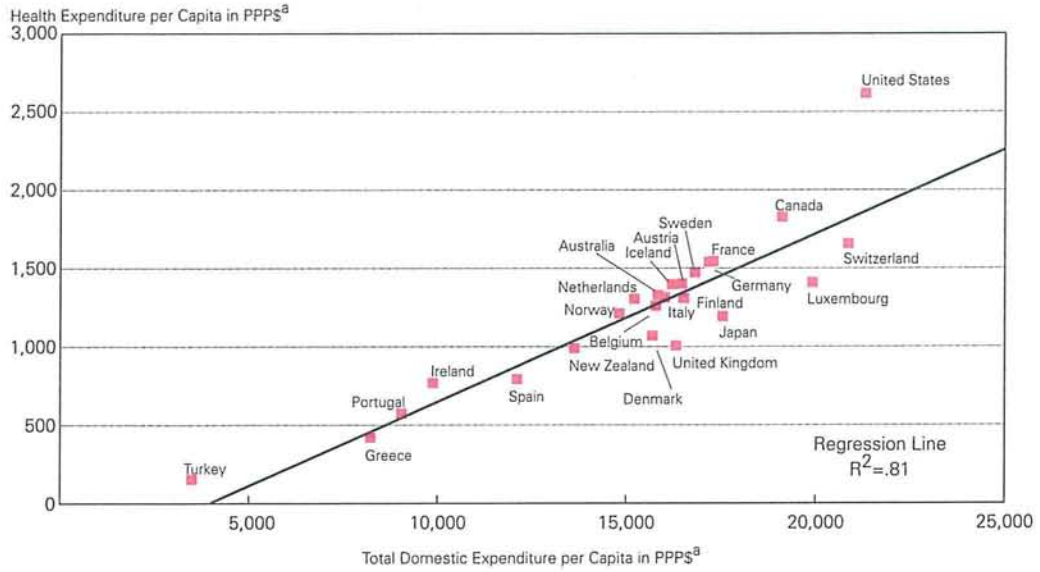
[1] Within New England and most other regions, the impact of health reform will vary considerably by state. Although discussing health reform at the regional level blurs these important distinctions, it does permit summarizing the data and conclusions.

[2] A recent article by Grubaugh and Santerre (1994) suggests that the United States may not be such a significant outlier if lifestyle variables like tobacco consumption and population density are considered. At the very least, this article's conclusions underscore the need to address social issues as well as any inefficiencies in the U.S. health care delivery system, if U.S. citizens are serious about restraining health care costs.

[3] In addition, many have been asked to pay for a rising share of their health care costs through increased deductibles, copayments and so forth.

Figure 1

Total Spending and Health Spending per Capita, 1990



[a]Dollars in purchasing power parity exchange rates. PPP exhange rates are those that equilibrate the domestic purchasing power of each currency.
Source: OECD, *OECD Health Systems: Volume 1: Facts and Trends 1960-1991.*

to the elderly and some of the poor, are absorbing ever-increasing shares of total outlays. These two programs accounted for 5 percent of federal outlays in 1970 and 12 percent in 1990, and are projected by the CBO to absorb 25 percent of the total budget by the year 2002 if rising health care costs are left unchecked. According to this same CBO analysis, if federal spending on Medicaid and Medicare could be held to its 1991 share of GDP, the resulting reduction in the federal deficit would permit lower interest rates, additional investment, and an increase in real GDP to a level 2 percent above that which can be expected in the absence of reform (U.S. Congressional Budget Office 1992).

Access

Despite the extraordinary cost of the U.S. health care system, the United States is one of only two industrialized countries not providing universal access to health insurance.[4] In 1992 over 38 million people, or 17 percent of the nonelderly population, had no health insurance. A majority of these people were employed; over one-quarter were children;[5] only 18 percent were unemployed adults (Employee Benefit Research Institute 1994). The great majority of these people had gone without insurance for the entire year.[6] Accordingly, considerably more than 17 percent of the nonelderly population had no insurance during part of 1992, and a much larger percentage feel threatened with a loss of access to nonemergency health care, should they become unemployed or fall seriously ill. The problem has grown more serious as governments and private industry have become alarmed about rising health care costs and have put pressure on insurance companies and health care providers to contain them. As a consequence, insurers and providers have sought to avoid individuals with known health risks, small group and individual policies have become very expensive, and the number of nonelderly individuals going without health insurance and often, thus, nonemergency health care, has grown by 15 percent since 1988.

[4] The other one is the Union of South Africa.

[5] Among children in families with no health insurance, 74 percent lived with an employed adult.

[6] These often cited numbers are often misrepresented. The questions in the Current Population Survey actually ask if an individual had any type of health insurance at any time during 1992; thus, a negative answer should indicate that the individual had no health insurance coverage for the entire year.

Outcomes

Despite the U.S. health care system's high cost and, undoubtedly, in part because of its growing access problem, U.S. citizens do not, on average, appear to achieve better health care outcomes than residents of other industrialized nations spending less. To be sure, many U.S. residents have access to the technically finest medical care in the world, and some observers would argue that this country directly or indirectly funds much of the world's medical R&D. Moreover, cross-country comparisons of health care outcomes are frequently misleading because a whole constellation of sociological and environmental differences can distort the results. Nevertheless, health care economists generally suggest that infant mortality rates provide one of the best available measures of relative health care outcomes. By this single measure, among 23 OECD countries, the United States ranked 20th in 1990— ahead of Greece, Portugal, and Turkey. On balance, in other words, it is not clear that the United States is getting good value for its health care dollars.

For all of the above reasons, health reform remains a national goal of major importance. By comparison, the impact of reform on individual regions has more limited significance. Nonetheless, understanding the impact of modifying such a large part of most state economies as health care is important for regional leaders seeking to plan ahead.

II. Summary of the Health Security Act

The Clinton Administration's health reform legislation has two primary goals: 1) to provide universal access to health insurance for a defined but reasonably generous range of medical services; and 2) to slow the growth of the nation's health care spending. In an effort to build on the nation's current employer-based system while pursuing the first goal, the Health Security Act requires all employers to pay for a share of their employees' health insurance premiums; it also requires all individuals and families—except Medicaid beneficiaries and others with very low incomes—to pay at least part of their health insurance premiums. For reasons of equity and practicality, the bill caps and subsidizes premium payments made by employers and low-income families. For employers with more than 75 employees, contributions are capped at 7.9 percent of payroll. Small, low-wage companies make premium payments capped according to a sliding scale that starts at 3.5 percent of payroll and rises to 7.9 percent. For families with incomes under $40,000, premium caps rise on a sliding scale from 0 to 3.9 percent of income.

To give health care consumers added market power and, thus, to improve cost control, the Health Security Act requires states to establish one or more health insurance purchasing alliances. Most people who work for firms with fewer than 5,000 employees and most nonworkers under the age of 65 would buy their insurance through these alliances. Medicaid programs for people under 65 would be partly dismantled. Among the nonelderly now eligible for Medicaid, only individuals receiving cash payments through the Aid to Families with Dependent Children (AFDC) or the Supplemental Security Income (SSI) programs would continue to receive Medicaid; the federal and state governments would purchase health insurance for these individuals through the alliances.[7] By contrast, the Medicare program would remain largely intact and outside the alliance system. Large firms and some multi-employer groups and cooperatives, many of whom now self-insure, could establish their own corporate alliances.

The alliances would negotiate, on behalf of their members, with networks of local providers to establish the premiums for a set of defined health plans. These premiums would be set by community rating and could not vary according to the perceived riskiness of the consumer. The alliances would offer their members a choice of health plans, including (lower cost) managed care plans and at least one (higher cost) fee-for-service plan. All plans would offer the standard package of benefits. Plans would have to accept all applicants (within the limits set by their capacity) and could not exclude anyone because of preexisting medical conditions.

In addition to establishing universal access, the Health Security Act expands or initiates a few federal programs. Important among these initiatives is a plan to cover prescription drugs for Medicare beneficiaries and a program to provide home and community care for severely disabled people.

Much of the funding to pay for these new programs and the federal subsidies used to cap employer and low-income family payments for insurance pre-

[7] Other Medicaid programs for the nonelderly will end, but states will be required to make ongoing maintenance-of-effort payments to the alliances equaling the state's current Medicaid obligations for the discontinued programs. These provisions penalize states with costly or broadly inclusive Medicaid programs in perpetuity.

miums would come from savings on existing Medicare and Medicaid programs plus some new revenue measures, like the increase in the excise tax on tobacco products. The Administration and the CBO also anticipate substantial increases in federal income and payroll tax receipts as wages and incomes rise as a result of savings from health care reform. As already mentioned, states would also be required to make inflation-adjusted maintenance-of-effort payments to the alliances for their share of current Medicaid programs discontinued by the Health Security Act.[8]

The Administration expects that increased competition among health plans (facilitated by the creation of the purchasing alliances and the standardized package of health benefits), increased use of managed care, and the use of capitated reimbursement systems for paying providers will slow the rise in national health care spending. In case these measures do not slow health care spending as expected, however, the Act provides a formula and enforcement mechanism capping the permitted annual rise in health insurance premiums. The CBO concludes that the Administration's approach is likely to prove effective in reducing the growth in health care spending.

III. The Role of Health Care in the New England Economy

This section will set the stage for a discussion of the regional impact of health reform by describing the role of the health care industries in the New England economy today. As Table 1 shows, New England is the U.S. region most dependent on health care employment. Defining health care to include private health care services, medical equipment, drugs, and health insurance, the health care industry accounted for 10.5 percent of the region's total nonagricultural employment in 1991, the most recent year for which these data are available.[9] After North Dakota and Pennsylvania, Rhode Island and Massachusetts are the two states most dependent on health care jobs. While the bulk of these jobs are in health care services, industries that export to national markets—drugs, medical equipment, and health insurance—account for almost 1 percent of regional employment. Among health service workers in New England, 44 percent work in hospitals, 22 percent in nursing facilities, and 14 percent in doctors' offices and clinics. Home health and medical laboratories account for 6 and less than 2 percent, respectively.

Within the group of health-related export industries, medical equipment looms most important. As the location quotients[10] shown in the table indicate, after Delaware, Minnesota, and Utah, Connecticut and Massachusetts have the greatest relative dependence on medical equipment. By contrast, and surprisingly perhaps, New England does not have an above-average dependence on employment in drugs or health insurance. Among the New England states, only Connecticut has an above-average dependence on pharmaceuticals; nationally, the states with the greatest concentration of pharmaceutical jobs are New Jersey, Delaware, and Indiana. While New England's strength in pharmaceuticals lies in its R&D activities, which are not labor intensive, the mature drug companies headquartered in New Jersey, Delaware, and Indiana have large production and marketing staffs. As for insurance, the region's greatest strengths are in the life and casualty areas. Accordingly, despite its role as a headquarters state for several major insurance companies, Connecticut has a barely above-average dependence on health insurance jobs.

To put New England's dependence on health care in perspective, it is worth noting that, in absolute terms, the region is considerably more dependent on health care than on defense. (See the memo item on Table 1.) Regionally, health care accounts for roughly twice as many jobs as defense; even in Connecticut, the most defense-dependent state in New England and one of the most defense-dependent states in the nation, the ratio of health care jobs to defense jobs is about 1.6 to 1.[11]

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[8] In addition to the payments for nonelderly beneficiaries not receiving cash support through AFDC or SSI, the discontinued obligations covered by the maintenance-of-effort requirements include payments to the "disproportionate-share" hospitals (hospitals that provide a disproportionately large share of uncompensated care) associated with these individuals.

[9] This measure of health care employment is not complete. For example, it does not include employment at state hospitals because, among the New England states, these data are only available for Massachusetts. (Employment at Massachusetts state hospitals equaled 0.5 percent of total state employment in 1991.) Total health-related employment should also include individuals engaged in health-related research and education, but U.S. Bureau of Labor Statistics (BLS) data do not provide an adequately fine breakdown of research and education by discipline to permit identifying these workers.

[10] A location quotient is the ratio of an industry's share of total state employment to the industry's share of total U.S. employment. This ratio suggests a state's relative dependence on the industry in question.

[11] However, because the distribution of defense employment is highly concentrated, the region's relative dependence on defense is much greater.

Table 1

Private Health-Related Employment as a Percentage of Total Nonagricultural Employment, by State and by Region, 1991

Region/State	Health Care Services (80)		Medical Equipment (384, 385)		Drugs (283)	
	Percentage of Total State Employment	Location Quotient	Percentage of Total State Employment	Location Quotient	Percentage of Total State Employment	Location Quotient
United States	7.63	1.00	.28(d)	1.00	.23(d)	1.00
New England	9.53	1.25	.52(d)	1.87	.21(d)	.92
Connecticut	8.98	1.18	.66	2.34	.53	2.27
Maine	9.20	1.21	.13(d)	.45	.08	.35
Massachusetts	10.05	1.32	.59	2.10	.13	.57
New Hampshire	8.32	1.09	.48(d)	1.71	.02	.10
Rhode Island	10.20	1.34	.35	1.26	.08	.34
Vermont	8.91	1.17	.17	.59	(d)	.00
Middle Atlantic	8.76	1.15	.31	1.12	.61	2.60
New Jersey	7.81	1.02	.47	1.67	1.46	6.26
New York	8.42	1.10	.28	.98	.32	1.36
Pennsylvania	9.94	1.30	.27	.95	.48	2.05
East North Central	8.18	1.07	.26(d)	.92	.29	1.26
Illinois	7.76	1.02	.25	.91	.33	1.41
Indiana	7.62	1.00	.39(d)	1.40	.77	3.33
Michigan	8.22	1.08	.14	.50	.35	1.50
Ohio	8.79	1.15	.22	.80	.07	.31
Wisconsin	8.37	1.10	.40	1.44	.05	.23
West North Central	8.58	1.12	.35(d)	1.24	.19(d)	.79
Iowa	8.32	1.09	.04(d)	.13	.16	.68
Kansas	8.03	1.05	.16	.56	.12	.51
Minnesota	8.36	1.10	.76	2.72	.09	.38
Missouri	8.93	1.17	.22	.77	.35	1.51
Nebraska	7.78	1.02	.41	1.46	.23	.97
North Dakota	11.72	1.54	.05	.16	.00	.00
South Dakota	9.98	1.31	.49(d)	1.75	(d)	.00
South Atlantic	6.68	.88	.21(d)	.75	.16	.70
Delaware	6.98	.91	.82	2.91	.85	3.66
Florida	8.22	1.08	.31	1.12	.06	.25
Georgia	5.69	.75	.20	.72	.06	.25
Maryland	7.96	1.04	.12	.44	.16	.67
North Carolina	5.24	.69	.21	.73	.51	2.19
South Carolina	4.22	.55	.23	.83	.11	.49
Virginia	6.30	.83	.09	.32	.09	.40
West Virginia	9.62	1.26	.05(d)	.17	.08	.36
East South Central	7.35	.96	.16(d)	.59	.09	.37
Alabama	6.55	.86	.10(d)	.35	.00	.02
Kentucky	8.66	1.14	.15	.52	.01	.04
Mississippi	5.93	.78	.10(d)	.37	.16	.68
Tennessee	7.69	1.01	.25	.91	.17	.71
West South Central	7.34	.96	.18(d)	.65	.06	.26
Arkansas	7.95	1.04	.18(d)	.65	.02	.09
Louisiana	7.99	1.05	.02	.07	.03	.14
Oklahoma	7.26	.95	.15	.54	.02	.07
Texas	7.13	.93	.23	.80	.08	.34
Mountain	6.54	.86	.27(d)	.97	.06	.25
Arizona	6.99	.92	.11	.41	.06	.25
Colorado	6.82	.89	.46	1.65	.08	.36
Idaho	5.82	.76	.05	.17	.01	.04
Montana	9.02	1.18	.04	.15	.01	.05
Nevada	4.58	.60	.04	.15	.02	.09
New Mexico	6.48	.85	.22	.79	.03	.12
Utah	6.72	.88	.72	2.56	.11	.49
Wyoming	4.39	.58	(d)	.00	.03	.11
Pacific	6.57	.86	.34	1.22	.14	.60
Alaska	4.69	.61	.00	.00	.00	.00
California	6.46	.85	.40	1.42	.17	.75
Hawaii	5.74	.75	.01	.04	.00	.00
Oregon	7.09	.93	.19	.69	.03	.14
Washington	7.32	.96	.22	.78	.05	.21

Note: Total employment is total nonagricultural employment. SIC codes in parentheses. (d) indicates data withheld to avoid disclosing information for individual firms; thus, totals are understated. A location quotient is the ratio of an industry's share of total state employment to the industry's share of total U.S. employment.

[a]Total health-related export = medical equipment, drugs, and health insurance.

[b]Total health-related = health care services plus health-related export.

Source: U.S. Bureau of Labor Statistics, ES202; Defense Budget Project.

Table 1 (continued)

Private Health-Related Employment as a Percentage of Total Nonagricultural Employment, by State and by Region, 1991

Health Insurance (632)		Total Health-Related Export[a]		Total Health-Related[b]		Memo: Defense	
Percentage of Total State Employment	Location Quotient	Percentage of Total State Employment	Location Quotient	Percentage of Total State Employment	Location Quotient	Percentage of Total State Employment	Location Quotient
.24(d)	1.00	.75(d)	1.00	8.38(d)	1.00	4.45	1.00
.24	1.00	.98(d)	1.30	10.50(d)	1.25	5.17	1.16
.25	1.03	1.43	1.90	10.41	1.24	6.43	1.45
.23	.96	.44(d)	.58	9.64(d)	1.15	5.20	1.17
.21	.88	.93	1.24	10.98	1.31	5.13	1.15
.28	1.17	.78(d)	1.04	9.10(d)	1.09	3.33	.75
.42	1.73	.85	1.13	11.05	1.32	4.57	1.03
.13	.56	.30(d)	.40	9.21(d)	1.10	2.55	.57
.30	1.26	1.22	1.62	9.98	1.19	2.99	.67
.22	.92	2.15	2.85	9.95	1.19	3.40	.77
.28	1.15	.87	1.15	9.29	1.11	2.66	.60
.40	1.67	1.14	1.52	11.08	1.32	3.21	.72
.28	1.18	.83(d)	1.11	9.01(d)	1.07	2.59	.58
.28	1.17	.86	1.15	8.63	1.03	2.42	.54
.27	1.12	1.44(d)	1.91	9.05(d)	1.08	3.18	.71
.27	1.12	.76	1.01	8.98	1.07	2.05	.46
.20	.85	.50	.66	9.29	1.11	3.36	.76
.49	2.04	.95	1.26	9.31	1.11	1.63	.37
.37	1.53	.90(d)	1.19	9.48(d)	1.13	3.34	.75
.26	1.07	.45(d)	.60	8.77(d)	1.05	1.60	.36
.23	.96	.51	.67	8.53	1.02	4.57	1.03
.38	1.58	1.23	1.63	9.59	1.14	2.11	.47
.26	1.10	.83	1.11	9.76	1.16	4.71	1.06
1.14	4.72	1.77	2.35	9.55	1.14	3.04	.68
.46	1.92	.51	.67	12.22	1.46	5.34	1.20
.06	.23	.55(d)	.72	10.53(d)	1.26	3.35	.75
.18	.76	.56(d)	.74	7.24(d)	.86	5.95	1.34
.32	1.34	1.99	2.64	8.97	1.07	3.66	.82
.18	.76	.55	.74	8.78	1.05	3.98	.90
.08	.35	.34	.46	6.04	.72	5.24	1.18
.24	1.00	.52	.69	8.48	1.01	7.24	1.63
.11	.46	.83	1.10	6.07	.72	4.98	1.12
.33	1.37	.68	.90	4.89	.58	5.29	1.19
.19	.79	.37	.49	6.67	.80	11.81	2.65
.13	.53	.26(d)	.34	9.88(d)	1.18	1.92	.43
.24	.99	.49(d)	.65	7.84(d)	.93	3.48	.78
.22	.90	.32(d)	.42	6.87(d)	.82	3.25	.73
.19	.80	.35	.46	9.01	1.08	4.57	1.03
.18	.74	.44(d)	.58	6.37(d)	.76	5.49	1.23
.31	1.28	.73	.96	8.41	1.00	2.07	.47
.13	.53	.37(d)	.49	7.71(d)	.92	4.66	1.05
.16	.67	.36(d)	.48	8.32(d)	.99	2.82	.64
.12	.49	.17	.22	8.15	.97	4.11	.92
.17	.72	.34	.45	7.60	.91	6.17	1.39
.12	.49	.42	.56	7.55	.90	4.77	1.07
.20	.85	.53(d)	.71	7.07(d)	.84	5.09	1.14
.25	1.02	.42	.56	7.41	.88	5.27	1.18
.22	.92	.77	1.02	7.59	.91	6.28	1.41
.19	.81	.25	.33	6.07	.72	2.47	.56
.23	.95	.28	.38	9.30	1.11	2.84	.64
.11	.44	.17	.23	4.75	.57	2.38	.54
.17	.69	.41	.55	6.90	.82	6.67	1.50
.22	.90	1.05	1.39	7.77	.93	5.99	1.35
.13	.53	.15(d)	.20	4.55(d)	.54	3.79	.85
.23(d)	.94	.71(d)	.94	7.27(d)	.87	6.52	1.47
(d)	.00	.00(d)	.00	4.69(d)	.56	13.55	3.05
.22	.90	.79	1.05	7.25	.86	6.68	1.50
.28	1.17	.29	.39	6.03	.72	13.45	3.02
.30	1.23	.52	.69	7.61	.91	1.40	.31
.25	1.04	.52	.69	7.84	.93	6.14	1.38

In many ways, of course, these employment numbers do not do justice to the importance of New England's health care industries to the region. The region's world-famous teaching hospitals and medical schools form the nucleus of a high-tech cluster that attracts scholars, entrepreneurs, and research and investment money from all over the world.[12] Along with defense and other R&D-intensive activities, these industries contribute importantly to the sense of innovative dynamism by which this region defines itself and its future.

While the foregoing data underscore the importance of health care as a regional employer, from the consumer's perspective, the salient fact about New England health care is that it is the most expensive (although technically superb) medical care in the country. According to Health Care Finance Administration (HCFA) data on expenditures for hospital care, physicians' services, and prescription drugs in FY 1991, by state, New England's health care spending was 12.5 percent above the national average on a per capita basis. While Maine, New Hampshire and Vermont appear to have below average health care costs, Massachusetts has the highest per capita costs in the nation—28 percent above average (Table 2).

A word of caution is in order, however. These data should only be interpreted as rough indicators of relative health care costs for a number of reasons. First, the numbers are based on residence of provider, not on residence of recipient. Accordingly, the data are not adjusted for the impact of patients who cross state borders to obtain medical care (Levit, Lazenby, Cowan, and Letsch 1993). As is well known, hospitals in New England, particularly Massachusetts, attract patients from out of

Table 2
Selected Characteristics Affecting Relative Health Care Costs and Impact of Reform, by State and Region

Region/State	Relative Health Care Costs FY1991	Share of Nonelderly without Insurance Coverage 1992	Relative per Capita Income FY1991	Relative Pay per Worker, Total 1990	Share of Families with Income below Poverty Line 1992
United States	1.00	.17	1.00	1.00	.17
New England	1.13	.12	1.18	1.08	.12
Connecticut	1.11	.10	1.36	1.21	.09
Maine	.85	.13	.91	.86	.16
Massachusetts	1.28	.12	1.20	1.10	.12
New Hampshire	.92	.15	1.14	.96	.12
Rhode Island	1.02	.11	1.01	.92	.15
Vermont	.77	.11	.94	.85	.14
Middle Atlantic	1.10	.14	1.16	1.13	.15
New Jersey	1.01	.15	1.34	1.18	.13
New York	1.14	.16	1.18	1.20	.17
Pennsylvania	1.12	.11	1.01	.98	.15
East North Central	.97	.13	.98	1.02	.15
Illinois	.98	.15	1.09	1.09	.17
Indiana	.93	.13	.90	.93	.12
Michigan	.99	.12	.98	1.08	.16
Ohio	.99	.13	.93	.98	.14
Wisconsin	.94	.11	.94	.92	.14
West North Central	.99	.13	.94	.89	.15
Iowa	.88	.12	.91	.82	.14
Kansas	.92	.13	.96	.87	.14
Minnesota	1.05	.10	1.00	.98	.14
Missouri	1.06	.17	.94	.93	.17
Nebraska	.93	.11	.93	.79	.11
North Dakota	1.11	.11	.82	.74	.14
South Dakota	.93	.19	.84	.70	.19
South Atlantic	1.01	.20	.97	.91	.17
Delaware	1.08	.13	1.09	1.08	.11
Florida	1.09	.24	.99	.86	.19
Georgia	1.00	.22	.91	.93	.18
Maryland	1.02	.14	1.16	1.01	.14
North Carolina	.87	.16	.88	.85	.16
South Carolina	.83	.21	.81	.83	.21
Virginia	.92	.17	1.05	.94	.11
West Virginia	.96	.19	.75	.89	.23
East South Central	.96	.19	.81	.84	.21
Alabama	.98	.20	.81	.85	.19
Kentucky	.91	.17	.82	.84	.21
Mississippi	.77	.23	.70	.76	.26
Tennessee	1.07	.16	.86	.87	.20
West South Central	.93	.26	.86	.94	.20
Arkansas	.89	.24	.77	.77	.19
Louisiana	1.04	.26	.79	.89	.25
Oklahoma	.83	.26	.81	.88	.21
Texas	.93	.26	.90	.98	.18
Mountain	.87	.18	.89	.90	.16
Arizona	.91	.19	.87	.90	.18
Colorado	.96	.15	1.01	.98	.14
Idaho	.66	.19	.80	.83	.17
Montana	.77	.12	.82	.74	.15
Nevada	.94	.27	1.04	.93	.16
New Mexico	.84	.23	.77	.81	.22
Utah	.76	.13	.77	.86	.13
Wyoming	.69	.14	.89	.86	.13
Pacific	.99	.20	1.07	1.08	.18
Alaska	.96	.19	1.10	1.31	.13
California	1.02	.22	1.09	1.11	.19
Hawaii	1.01	.08	1.11	.95	.14
Oregon	.84	.16	.92	.91	.14
Washington	.90	.12	1.02	1.01	.14

Source: HCFA, Data on State Health Expenditures; U.S. Bureau of the Census, *Current Population Survey* and *County Business Patterns*; Employee Benefit Research Institute.

[12] For example, Massachusetts teaching hospitals and other research institutions received over $650 million in payments for direct research costs from the National Institutes of Health (NIH) in 1993 (Blumenthal 1994).

state and all over the world. However, adjusting for border crossing lowers Massachusetts' apparent per capita health care costs just slightly, according to the Final Report of the Task Force on the Health Care Industry of the Governor's Council on Economic Growth and Technology (Safran and Ruger 1994).[13]

More important in explaining the region's high health care costs is the fact that New England is the U.S. region with the largest fraction of its nonelderly population covered by health insurance. Health insurance coverage affects per capita health care costs because nationally the uninsured use only 58 to 64 percent as much health care as similar insured individuals (U.S. Congressional Budget Office 1993 and Sheils, Lewin, and Haught 1993). Moreover, this region also has above-average wages and the highest per capita income in the country. Because health care is labor intensive, the region's high wages feed directly into its high health care costs. In addition, the positive relationship between income and spending on health care already mentioned in an international context appears to apply across states as well. Not only do high-income people spend a higher share of their income on health care, but they also appear willing to spend more on health care for other citizens. High-income states and regions tend to have more generous Medicaid programs (measured by state Medicaid payments per capita and by share of a state's impoverished population covered by Medicaid) than do low-income regions (Little 1992).[14] A final reason for the region's high health care costs is its world-famous health care infrastructure. The region has more doctors (particularly specialists and researchers) per capita, and its citizens undergo more surgical operations and make more outpatient hospital visits per capita (and to expensive teaching hospitals to boot) than the average region (Levit, Lazenby, Cowan, and Letsch 1993).[15]

New England's high health care costs may be explained in part by the high percentage of the population covered by insurance and by the region's high per capita income.

How do these high health care costs affect the cost of doing business in New England? Probably only modestly. Although business executives sometimes complain about the competitive effects of high and rapidly rising health care costs, these expenses generally have a limited impact on their ability to compete or on their locational choices—especially over the mid to long term. Employers care about total compensation and unit labor costs, not about the cost of wages or individual benefits in isolation. Moreover, because the supply of labor does not change a lot in response to a change in real wages, employers are generally able to pass much of the increase in health insurance costs on to employees in the form of reduced real wages. Both nationally and regionally, in other words, and often with a lag, employees tend to pay for their own health insurance through reduced real wages or reduced employment.[16]

[13] An Urban Institute effort to adjust its HCFA-derived health care cost index for 26 states for the impact of border crossing, differences in insurance coverage, and uncompensated care resulted in changes of more than plus or minus 5 percentage points in six states, as compared with the unadjusted data for 1991. The biggest change, −13 percentage points, was for North Dakota. For the two New England states covered, Massachusetts' ratio fell 6 percentage points, while New Hampshire's rose 4 percentage points. (See Holahan and Liska 1994, Table 1.) Given the variance in insurance coverage across states, these results again suggest that, in most cases, the impact of border crossing is not very large.

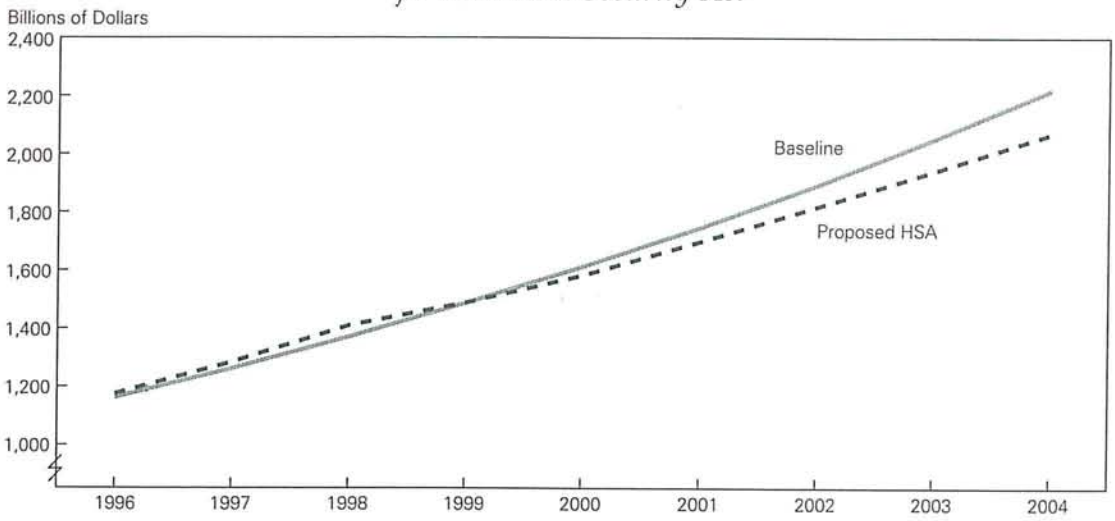
[14] The correlation between per capita personal income and per capita health care spending across states is 0.46, while the correlation between per capita income and Medicaid expenditures per capita is 0.32. In other words, the association between income and health care spending appears to be considerably weaker at the state level than internationally. But, of course, this country has developed public health care programs specifically designed to break the link between health care spending and income—Medicare and Medicaid. The correlation between state per capita income and state per capita Medicaid spending excluding the federal share (which varies inversely with income) is 0.69. Thus, the association between income and health care spending made (more largely) on state residents' initiative begins to approach international levels.

[15] In addition, while the region has a below-average number of hospital beds per capita, it records an average number of hospital admissions and an average number of inpatient days per capita. Length of stay is also average. (Levit, Lazenby, Cowan and Letsch 1993, Exhibit 8.) These data suggest that New England hospitals are achieving a better-than-average occupancy rate for hospital beds and, since above-average use of outpatient care has not brought inpatient care below the norm, above-average utilization of hospital facilities generally.

[16] In regions (unlike New England) where many people work for the minimum wage, the impact of rising health care costs may fall on employment rather than on real wages. Moreover, in periods of labor shortage, like the late 1980s in New England, the impact of rising health care costs may fall on employers or be passed through to customers.

Figure 2

National Health Expenditures Using CBO Baseline and CBO Projections for the Health Security Act



Source: Congressional Budget Office (1994).

Relative health care costs might also affect a state's competitive position through their impact on state tax rates. Health care costs feed into state budgets and tax rates through state spending on the Medicaid program. In recent years, Medicaid has been one of the largest and fastest-growing categories in most state budgets. Indeed, Medicaid has been cast as villain in state fiscal crises all across the country as citizens have faced a choice of raising taxes or cutting other desirable investments. Altogether then, if reform reduces New England's relative health care costs, the change may improve the region's competitive position to some limited extent.

IV. Impact of Reform on Regional Economies

Turning to the impact of reform on the regional economy, according to CBO analysis, with the passage of the Act, U.S. health care spending will quickly swell above CBO baseline projections[17] as universal access and other new programs, like Medicare payments for prescription drugs, begin. In time, however, the impact of cost control measures, like increased use of managed care, will prevail. As a result, the CBO projects that by the year 2004 U.S. health care spending will be $150 billion (or 7 percent) below its current baseline projections for that year, as shown in Figure 2.

It should be stressed that while the CBO foresees a slowdown in health care spending, it expects significant growth to continue, nonetheless. With the passage of the Act, U.S. health care spending is projected to rise 76 percent between 1996 and 2004, rather than 91 percent, as projected assuming no policy change. The following regional analysis is all relative to this baseline of rapidly rising national expenditures.

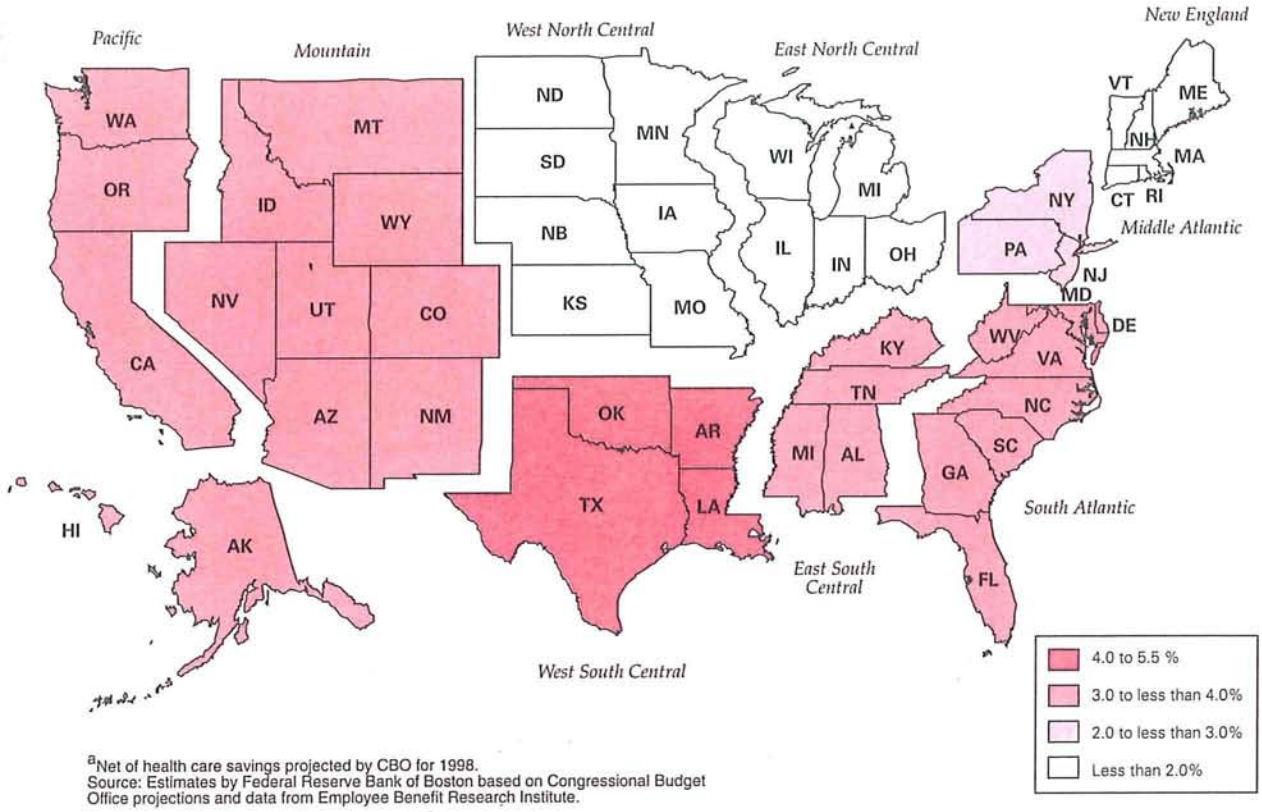
Health Care Services

Passage of the Administration proposal will produce an immediate increase in the real demand for health services in all states and regions—with a deceleration in health care spending from baseline expectations following at a later date. The relative size of the immediate increase will largely depend on the share of the state population that is currently uninsured or under-insured. The share of the non-elderly population without insurance coverage is lowest in New England, followed by the East and

[17] The CBO's baseline projections were made assuming no change in current policies and trends.

Map 1

Estimated Net[a] Increase in the Demand for Health Care due to Universal Access, by Region, 1998



[a]Net of health care savings projected by CBO for 1998.
Source: Estimates by Federal Reserve Bank of Boston based on Congressional Budget Office projections and data from Employee Benefit Research Institute.

West North Central regions (Table 2). Coverage is thinnest in the West South Central and in individual states, like Nevada, New Mexico, Mississippi, and California, scattered through the southern and western parts of the country. Accordingly, the real increase in demand for health care will be relatively great in the latter areas, while New England will most likely experience the smallest real increase in demand for health care.

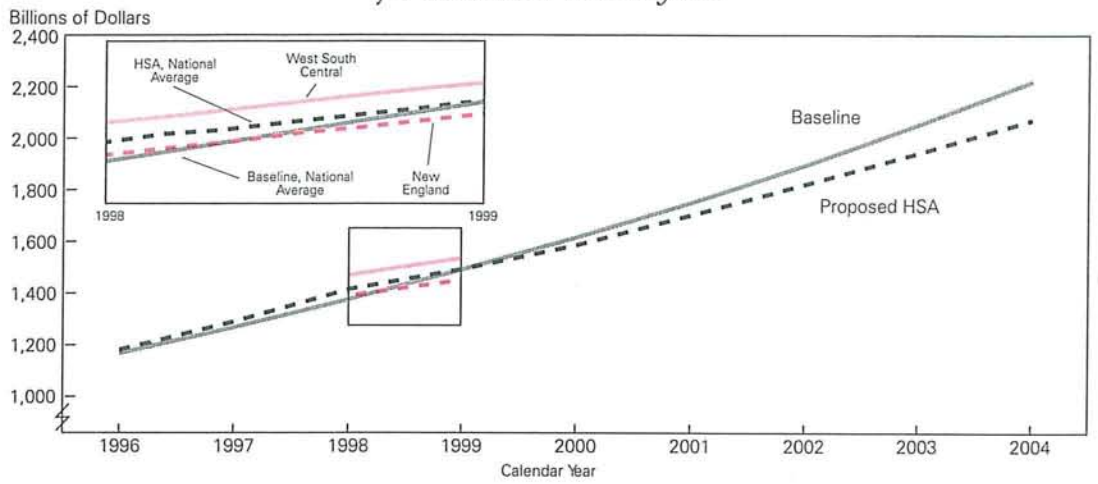
Map 1 shows a rough estimate of the initial impact of the Health Security Act on the demand for health care at the regional level, on the assumptions that the currently uninsured use just 64 percent of the health care absorbed by similar individuals with insurance coverage (U.S. Congressional Budget Office 1993) and that reform will rectify this discrepancy. Because New England has the broadest health insurance coverage of any region, its health care industries are likely to experience the smallest surge in demand—slightly less than 4 percent above current trends on a gross basis and just under 1 percent net of the health care savings the CBO projects for 1998. The East and West North Central and Mid Atlantic divisions are also likely to experience below average increases in demand for health care, while the largest gain (roughly 5.5 percent, net) will occur in the West South Central division.

Given the modest blip in demand here in New England, when increased competition and other cost control mechanisms take effect, this region's health care spending will likely be lower—relative to baseline expectations—than in the rest of the country (Figure 2A). In addition, increased emphasis on cost containment plus the likely growth of national hospital and insurance chains[18] could force New En-

[18] Not necessarily within New England. To date, some observers point out, for-profit hospital chains have made no inroads into the region.

Figure 2a

National Health Expenditures Using CBO Baseline and CBO Projections for the Health Security Act



Source: Congressional Budget Office (1994).

gland's relatively high-cost providers to bring their operations closer to national norms. Thus, New England providers may face a greater than average slowing in demand growth.

What do these developments mean for employment in New England's health care industries? As the charts in Figure 3 show, for the past several years, health care has been a powerful engine of job growth both nationally and regionally. With reform, the CBO projections suggest, health-related employment will continue to grow—but more slowly than once expected.[19] Indeed, incoming data indicate that some providers have already begun to cut employment—either in anticipation of reform or in response to the increased competition or use of managed care now occurring. Although the growth in total health service jobs shows little pause, employment in private hospital services has flattened out at the national level and in Vermont and has actually dipped in Massachusetts (Figure 4).[20] How deep are these cuts likely to go? In the case of Massachusetts, the final report of Governor Weld's Task Force projects that reducing that state's annual use of hospital bed days per capita to national average levels could lead to a 5 percent reduction in the state's hospital employment (Safran and Ruger 1994). Such layoffs would amount to about one-quarter of 1 percent of total state employment.[21] It should be remembered, however, that universal access may increase national average rates of hospital use at least slightly.

What occupational groups are likely to feel the brunt of cuts in hospital staffs? If the cuts are proportional to current staffing patterns, nurses and low-wage service workers would account for the bulk of

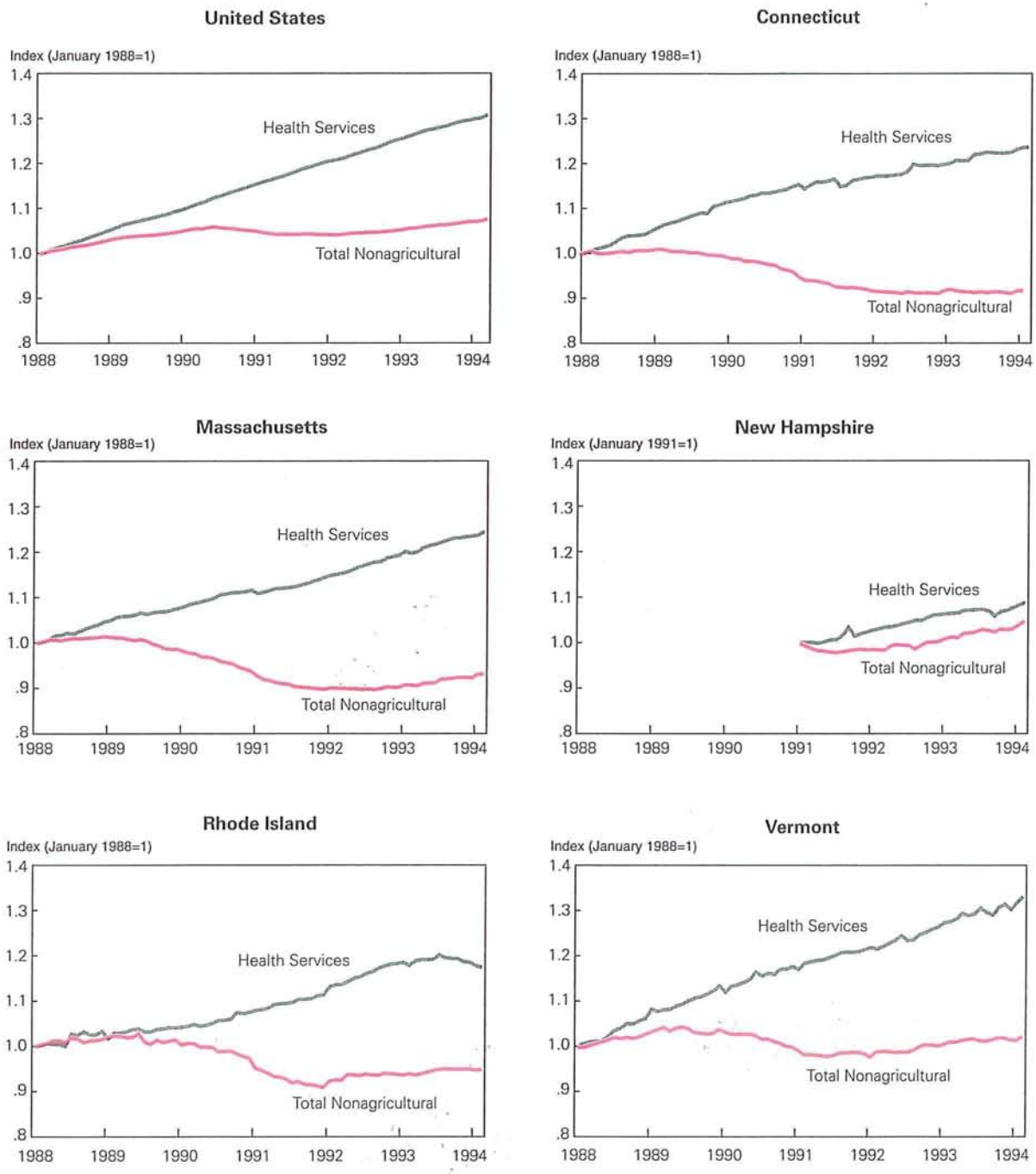
[19] In "Health Care Alternatives: Employment and Occupations in 2005," Pfleeger and Wallace (1994) project the growth in U.S. health-related employment between 1990 and 2005 assuming that real demand for the output of 10 health-related industries grows 2.0 percent annually (low-growth scenario) versus 3.2 percent annually (moderate-growth scenario), holding total GDP growth unchanged in both cases. Although the authors do not examine the impact of health reform per se, the low-growth scenario is probably applicable. Naturally, the 2 percent scenario reduces job growth in all health-related industries (except home health), as compared with the moderate-growth scenario. For example, low growth results in an increase in private hospital jobs of 13 percent over 15 years, compared to a rise of 42 percent assuming moderate growth.

[20] Moreover, employment at Massachusetts state hospitals has fallen by over 27 percent since mid-1990.

[21] The less easily achieved goal of reducing bed use to California's low level would result in layoffs amounting to about 1 percent of Massachusetts total nonagricultural employment (Safran and Ruger 1994). As will be discussed later, however, because a portion of the cuts in state health care spending represent savings for the state government and the private sector, job gains in non-health industries would offset job losses at the hospitals. The net decline in total state employment would probably be only half as great as the decline in hospital employment.

Figure 3

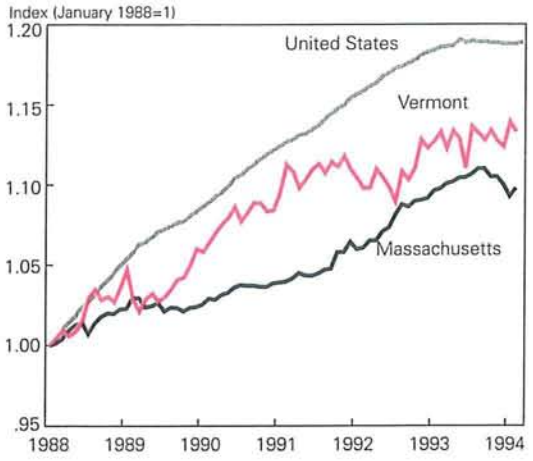
U.S. and New England Private Health Services Employment and Total Nonagricultural Employment, Seasonally Adjusted



Source: U.S. Bureau of Labor Statistics, '790 Data' Tape.

Figure 4

United States and Two New England States Private Hospital Services Employment, Seasonally Adjusted



Source: U.S. Bureau of Labor Statistics, '790 Data' Tape.

the cuts. According to American Hospital Association data, registered nurses (RNs), licensed practical nurses (LPNs) and ancillary nursing personnel account for 36 percent of all hospital employment. On a full-time-equivalent basis, physicians, administrators, and record keepers account for just 5 to 6 percent of the total, while technicians make up 15 percent. The remainder (over 40 percent) are low-skill, low-wage service workers performing the hospitals' hotel-keeping functions. Moreover, because cost control efforts will encourage a continuing shift in emphasis from inpatient to outpatient care, service workers and, to a lesser extent, nurses are likely to suffer disproportionate cuts, as compared with physicians and technicians. While increased use of state-of-the-art information systems and reduced insurance options (given a standard health care package) should permit reductions in the hospitals' administrative and record-keeping staff, the numbers involved are small.

Whatever the occupations most affected, the adjustment is unlikely to be entirely smooth, judging from previous experience.[22] However, some technical and nursing personnel might move into utilization and outcomes measurement and consulting, or into supervisory positions in home and community health. Similarly, retraining nurses to be nurse practioners might offer another useful approach to absorbing excess hospital staff and to meeting the Administration's goal of emphasizing primary rather than specialized care. Since it is not clear that the government will be able to persuade young doctors—let alone mature specialists—to serve as primary care physicians in underserved areas, increased use of nurse practitioners could be doubly rewarding. In this regard, the further development of national hospital or managed care chains may also encourage increased geographic mobility for health care professionals.

One area in which demand for health care staff, including some less skilled service workers,[23] will clearly rise is home and community care. After all, the U.S. population is aging, and one of the Health Security Act's primary initiatives is a new home and community care program for the disabled. Just as current data show a decline in employment in hospital services, they also indicate that a rapid expansion of home health employment is already under way. Recently, home health has been the fastest growing subdivision of health care services, soaring 46 percent in New England from 1990 to 1992 and accounting for over one-third of the rise in the region's total health services employment. This surge probably reflects a 1989 change in Medicare rules that permits a shift in focus for the Medicare home health benefit from short-term post-acute to long-term care (Bishop and Skwara 1993). Since news of the change in the Medicare regulations is still filtering out, it is not clear whether the current surge is a precursor of or a substitute for future growth in home health employment. Still, home health remains small in relation to hospital employment and could not quickly absorb large numbers of hospital staff.[24]

[22] With the advent of prospective payment systems for hospitals in the 1980s, administrators decided to cut costs by reducing the number of LPNs and replacing them with a smaller number of more highly trained RNs. The change contributed to a generalized shortage of RNs, while the dismissed LPNs did not find lower-paid positions and heavier case loads at long-term care institutions very attractive (Safran and Ruger 1994).

[23] Some observers fear that the less skilled service workers laid off from hospital jobs will have difficulty finding comparable jobs without significant retraining. Although nurses appear to have the most promising job prospects, most retraining programs are geared to them as well. (See Torres 1994.)

[24] If, as intended, health reform permits increased emphasis on primary and preventive care within the community, some less technically trained service workers might find a role in community outreach and health education efforts.

Other Health-Related Industries

Health-related industries, like drugs and medical equipment, that serve national markets, will also be directly affected by health care reform.[25] When drug or health insurance companies are important regional citizens (most notably in New Jersey and Delaware), they add to the area's overall dependence on health care; thus, a given change in the demand for health care nationally will have an above-average impact on their regional economies. Here in New England, the most recent available data (1991) indicate that drugs, medical equipment, and health insurance account for just under 1 percent of the region's nonfarm jobs; thus, the increase in these industries' regional employment following a 3 percent bulge in U.S. demand for health care will be barely noticeable.

Moreover, it is not entirely clear that these health-related industries will maintain their current share of total health care employment. Indeed, the national data shown in Figure 5 suggest that job growth in these industries has already slowed. To start with the equipment makers, improved access to health care is unlikely to lead to a big jump in demand for medical equipment. The U.S. health care system is already so well equipped that the move to universal access is most unlikely to lead to a spurt in capital spending. Indeed, in this ever more cost-conscious era, health care providers will be under tremendous pressure to find ways to consolidate facilities and to share existing capital equipment. Even in the area of current supplies, hospitals are beginning to consolidate purchasing and inventory management, as firms in other industries have already done. While the demand for new products that clearly reduce costs may continue strong, total demand for medical equipment will most likely grow more slowly than analysts envisioned only two years ago.

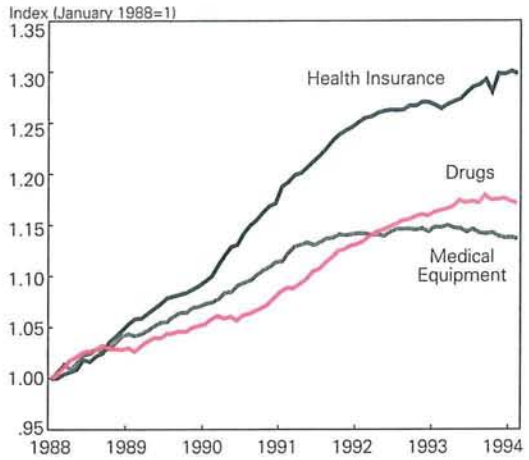
Improved access will presumably lead to an increase in the demand for pharmaceuticals, especially since the Health Security Act adds a prescription drug benefit to the Medicare program; however, the Clinton Administration also seems determined to prevent the drug companies from reaping any windfall profits. The Act contains provisions to regulate prices of drugs bought with public funds as well as prices of breakthrough drugs. In addition, the application of managed care concepts to prescription drugs is leading to mergers in the pharmaceutical industry. More particularly, the drug companies' performance on the stock markets this year suggests that the region's biotech companies will find raising money more difficult than in the recent past and that consolidation within the industry is likely.

As for insurance, the trend towards increased use of corporate self-insurance and managed care has already narrowed the scope for independent agents in the health care field. By contrast, large insurance companies have developed skills in "managing" managed care. Accordingly, they see a role for themselves in a health care system reformed according to the managed competition model. They will "manage" the managed competition, providing services to the approved health plans and the alliances. Indeed, the region's insurance companies would seem well positioned—particularly given their proximity to regional hospitals, and financial service and software companies—to develop a thriving export business in

Figure 5

U.S. Employment in Health-Related Export Industries

Seasonally Adjusted, Monthly Data



Source: U.S. Bureau of Labor Statistics, '790 Data' Tape.

[25] Some observers have suggested that regions like New England and the Mid Atlantic, where these industries loom important, will benefit disproportionately from the advent of universal access. In fact, however, because these export industries enlarge a region's health-related base, export activity per se does not magnify the impact of national changes in demand for health care on health care industries in these regions. Other things equal, a 3 percent increase in the demand for health care nationally will lead to a 3 percent increase in demand for the products of these export industries.

medical payments systems and in utilization and outcomes measurement and management. Still, it is not clear what impact the move to universal access to a standardized insurance product, as opposed to the move to managed competition, will have on the demand for exported insurance services. Informing, enrolling, and tracking the currently uninsured (who are more likely than the presently insured to be self-employed and unemployed) could require a different mix of local versus out-of-state workers.

With or without passage of reform legislation, the health care industry will clearly undergo the restructuring that many other industries have already experienced.

In sum, with or without passage of federal health reform legislation, the health care industry will clearly undergo the restructuring that many other industries have already experienced. Indeed, the national data shown in Figure 5 suggest that employment growth in these industries has already slowed. These developments should leave the industry more productive than before, but the industry will not serve as a regional engine of growth to the extent once expected.[26]

Impact on the Non-Health Sector

Turning to the non-health sector, since most New Englanders currently have insurance coverage, the move to universal access will require less adjustment here than elsewhere. Still, because the region also has the nation's highest health care costs, a federal mandate to buy health insurance could seem burdensome for some New Englanders. Because a gradual change is usually easier to digest than an abrupt one, state initiatives to increase insurance coverage ahead of national legislation are generally welcome.[27]

Who will feel the greatest impact of federal employer-worker mandates? The most affected will be low-wage workers,[28] particularly those in firms with more than 75 employees, since enterprises of this size will not be eligible for the extra subsidies available to small, low-wage firms. Because real wage developments generally offset the employer cost of insurance premiums, and because this flat per worker cost looms particularly large in relation to the lowest wages, workers on the bottom rung will bear the brunt of this real wage adjustment.[29] Furthermore, some analysts suggest that the Health Security Act will encourage the spin-off of low-wage functions, like cleaning and custodial services, into small firms entitled to the extra subsidy—with questionable effects on productivity, and, over time, thus, real income growth. Still, because low-income families will receive inflation-adjusted subsidies[30] for the family share of the premium payment, their real income, including the value of their health insurance, should rise with reform.

In the second phase of reform, once cost control efforts take hold, the slowdown in health care spending will produce savings for the non-health sector. The (gross) savings achieved within each state will be divided almost evenly between the federal government, on the one hand, and each state's governments

[26] In their low-growth scenario, Pfleeger and Wallace (1994) project job gains of 21 percent and 8 percent respectively for the medical instrument and supplies and the pharmaceutical industries, compared with 42 percent and 25 percent under the moderate-growth scenario. They project a negligible slowdown in job growth for insurance carriers and agents for the low-growth as compared with the moderate-growth scenario.

[27] On the other hand, because of the maintenance-of-effort provisions and other stipulations concerning Medicaid in the Health Security Act, state policymakers may want to be cautious about using newly extended Medicaid eligibility standards as a mechanism for achieving broader insurance coverage. Moreover, recent experience in New York state suggests that community rating without an employer or individual mandate may actually increase the number of uninsured (See Scism 1994, and, for a more positive view of New York state insurance reform, Pear 1994).

[28] At present, insurance coverage is relatively thin in agriculture, construction, retailing and nonfinancial services nationally, and firms and workers in these industries will be among those most directly affected by reform. By contrast, earnings of workers in manufacturing and other industries where health insurance benefits have been common are likely to benefit from these changes because these workers have borne the brunt of "cost-shifting" efforts, whereby providers have shifted part of the cost of serving uninsured and underinsured patients to the privately insured.

[29] Indeed, it seems possible that the somewhat puzzling growth in the apparent return to education in recent years partly reflects the disproportionate impact of increasingly costly health insurance on low wage rates (generally earned by less educated workers).

[30] The determinants of employer subsidies are not inflation adjusted; thus, the value of employer subsidies will decline over time.

and the private sector on the other.[31] Indeed, the CBO projects that state governments will save $63 billion (net of state Medicaid contributions to the alliances) in 2004 under the Health Security Act compared with their expected health care spending assuming no change from current trends. Similarly, the private sector is projected to spend $188 billion less on health care, net, in that year than it would have under baseline assumptions. Because these savings reflect reductions in projected expenditures, they will not appear as a pot of gold at the end of the health reform rainbow. Rather, these in-state savings are likely to materialize as increased real wages and reduced fiscal pressures on state governments.

This region's medical establishment will face above-average pressures to cut its way-above-average costs. Accordingly, New England will almost surely enjoy above-average savings from reform. In other regions, the savings will be less, and paying for improved access will absorb a relatively large share. Thus, workers and taxpayers in those regions will have smaller net savings to use for non-health care goals. Here in New England, assuming that we spend our savings on local goods and services with the same labor content as health care (a tall order, to be sure), roughly half of any employment loss in health care could be replaced with job gains in other industries.

Regional Income Shifts

As for the federal government, it will earn about one-third of the savings from health reform because it pays for public programs like Medicare and, on a shared basis with the states, Medicaid. In addition, as savings on health insurance allow wages and incomes to rise, the federal government will collect taxes on the increases, thus raising its share of the nation's health care savings to almost 45 percent. According to the CBO, until 2004 the federal government will use all of its savings (plus increased revenues from a rise in the tobacco tax) to pay for the premium subsidies and other new programs in the plan. The CBO projects that these (gross) subsidies will equal almost $200 billion, or roughly 2 percent of GDP, in 2004; thus, these premium payments are likely to entail a significant redistribution of income across states.

To explore the redistributional impact of reform, the authors first estimated the federal subsidy payments, by state. Each state's relative need for subsidies will reflect many characteristics, several of which were shown in Table 2. These characteristics include a state's relative health care costs, its relative wages and incomes, the size distribution of its firms, the income distribution of its population, and the number of workers per family. In addition, because the Health Security Act will require states to maintain their current level of support for health care, the relative generosity/expense of existing Medicaid programs is also a factor.[32] States with relatively generous/expensive Medicaid programs will be required to make relatively large maintenance of effort payments. In addition, a state with relatively inclusive Medicaid eligibility standards is likely to pay more per low-income resident, via its share of ongoing Medicaid obligations, than a state with exclusive eligibility requirements. For each low-income person retaining Medicaid eligibility under the Administration plan, a state will pay 25 to 50 percent of the (Medicaid) cost of insurance, depending on the state's per capita income. By contrast, if the same low-income person had never been deemed eligible for Medicaid (because the state had restrictive eligibility standards), the federal government would pay up to 100 percent of the needed subsidy under reform.

In the second phase of reform, once cost control efforts take hold, the slowdown in health care spending will produce savings for the non-health sector.

Tables 3 and 4 provide estimates of employer and family premium subsidies by state and region.[33] The authors made these estimates by applying the provisions of the Health Security Act to conditions prevail-

[31] In addition, states with health-related exports will suffer some income loss without any offsetting savings gain, because the savings from cutbacks of purchases of these products accrue to buyers in the importing state.

[32] Within limits imposed by federal legislation, the states have had considerable leeway in determining the eligibility requirements for and the benefits covered by their Medicaid program.

[33] Because the need for subsidies is determined and financing occurs at the state level, the regional numbers are not very meaningful; they are included in Tables 3 and 4 to permit abbreviated generalizations.

Table 3

Estimated Subsidies, Assuming FY1991 Variations in State Health Care Costs[a]

Millions of 1991 dollars, except where indicated

Region/State	Employer and Family Subsidies	Medicaid Maintenance-of-Effort	Net Subsidies	Per Capita (1991 Dollars): Employer and Family Subsidies	Medicaid Maintenance-of-Effort	Net Subsidies
United States[b]	80,653	−11,658	68,995	320	−46	274
New England	4,392	−937	3,455	333	−71	262
Connecticut	892	−372	521	271	−113	158
Maine	314	−70	244	254	−57	197
Massachusetts	2,512	−329	2,183	419	−55	364
New Hampshire	259	−54	205	234	−49	185
Rhode Island	306	−94	211	304	−94	211
Vermont	110	−18	91	193	−33	161
Middle Atlantic	14,084	−2,764	11,320	373	−73	300
New Jersey	1,830	−346	1,484	236	−45	191
New York	7,361	−2,036	5,325	408	−113	295
Pennsylvania	4,893	−382	4,511	409	−32	377
East North Central	11,493	−2,195	9,298	271	−52	219
Illinois	3,301	−663	2,638	286	−57	229
Indiana	1,403	−343	1,060	250	−61	189
Michigan	2,480	−319	2,161	265	−34	231
Ohio	3,057	−724	2,333	279	−66	213
Wisconsin	1,252	−145	1,107	253	−29	223
West North Central	5,993	−809	5,184	336	−45	291
Iowa	771	−97	674	276	−35	241
Kansas	646	−86	560	259	−35	224
Minnesota	1,649	−228	1,420	372	−51	320
Missouri	1,948	−306	1,641	378	−59	318
Nebraska	458	−52	407	288	−32	255
North Dakota	287	−20	267	452	−32	420
South Dakota	234	−19	215	333	−27	307
South Atlantic[c]	15,030	−1,624	13,406	338	−37	302
Delaware	223	−27	196	327	−40	288
Florida	5,379	−411	4,968	405	−31	374
Georgia	2,130	−200	1,930	322	−30	291
Maryland	1,314	−252	1,062	270	−52	218
North Carolina	1,515	−272	1,243	225	−40	185
South Carolina	781	−115	666	219	−32	187
Virginia	1,183	−236	947	188	−38	151
West Virginia	739	−51	688	410	−28	382
East South Central	5,509	−358	5,151	359	−23	336
Alabama	1,464	−77	1,387	358	−19	339
Kentucky	1,301	−91	1,210	350	−24	326
Mississippi	610	−41	569	235	−16	219
Tennessee	2,134	−149	1,985	431	−30	401
West South Central	8,589	−999	7,590	316	−37	280
Arkansas	766	−60	706	323	−25	298
Louisiana	1,895	−277	1,617	446	−65	380
Oklahoma	830	−128	702	261	−40	221
Texas	5,099	−534	4,565	294	−31	263
Mountain[d]	2,058	−313	1,745	200	−30	170
Arizona[e]	908	−29	879	242	−8	234
Colorado	800	−102	698	237	−30	207
Idaho	143	−37	106	138	−36	102
Montana	152	−15	138	189	−18	170
Nevada	327	−81	246	255	−63	192
New Mexico	417	−24	393	270	−16	254
Utah	171	−43	128	96	−24	72
Wyoming	46	−10	36	101	−22	78
Pacific	12,597	−1,630	10,967	315	−41	274
Alaska	111	−27	85	196	−47	148
California	10,689	−1,325	9,365	352	−44	308
Hawaii	254	−40	214	224	−35	188
Oregon	563	−103	459	193	−35	157
Washington	980	−135	845	195	−27	168

[a]Range from 0.66 to 1.28, where 1.00 = U.S. average (Table 2). [b]Includes District of Columbia and Arizona. [c]Includes District of Columbia. [d]Excludes Arizona. [e]Arizona does not participate in the Medicaid program; it operates an alternative program under a federal waiver.

Source: Calculated by authors using data from HCFA, diskettes with state health expenditures and Medicaid expenditures; U.S. Bureau of the Census, *Current Population Survey* and *County Business Patterns*; Congressional Budget Office (1994).

Table 4

Estimated Subsidies, Assuming a Narrowed Range of State Health Care Costs[a]

Millions of 1991 dollars, except where indicated

Region/State	Employer and Family Subsidies	Medicaid Maintenance-of-Effort	Net Subsidies	Per Capita (1991 Dollars): Employer and Family Subsidies	Per Capita (1991 Dollars): Medicaid Maintenance-of-Effort	Per Capita (1991 Dollars): Net Subsidies
United States[b]	80,162	−11,658	68,504	318	−46	272
New England	3,688	−937	2,750	279	−71	208
Connecticut	743	−372	371	226	−113	113
Maine	430	−70	361	349	−57	292
Massachusetts	1,731	−329	1,403	289	−55	234
New Hampshire	305	−54	250	276	−49	227
Rhode Island	295	−94	201	294	−94	200
Vermont	183	−18	165	323	−33	291
Middle Atlantic	12,088	−2,764	9,324	320	−73	247
New Jersey	1,812	−346	1,466	233	−45	189
New York	6,158	−2,036	4,122	341	−113	228
Pennsylvania	4,118	−382	3,736	344	−32	312
East North Central	12,131	−2,195	9,936	286	−52	234
Illinois	3,418	−663	2,755	296	−57	239
Indiana	1,646	−343	1,303	293	−61	232
Michigan	2,530	−319	2,211	270	−34	236
Ohio	3,113	−724	2,389	285	−66	218
Wisconsin	1,423	−145	1,278	287	−29	258
West North Central	6,077	−809	5,268	341	−45	296
Iowa	971	−97	874	347	−35	313
Kansas	753	−86	666	302	−35	267
Minnesota	1,528	−228	1,299	345	−51	293
Missouri	1,792	−306	1,485	347	−59	288
Nebraska	521	−52	469	327	−32	295
North Dakota	247	−20	226	388	−32	356
South Dakota	267	−19	248	379	−27	353
South Atlantic[c]	14,061	−1,624	12,437	317	−37	280
Delaware	195	−27	168	286	−40	246
Florida	4,739	−411	4,328	357	−31	326
Georgia	2,118	−200	1,918	320	−30	290
Maryland	1,265	−252	1,013	260	−52	208
North Carolina	1,956	−272	1,684	290	−40	250
South Carolina	1,098	−115	983	308	−32	276
Virginia	1,418	−236	1,181	226	−38	188
West Virginia	791	−51	740	439	−28	411
East South Central	5,899	−358	5,540	384	−23	361
Alabama	1,522	−77	1,445	372	−19	353
Kentucky	1,495	−91	1,404	403	−24	378
Mississippi	943	−41	902	364	−16	348
Tennessee	1,938	−149	1,790	391	−30	361
West South Central	9,632	−999	8,633	355	−37	318
Arkansas	926	−60	866	390	−25	365
Louisiana	1,791	−277	1,513	421	−65	356
Oklahoma	1,138	−128	1,010	358	−40	318
Texas	5,777	−534	5,243	333	−31	302
Mountain[d]	2,764	−313	2,450	269	−30	238
Arizona[e]	1,070	−29	1,041	285	−8	278
Colorado	862	−102	760	255	−30	225
Idaho	320	−37	283	308	−36	272
Montana	248	−15	233	306	−18	288
Nevada	365	−81	284	284	−63	221
New Mexico	541	−24	517	349	−16	334
Utah	320	−43	277	181	−24	157
Wyoming	108	−10	98	235	−22	213
Pacific	12,754	−1,630	11,124	319	−41	278
Alaska	120	−27	93	210	−47	163
California	10,383	−1,325	9,059	342	−44	298
Hawaii	251	−40	211	221	−35	186
Oregon	795	−103	692	272	−35	237
Washington	1,205	−135	1,069	240	−27	213

[a]Range from 0.90 to 1.10, where 1.00 = U.S. average. [b]Includes District of Columbia and Arizona. [c]Includes District of Columbia. [d]Excludes Arizona. [e]Arizona does not participate in the Medicaid program; it operates an alternative program under a federal waiver.

Source: Calculated by authors using data from HCFA, diskettes with state health expenditures and Medicaid expenditures; U.S. Bureau of the Census, *Current Population Survey* and *County Business Patterns*; Congressional Budget Office (1994).

ing in 1991 and 1992, using data obtained from the U.S. Bureau of the Census (the Current Population Survey supplemented by County Business Patterns) and from HCFA. CBO estimates of national average insurance premiums for the mandated insurance package in 1994 dollars were deflated to 1991 price levels.[34]

The estimation effort involved some assumptions that admittedly amount to short-cuts. For instance, in part because of data limitations, all firms with more than 1,000 employees (rather than the 5,000 specified in the legislation) were assumed to opt to form a corporate alliance. By contrast, the CBO estimated the share of firms nationally that would benefit by and thus choose this course. Similarly, we did not try to estimate the cost of the Act's early retirement provisions, partly in the belief that this expensive initiative is unlikely to survive the legislative process. It seems unlikely that these short-cuts would alter the thrust of the conclusions very significantly. Nevertheless, these estimates should only be regarded as preliminary and illustrative.

Tables 3 and 4 differ only in their assumptions about relative medical costs. In Table 3 the variation in state health care costs observed in FY 1992 remains unchanged with improved access. In Table 4, reform eliminates two-thirds of the current variation. (The index of relative per capita spending for hospital care, physician services, and prescription drugs for FY 1992 ranged from 0.69 to 1.28, not adjusted for border crossing. For Table 4, the range is reduced to 0.90 to 1.10.)[35] Because cross-state differences in insurance coverage, the generosity of Medicaid benefit packages, and style of medical practice undoubtedly explain much of the current variation in state health care costs, and because many of these differences will vanish with reform, the results displayed in Table 4 seem the more likely to the authors.

To start with Table 3, however—thus assuming no change in relative medical costs—all of the New England states but Massachusetts would receive below-average per capita subsidies, net the Medicaid effort payments. By contrast, Massachusetts would receive one of the highest per capita subsidies in the nation, largely because its high health care costs are even higher than its personal income.[36] Otherwise, the largest per capita subsidies would go, on average, to the East South Central and the South Atlantic regions.

On the other hand, if cross-state differences in per capita health care costs do narrow with reform, as assumed in Table 4, then the New England states would average the lowest per capita subsidies in the nation. (As states with below-average incomes, Maine and Vermont would be exceptions. If their below-average medical costs rose towards the national average, they would receive relatively big subsidies.) The largest per capita subsidies would flow, on average, to states in the East South Central and the West South Central divisions, but individual Plains, Mountain and South Atlantic states would also need relatively big subsidies.

These results reflect a fairly simple relationship. If a state's health care costs are high compared to its per capita income, the state is likely to need above-average subsidies, and vice versa. If the range of state health care costs narrows, relative income and its distribution get more weight. Thus, if New England's high medical costs are driven towards the norm, the region's high-income status dominates the results. However, the perverse impact of the Medicaid maintenance-of-effort payments also jumps out from the tables. Rhode Island pays considerably more, per capita, in effort payments than high-income New Hampshire. Similarly, low-income Louisiana makes higher per capita effort payments than higher-income Texas or even than high-income California.

As the final step in estimating the income shifts resulting from reform, the authors took as given CBO projections of how the federal government will fund its commitments under the Health Security Act in 2004. As Table 5 indicates, projected savings in the Medicaid and Medicare programs are expected to pro-

[34] CBO premium estimates are about 15 percent higher than those used by the Administration and virtually identical to those used by Lewin-VHI, Inc. (See U.S. CBO (1994, pages 30 and 36), and Lewin-VHI, Inc. (1993, Table 4, page 25). The CBO estimates shown are for 1994; the Lewin estimates in Table 4 are for 1998.) An analysis by the American Academy of Actuaries (reported by Telerate Matrix on April 21, 1994, page 31795) concludes that the premium targets prepared by the Clinton Administration may be underestimated by as much as 20 percent.

[35] Lewin-VHI, Inc. (1993, page 25) shows estimates of regional premium costs that range from 4 percent above to 10 percent below the national average in 1998.

[36] Massachusetts ranks seventh by size of estimated per capita subsidy. The other six states are North Dakota, Tennessee, West Virginia, Louisiana, Pennsylvania and Florida. Holahan and Liska's study (1994) also finds that all of these states (except Tennessee) will receive above-average subsidies, net of Medicaid maintenance-of-effort payments. Among the 26 states covered in their study, North Dakota, West Virginia and Massachusetts top the list. Holahan and Liska's estimates include subsidies for early retirees, which the estimates in this study do not. In addition, Holahan and Liska adjusted HCFA's state health care expenditure data for border crossing, insurance coverage, and uncompensated care but apparently did not use the County Business Pattern data on the distribution of firms, employment, and payroll by firm size to adjust the Current Population Survey data.

Table 5
CBO Estimates of Federal Outlays and Sources of Funds by Major Category, 2004
Billions of 2004 Dollars

Outlays	
Subsidies	$173
Drug benefit	28
Long-term care	40
Total, Outlays	$241
Revenues	
Medicare	
Employed beneficiary savings	$ 10
Program savings	77
Medicaid	
Discontinued coverage	48
Premium limits	45
Income and payroll tax	34
Tobacco tax	10
Department of Defense	4
Federal employees health benefits	8
Department of Veterans Affairs	5
Total, Revenues	$241

Source: Congressional Budget Office (1994).

vide the bulk of the funds required for the employer and family subsidies, the major item on the expenditure side of the ledger. The authors allocated the federal expenditures and receipts shown in Table 5 to states by criteria applicable in 1991–92.[37] For example, each state's contribution to federal savings in the ongoing part of Medicaid was determined by its share of federal Medicaid spending for nonelderly cash recipients in FY 1992. Premium subsidies were distributed according to our estimates in Tables 3 and 4.

Table 6 shows the results. Columns 1 to 3 assume current differences in state health care costs, while columns 4 to 6 assume that these differences narrow. As the table shows, health reform is likely to shift income from the Mid-Atlantic, East North Central, and New England regions to the rest of the country. If current differences in health care costs remain, Massachusetts would be the one New England state to receive a small net gain in income.

But, assuming a substantial reduction in cost differences, Massachusetts joins Connecticut, Maine, Rhode Island, and most of the Mid-Atlantic and East North Central states (plus a handful of other generally high-income states) in subsidizing health care for low-income people throughout the country. The regions likely to enjoy the largest income gains are the states of the East South Central and West North Central districts. It should be stressed, of course, that these transfers are in 2004 dollars and do not reflect tax increases; rather they are largely funds that would have been spent in one region (on Medicaid and Medicare) in the absence of reform but which, with passage of the Health Security Act, are likely to be spent on health insurance subsidies in another.

Columns 3 and 6 show state and regional average net contributions to health care reform, in dollars per thousand dollars of state personal income (projected to 2004 according to national trends for 1975 to 1993). As the table shows, the estimated transfer averages 0.3 to 0.7 percent of New England's regional income, while in Connecticut, Rhode Island and Maine (under different assumptions), the transfer could amount to more than 1 percent of state income. The associated job loss (from levels that would have occurred in the absence of reform) could approach projected defense-related layoffs in all of the New England states but Massachusetts and New Hampshire (Kosiak and Bitzinger 1993 and Kodrzycki 1994).[38] Potential income redistributions of this size warrant the notice of state planning officials.

Comparing the results for Rhode Island and New Hampshire again highlights the perverse effect of building on today's Medicaid program. New Hampshire enjoys a higher average per capita income than Rhode Island, yet Rhode Island is likely to suffer a larger loss of state income. And Louisiana, one of the country's lowest-income states, may wind up making a larger contribution to financing health reform nationally than either Texas or high-income California. As Figure 6 showing the relationship between per capita personal income and Medicaid spending per capita indicates, Louisiana, Rhode Island, and New York have all spent much more per capita on Medicaid than other states with similar income. By contrast, New Hampshire, Texas, California, and New Jersey are among the states spending less per capita on Medicaid than might be expected given their income. Clearly, building health reform on the remnants of the current Medicaid program has an adverse impact on the generous/profligate states.

[37] Appendix Tables 1 and 2 show these federal sources and uses of funds by state on a per capita basis under the alternative assumptions that state differences in health care costs 1) remain unchanged and 2) narrow significantly with reform.

[38] In Rhode Island the income redistribution associated with reform could lead to prospective job losses surpassing projected defense-related layoffs.

Table 6

Estimates of Net Income Shifts Accompanying Health Care Reform, 2004 (in 2004 Dollars)

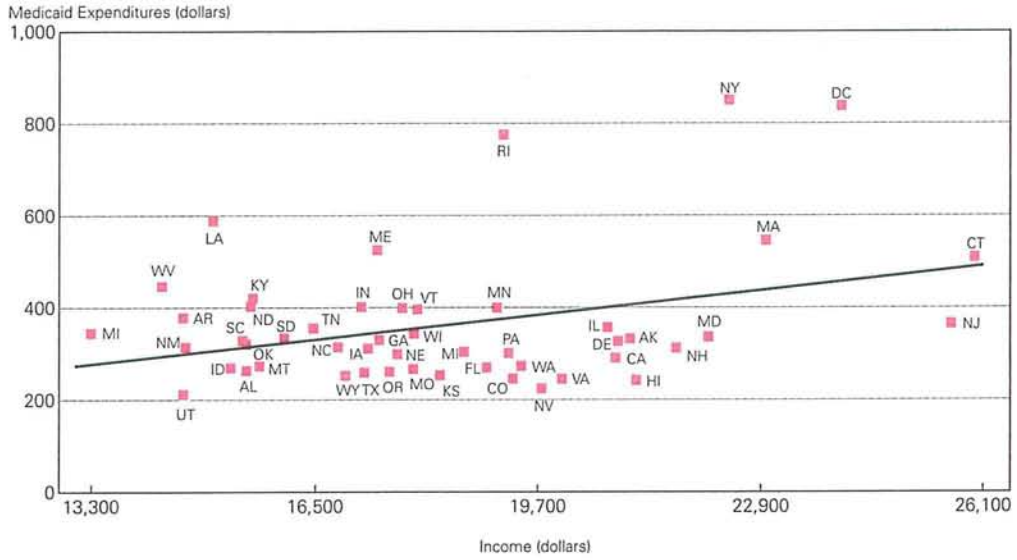
Region/State	Assuming FY1991 Variations in State Health Care Costs[a]			Assuming a Narrowed Range of State Health Care Costs[b]		
	Net Gain (Loss) from Health Care Reform (Billions of $) (1)	Per Capita (Dollars) (2)	Per $1,000 of Personal Income (Dollars) (3)	Net Gain (Loss) from Health Care Reform (Billions of $) (4)	Per Capita (Dollars) (5)	Per $1,000 of Personal Income (Dollars) (6)
United States[c]	0	0	0	0	0	0
New England	−1.625	−134	−3.4	−3.342	−276	−7.0
Connecticut	−1.293	−428	−9.4	−1.661	−550	−12.1
Maine	−.358	−316	−10.3	−.058	−51	−1.7
Massachusetts	.679	123	3.1	−1.252	−228	−5.6
New Hampshire	−.115	−114	−3.0	.004	4	.1
Rhode Island	−.415	−451	−13.4	−.438	−476	−14.1
Vermont	−.123	−237	−7.5	.064	124	3.9
Middle Atlantic	−3.478	−100	−2.6	−8.315	−240	−6.2
New Jersey	−1.648	−231	−5.1	−1.667	−234	−5.2
New York	−5.535	−334	−8.5	−8.478	−512	−13.0
Pennsylvania	3.706	338	10.0	1.830	167	4.9
East North Central	−5.698	−146	−4.5	−3.921	−101	−3.1
Illinois	−1.267	−120	−3.3	−.923	−87	−2.4
Indiana	−1.558	−303	−10.0	−.925	−180	−6.0
Michigan	−.529	−62	−1.9	−.364	−42	−1.3
Ohio	−2.394	−239	−7.6	−2.211	−220	−7.1
Wisconsin	.050	11	.3	.502	110	3.5
West North Central	2.396	147	4.6	2.701	165	5.2
Iowa	.013	5	.2	.529	206	6.8
Kansas	−.054	−23	−.7	.225	99	3.1
Minnesota	1.103	271	8.1	.823	202	6.0
Missouri	.816	172	5.5	.451	95	3.0
Nebraska	.177	121	3.9	.342	234	7.5
North Dakota	.242	415	15.2	.145	248	9.1
South Dakota	.100	154	5.5	.186	288	10.2
South Atlantic[d]	3.883	95	2.9	1.677	41	1.3
Delaware	.049	78	2.1	−.018	−29	−.8
Florida	5.149	423	12.7	3.622	297	8.9
Georgia	.350	58	1.9	.354	58	1.9
Maryland	−1.382	−310	−8.0	−1.486	−333	−8.6
North Carolina	−1.252	−203	−6.9	−.115	−19	−.6
South Carolina	−.896	−274	−10.1	−.085	−26	−1.0
Virginia	−1.725	−299	−8.5	−1.117	−194	−5.5
West Virginia	.194	118	4.7	.337	204	8.1
East South Central	1.554	110	4.1	2.631	187	6.9
Alabama	.875	233	8.6	1.046	279	10.2
Kentucky	−.183	−54	−2.0	.329	96	3.5
Mississippi	−.366	−154	−6.6	.486	204	8.7
Tennessee	1.227	270	9.3	.770	169	5.9
West South Central	−.686	−28	−1.0	2.084	84	2.9
Arkansas	−.011	−5	−.2	.406	187	7.3
Louisiana	−1.437	−368	−13.9	−1.671	−428	−16.2
Oklahoma	−.450	−154	−5.7	.341	117	4.3
Texas	1.212	76	2.5	3.008	189	6.3
Mountain[e]	−1.549	−164	−5.5	.264	28	.9
Arizona[f]	.897	261	9.0	1.321	384	13.2
Colorado	−.001	−0	−.0	.167	54	1.6
Idaho	−.357	−374	−13.9	.092	96	3.6
Montana	−.124	−167	−6.1	.119	161	5.8
Nevada	−.133	−113	−3.3	−.035	−30	−.9
New Mexico	−.076	−54	−2.1	.242	171	6.6
Utah	−.655	−403	−15.7	−.275	−169	−6.6
Wyoming	−.203	−481	−16.2	−.046	−110	−3.7
Pacific	4.306	117	3.3	4.899	133	3.7
Alaska	−.250	−479	−13.0	−.228	−436	−11.8
California	5.728	206	5.6	5.124	184	5.0
Hawaii	−.096	−93	−2.5	−.100	−96	−2.6
Oregon	−.385	−143	−4.6	.211	79	2.5
Washington	−.691	−150	−4.4	−.109	−24	−.7

[a]Range from 0.66 to 1.28, where 1.00 = U.S. average (Table 2). [b]Range from 0.90 to 1.10, where 1.00 = U.S. average. [c]Includes District of Columbia and Arizona. [d]Includes District of Columbia. [e]Excludes Arizona. [f]Arizona does not participate in the Medicaid program; it operates an alternative program under a federal waiver.

Source: Calculated by authors using data from HCFA, diskettes with state health expenditures and Medicaid expenditures; U.S. Bureau of the Census, *Current Population Survey*, and *Population Projections for the United States*; Internal Revenue Service, *Statistics of Income Bulletin*; U.S. Department of Defense, *Atlas/Data Abstract for the United States and Selected Areas*; The Tobacco Institute, *The Tax Burden on Tobacco*; Congressional Budget Office (1994).

Figure 6

Medicaid Expenditures and Income per Capita by State, 1991



Source: U.S. Health Care Financing Administration, data diskette.

But why retain Medicaid for AFDC and SSI beneficiaries once reform is in place? Why should AFDC and SSI recipients be treated differently from other low-income individuals? And why should states that are particularly successful in slowing medical inflation under reform be required to make maintenance-of-effort payments on the basis of previous spending patterns? Obviously, retaining elements of Medicaid provides a way to maintain the states' role in financing health care. An alternative approach might assign responsibility for financing a (fairly large) share of the employer and family subsidies to the states, with each individual state's share of the total determined by its relative per capita income.

The results shown in Table 6—a not insignificant transfer of income from high-income regions with relatively generous/expensive public health care programs to low-income regions with relatively low-cost public programs—are hardly surprising. Indeed, except for the unnecessarily perverse impact of the provisions concerning Medicaid, similar results would probably occur under almost any viable reform program.[39] After all, funds to pay for health care for citizens who cannot afford to pay for themselves can only come from relatively high-income individuals, whether the direct source is the income tax, a payroll tax, a consumption tax, or cuts in existing publicly funded health care programs. As it turns out, per capita income, pay, nonfood retail sales, health care spending, and Medicaid spending tend to be quite highly correlated across states.

It would appear, thus, that the federal initiatives required by almost any health reform proposal will result in a shift of economic resources and activity away from New England and the rest of the Northeast. Accordingly, it becomes important to this region how state governments and the private sector here and elsewhere spend their share of the savings accruing from health care reform. In particular, state governments will want to invest the savings in ways that strengthen the region's economic base.

Americans are demanding health care reform in part because they have concerns about devoting a

[39] An earlier exercise by the authors, undertaken before the Health Security Act was filed, assumed that health reform would be financed by a payroll tax or a combination of income tax increases and a value-added tax (VAT). That effort also suggested that New England and the Mid Atlantic would subsidize health reform in the East and West South Central and the West North Central states.

disproportionately large share of national income to health care without getting good value for their money. Accordingly, they must believe that health care spending is crowding out other worthwhile investments like education, basic research in a variety of disciplines, and public infrastructure. New England has a comparative advantage in several of these activities. Thus, the ultimate impact of health care reform on New England depends on how we spend the savings we obtain. Because the "health reform dividend" will generally materialize as higher real wages and reduced state fiscal pressures, it will be as state taxpayers and policymakers that we will make most of the choices that will determine whether the region will recoup the income losses stemming from reform.

V. Conclusion

According to the CBO, the Health Security Act will result in a short-term swell in the demand for health care, followed by a modest slowdown in the growth in health care spending from previously projected rates. Because New England has the best insurance coverage in the country, the region's health care industry is likely to experience the nation's smallest rise in the demand for medical care. Given the nation's increased emphasis on controlling health care costs, the region's medical equipment and biotech industries are also unlikely to make significant gains from the advent of universal access. On the other hand, the move to employer-worker mandates should require fewer adjustments in New England than elsewhere in the country.[40]

Over the longer term, New England's relatively expensive health care industries are likely to experience above-average pressures to cut costs— whether these pressures stem from national legislation or from private sector developments already under way.[41] The flip side, of course, is that the health care sector's loss represents a gain to health care purchasers in the private sector and elsewhere. To the extent that New England's health care industries manage to achieve above-average cost reductions, New England state governments and New Englanders in the private sector will enjoy about half the savings.

And, there of course is the rub because, according to estimates made for this article, New England's contribution to the increase in federal revenues and program savings associated with health reform will be considerably larger than the region's receipt of federal monies for premium subsidies and other new health care programs.[42] Although the outcome varies considerably by state, and, importantly, according to the assumptions made concerning the behavior of cross-state differences in health care costs, the redistribution involved could equal over 1 percent of a state's personal income. This general conclusion pertains whether or not cross-state differences in health care costs are assumed to narrow with universal access, but it is reinforced in the likely event that reform does encourage some convergence.

The conclusion that New England and the rest of the Northeast will make net contributions to health care reform in other parts of the country is hardly surprising; it reflects the region's status as a high-income, high-pay area with relatively generous/expensive Medicaid and Medicare programs.[43] If additional deficit spending is ruled out, and cutting unrelated federal spending is difficult, funding for new health care programs can only come from individuals with money in their pockets or from cuts in public health care programs. Given the political realities of the day and the positive association between per capita income, pay, consumption, and health care spending, any reform program that involves subsidizing low-income families' health insurance will require a redistribution of income from the Northeast to less wealthy regions, especially those where health care costs are high relative to income.

Antithetical in many ways, the defense and health care industries have some things in common. After all, who could lament the end of the Cold War and the opportunity to cut defense spending? Yet the negative consequences for the New England economy are evident. Similarly, providing all U.S. citizens with access to appropriate health care and reducing inefficiencies in our health care system are important goals. Yet the employment consequences for New England could be significant. Although actual layoffs

[40] Likewise, the region may also experience relatively little disruption from the increased emphasis on managed care, since HMO participation is already high in New England.

[41] Of course, Maine, New Hampshire and Vermont have below-average health care costs, but the regional average is dominated by costs in the southern states.

[42] Some health reform bills currently before the Congress increase federal funding for medical education and research. Increased federal spending for these purposes would benefit New England and could help to offset the income shifts required for the premium subsidies.

[43] Nor, according to some observers, is this outcome entirely inappropriate, particularly since citizens in some lower-income states have probably made net contributions to funding this region's costly Medicaid programs in years past.

"feel" different from the loss of jobs that fail to materialize in the future, over time the impact is similar.

In a dynamic sense, moreover, reform could affect the region by reducing incentives to invest in health-related research. Even with some funding for basic research guaranteed, the returns on successful new products are likely to appear smaller than expected not long ago.[44] Historically—in defense, computers, communications, and health—this region has depended on a nexus of educational institutions and entrepreneurs performing the basic and applied research that spawns important new products. As other regions trying to mimic New England's success in this regard have found to their chagrin, the development of such dynamic networks is a cumulative process (Rosegrant and Lampe 1992). Thus, the continued health of the region's innovative clusters must remain a major goal for New England's leaders.

It is especially important to this region, then, that we "keep our eyes on the prize"—the savings that health reform promises over the long term. Although the regional income shifts linked to reform may slow growth in New England relative to other parts of the country, within the decade health reform will provide net savings to the nation. As part of the nation, New England will benefit from the additional investment and growth these savings permit. Recognizing the challenges in store, New England leaders and taxpayers must use our share of these savings in ways that promote the economic vitality of the region.

[44] Hopefully, the biotech industry may also have reached a point where new products can be developed more efficiently and at less cost.

Note: A technical appendix will be available in the fall on request to the Research Library—D, Federal Reserve Bank of Boston, P.O. Box 2076, Boston, MA 02106-2076.

Appendix Table 1

Estimated Federal Outlays and Revenues in 2004, Assuming FY1991 Variations in State Health Care Costs[a]

Billions of 2004 Dollars

	Outlays				Revenues	
Region/State	Subsidies	Drug Benefit	Long-Term Care	Total	Medicare, Employed Beneficiary Savings	Medicare, Program Savings
United States[b]	173.000	28.000	40.000	241.000	10.000	77.000
New England	8.663	1.577	2.303	12.542	.571	4.401
Connecticut	1.306	.398	.591	2.295	.134	1.094
Maine	.611	.146	.246	1.003	.054	.340
Massachusetts	5.473	.727	1.008	7.208	.270	2.232
New Hampshire	.513	.113	.152	.778	.049	.261
Rhode Island	.530	.134	.206	.870	.034	.343
Vermont	.229	.059	.101	.389	.031	.131
Middle Atlantic	28.385	4.635	6.770	39.790	1.580	14.386
New Jersey	3.720	.918	1.298	5.936	.302	2.504
New York	13.352	2.078	2.970	18.400	.681	6.756
Pennsylvania	11.312	1.638	2.503	15.453	.598	5.126
East North Central	23.314	4.743	6.662	34.719	1.534	13.627
Illinois	6.614	1.277	1.816	9.706	.444	3.612
Indiana	2.657	.624	.956	4.238	.148	1.625
Michigan	5.418	.996	1.391	7.805	.280	3.140
Ohio	5.849	1.263	1.708	8.820	.387	3.891
Wisconsin	2.776	.583	.792	4.150	.275	1.359
West North Central	12.999	2.186	2.755	17.940	.823	5.153
Iowa	1.690	.380	.485	2.556	.184	.845
Kansas	1.404	.305	.336	2.045	.141	.763
Minnesota	3.561	.489	.554	4.604	.186	.985
Missouri	4.115	.640	.841	5.597	.160	1.762
Nebraska	1.020	.198	.279	1.497	.078	.415
North Dakota	.668	.081	.130	.880	.026	.191
South Dakota	.540	.092	.129	.761	.048	.191
South Atlantic[c]	33.614	5.270	7.391	46.275	1.835	13.820
Delaware	.490	.073	.091	.655	.025	.206
Florida	12.456	2.144	3.350	17.950	.636	5.514
Georgia	4.839	.589	.922	6.350	.263	1.690
Maryland	2.662	.467	.582	3.711	.207	1.519
North Carolina	3.117	.728	1.062	4.907	.351	1.702
South Carolina	1.670	.359	.336	2.366	.101	.791
Virginia	2.375	.601	.589	3.566	.187	1.529
West Virginia	1.725	.239	.379	2.343	.048	.620
East South Central	12.915	1.722	2.590	17.227	.613	4.887
Alabama	3.477	.466	.638	4.581	.112	1.387
Kentucky	3.034	.416	.657	4.107	.165	1.176
Mississippi	1.426	.285	.453	2.165	.079	.754
Tennessee	4.977	.555	.842	6.374	.256	1.571
West South Central	19.032	2.657	3.832	25.521	1.003	7.570
Arkansas	1.770	.311	.448	2.530	.117	.821
Louisiana	4.056	.418	.591	5.065	.146	1.491
Oklahoma	1.760	.379	.526	2.665	.104	.972
Texas	11.446	1.548	2.267	15.261	.635	4.287
Mountain[d]	4.374	.954	1.364	6.693	.418	2.162
Arizona[e]	2.204	.438	.681	3.323	.199	1.121
Colorado	1.750	.300	.479	2.529	.138	.680
Idaho	.265	.109	.160	.534	.056	.225
Montana	.345	.095	.132	.572	.049	.225
Nevada	.618	.122	.154	.893	.034	.311
New Mexico	.986	.148	.199	1.333	.051	.332
Utah	.320	.137	.188	.645	.054	.285
Wyoming	.090	.043	.053	.186	.035	.103
Pacific	27.500	3.819	5.651	36.970	1.424	9.873
Alaska	.212	.021	.023	.256	.009	.061
California	23.481	2.810	4.289	30.581	1.016	7.752
Hawaii	.536	.114	.160	.810	.053	.191
Oregon	1.152	.354	.463	1.969	.112	.676
Washington	2.119	.520	.716	3.355	.233	1.193

[a]Range from 0.66 to 1.28, where 1.00 = U.S. average (Table 2). [b]Includes District of Columbia and Arizona. [c]Includes District of Columbia. [d]Excludes Arizona. [e]Arizona does not participate in the Medicaid program; it operates an alternative program under a federal waiver.

Source: Calculated by authors using data from HCFA, diskettes with state health expenditures and Medicaid expenditures; U.S. Bureau of the Census, *Current Population Survey*; Internal Revenue Service, *Statistics of Income Bulletin*; U.S. Department of Defense, *Atlas/Data Abstract for the United States and Selected Areas*; The Tobacco Institute, *The Tax Burden on Tobacco*; Congressional Budget Office (1994).

Appendix Table 1 continued

Estimated Federal Outlays and Revenues in 2004, Assuming FY1991 Variations in State Health Care Costs[a]

Billions of 2004 Dollars

Revenues							
Medicaid, Discontinued Coverage	Medicaid, Premium Limits	Income and Payroll Tax	Tobacco Tax	Department of Defense	Federal Employees Health Benefits	Department of Veterans Affairs	Total
48.000	45.000	34.000	10.000	4.000	8.000	5.000	241.000
3.069	2.650	2.235	.571	.100	.324	.246	14.167
1.122	.224	.732	.129	.021	.076	.054	3.587
.367	.315	.129	.058	.025	.048	.026	1.361
.993	1.511	1.002	.246	.035	.130	.109	6.529
.164	.114	.171	.068	.003	.038	.026	.893
.331	.350	.134	.044	.015	.015	.019	1.285
.091	.136	.067	.027	.001	.016	.013	.512
8.702	9.001	6.126	1.585	.245	.938	.704	43.267
1.046	1.427	1.532	.356	.065	.211	.142	7.584
6.150	5.846	2.992	.781	.079	.362	.289	23.936
1.506	1.728	1.603	.449	.102	.364	.273	11.748
8.792	7.148	5.640	1.722	.261	.855	.840	40.418
2.004	2.104	1.814	.432	.093	.262	.207	10.973
1.782	1.053	.666	.251	.040	.118	.113	5.796
1.141	1.790	1.232	.398	.033	.136	.185	8.334
3.219	1.375	1.334	.453	.086	.238	.229	11.214
.646	.825	.594	.188	.008	.101	.105	4.100
3.577	2.229	2.112	.692	.191	.409	.359	15.544
.508	.489	.307	.109	.004	.046	.052	2.543
.351	.292	.306	.089	.053	.053	.050	2.099
.791	.647	.579	.175	.007	.041	.089	3.501
1.378	.323	.603	.216	.064	.166	.109	4.781
.262	.223	.182	.057	.027	.045	.031	1.320
.144	.130	.063	.022	.022	.027	.012	.638
.143	.125	.070	.025	.014	.030	.015	.662
7.254	7.409	5.758	1.856	1.296	2.191	.972	42.392
.082	.113	.103	.036	.012	.016	.015	.606
1.485	1.865	1.862	.616	.203	.290	.330	12.801
.960	1.479	.776	.259	.186	.257	.130	6.000
.761	.746	.799	.174	.138	.653	.097	5.094
1.639	.967	.726	.287	.212	.142	.133	6.159
.921	.702	.338	.139	.107	.088	.075	3.262
.713	.630	.890	.253	.376	.570	.144	5.291
.514	.640	.155	.074	.004	.052	.042	2.148
2.840	4.095	1.474	.700	.250	.504	.310	15.673
.624	.711	.394	.169	.083	.143	.083	3.706
.741	1.366	.351	.216	.093	.105	.077	4.290
.494	.734	.187	.100	.044	.090	.049	2.530
.980	1.284	.542	.216	.030	.166	.101	5.147
6.687	5.041	3.081	1.038	.490	.808	.490	26.206
.546	.623	.195	.103	.021	.066	.048	2.540
2.446	1.595	.396	.173	.058	.133	.064	6.502
.885	.454	.313	.113	.095	.112	.067	3.115
2.809	2.369	2.177	.648	.316	.496	.310	14.049
1.688	1.515	1.189	.334	.242	.470	.224	8.242
.140	.163	.404	.124	.060	.125	.089	2.426
.357	.460	.453	.110	.098	.155	.079	2.530
.316	.099	.097	.035	.012	.030	.022	.891
.113	.128	.074	.026	.011	.053	.018	.696
.245	.075	.210	.071	.019	.029	.034	1.027
.202	.474	.137	.039	.047	.092	.035	1.409
.388	.210	.160	.038	.048	.089	.026	1.299
.067	.071	.057	.016	.009	.022	.010	.389
5.252	5.750	5.981	1.377	.864	1.375	.768	32.664
.081	.108	.108	.027	.051	.050	.011	.506
4.001	4.410	4.600	1.034	.564	.938	.536	24.853
.142	.089	.179	.024	.119	.088	.021	.907
.544	.369	.339	.117	.007	.111	.078	2.353
.483	.774	.756	.175	.123	.188	.121	4.046

Appendix Table 2

Estimated Federal Outlays and Revenues in 2004, Assuming a Narrowed Range of State Health Care Costs[a]

Billions of 2004 Dollars

	Outlays				Revenues	
Region/State	Subsidies	Drug Benefit	Long-Term Care	Total	Medicare, Employed Beneficiary Savings	Medicare, Program Savings
United States[b]	173.000	28.000	40.000	241.000	10.000	77.000
New England	6.946	1.577	2.303	10.826	.571	4.401
Connecticut	.937	.398	.591	1.926	.134	1.094
Maine	.911	.146	.246	1.303	.054	.340
Massachusetts	3.542	.727	1.008	5.276	.270	2.232
New Hampshire	.632	.113	.152	.897	.049	.261
Rhode Island	.507	.134	.206	.847	.034	.343
Vermont	.416	.059	.101	.576	.031	.131
Middle Atlantic	23.548	4.635	6.770	34.952	1.580	14.386
New Jersey	3.702	.918	1.298	5.917	.302	2.504
New York	10.410	2.078	2.970	15.458	.681	6.756
Pennsylvania	9.436	1.638	2.503	13.577	.598	5.126
East North Central	25.092	4.743	6.662	36.497	1.534	13.627
Illinois	6.957	1.277	1.816	10.050	.444	3.612
Indiana	3.291	.624	.956	4.871	.148	1.625
Michigan	5.583	.996	1.391	7.970	.280	3.140
Ohio	6.033	1.263	1.708	9.003	.387	3.891
Wisconsin	3.228	.583	.792	4.602	.275	1.359
West North Central	13.304	2.186	2.755	18.245	.823	5.153
Iowa	2.207	.380	.485	3.072	.184	.845
Kansas	1.683	.305	.336	2.324	.141	.763
Minnesota	3.281	.489	.554	4.324	.186	.985
Missouri	3.751	.640	.841	5.232	.160	1.762
Nebraska	1.185	.198	.279	1.662	.078	.415
North Dakota	.571	.081	.130	.783	.026	.191
South Dakota	.626	.092	.129	.847	.048	.191
South Atlantic[c]	31.409	5.270	7.391	44.069	1.835	13.820
Delaware	.423	.073	.091	.588	.025	.206
Florida	10.929	2.144	3.350	16.424	.636	5.514
Georgia	4.844	.589	.922	6.355	.263	1.690
Maryland	2.559	.467	.582	3.608	.207	1.519
North Carolina	4.254	.728	1.062	6.044	.351	1.702
South Carolina	2.481	.359	.336	3.177	.101	.791
Virginia	2.984	.601	.589	4.174	.187	1.529
West Virginia	1.868	.239	.379	2.486	.048	.620
East South Central	13.991	1.722	2.590	18.304	.613	4.887
Alabama	3.648	.466	.638	4.752	.112	1.387
Kentucky	3.546	.416	.657	4.619	.165	1.176
Mississippi	2.278	.285	.453	3.016	.079	.754
Tennessee	4.520	.555	.842	5.917	.256	1.571
West South Central	21.802	2.657	3.832	28.290	1.003	7.570
Arkansas	2.187	.311	.448	2.947	.117	.821
Louisiana	3.821	.418	.591	4.830	.146	1.491
Oklahoma	2.552	.379	.526	3.457	.104	.972
Texas	13.241	1.548	2.267	17.057	.635	4.287
Mountain[d]	6.188	.954	1.364	8.506	.418	2.162
Arizona[e]	2.628	.438	.681	3.747	.199	1.121
Colorado	1.918	.300	.479	2.698	.138	.680
Idaho	.714	.109	.160	.983	.056	.225
Montana	.588	.095	.132	.815	.049	.225
Nevada	.716	.122	.154	.992	.034	.311
New Mexico	1.305	.148	.199	1.652	.051	.332
Utah	.700	.137	.188	1.025	.054	.285
Wyoming	.247	.043	.053	.343	.035	.103
Pacific	28.093	3.819	5.651	37.563	1.424	9.873
Alaska	.234	.021	.023	.278	.009	.061
California	22.878	2.810	4.289	29.977	1.016	7.752
Hawaii	.533	.114	.160	.807	.053	.191
Oregon	1.747	.354	.463	2.564	.112	.676
Washington	2.701	.520	.716	3.937	.233	1.193

[a]Range from 0.90 to 1.10, where 1.00 = U.S. average. [b]Includes District of Columbia and Arizona. [c]Includes District of Columbia. [d]Excludes Arizona. [e]Arizona does not participate in the Medicaid program; it operates an alternative program under a federal waiver.

Source: Calculated by authors using data from HCFA, diskettes with state health expenditures and Medicaid expenditures; U.S. Bureau of the Census, *Current Population Survey*; Internal Revenue Service, *Statistics of Income Bulletin*; U.S. Department of Defense, *Atlas/Data Abstract for the United States and Selected Areas*; The Tobacco Institute, *The Tax Burden on Tobacco*; Congressional Budget Office (1994).

Appendix Table 2 continued

Estimated Federal Outlays and Revenues in 2004, Assuming a Narrowed Range of State Health Care Costs[a]

Billions of 2004 Dollars

Revenues							
Medicaid, Discontinued Coverage	Medicaid, Premium Limits	Income and Payroll Tax	Tobacco Tax	Department of Defense	Federal Employees Health Benefits	Department of Veterans Affairs	Total
48.000	45.000	34.000	10.000	4.000	8.000	5.000	241.000
3.069	2.650	2.235	.571	.100	.324	.246	14.167
1.122	.224	.732	.129	.021	.076	.054	3.587
.367	.315	.129	.058	.025	.048	.026	1.361
.993	1.511	1.002	.246	.035	.130	.109	6.529
.164	.114	.171	.068	.003	.038	.026	.893
.331	.350	.134	.044	.015	.015	.019	1.285
.091	.136	.067	.027	.001	.016	.013	.512
8.702	9.001	6.126	1.585	.245	.938	.704	43.267
1.046	1.427	1.532	.356	.065	.211	.142	7.584
6.150	5.846	2.992	.781	.079	.362	.289	23.936
1.506	1.728	1.603	.449	.102	.364	.273	11.748
8.792	7.148	5.640	1.722	.261	.855	.840	40.418
2.004	2.104	1.814	.432	.093	.262	.207	10.973
1.782	1.053	.666	.251	.040	.118	.113	5.796
1.141	1.790	1.232	.398	.033	.136	.185	8.334
3.219	1.375	1.334	.453	.086	.238	.229	11.214
.646	.825	.594	.188	.008	.101	.105	4.100
3.577	2.229	2.112	.692	.191	.409	.359	15.544
.508	.489	.307	.109	.004	.046	.052	2.543
.351	.292	.306	.089	.053	.053	.050	2.099
.791	.647	.579	.175	.007	.041	.089	3.501
1.378	.323	.603	.216	.064	.166	.109	4.781
.262	.223	.182	.057	.027	.045	.031	1.320
.144	.130	.063	.022	.022	.027	.012	.638
.143	.125	.070	.025	.014	.030	.015	.662
7.254	7.409	5.758	1.856	1.296	2.191	.972	42.392
.082	.113	.103	.036	.012	.016	.015	.606
1.485	1.865	1.862	.616	.203	.290	.330	12.801
.960	1.479	.776	.259	.186	.257	.130	6.000
.761	.746	.799	.174	.138	.653	.097	5.094
1.639	.967	.726	.287	.212	.142	.133	6.159
.921	.702	.338	.139	.107	.088	.075	3.262
.713	.630	.890	.253	.376	.570	.144	5.291
.514	.640	.155	.074	.004	.052	.042	2.148
2.840	4.095	1.474	.700	.250	.504	.310	15.673
.624	.711	.394	.169	.083	.143	.083	3.706
.741	1.366	.351	.216	.093	.105	.077	4.290
.494	.734	.187	.100	.044	.090	.049	2.530
.980	1.284	.542	.216	.030	.166	.101	5.147
6.687	5.041	3.081	1.038	.490	.808	.490	26.206
.546	.623	.195	.103	.021	.066	.048	2.540
2.446	1.595	.396	.173	.058	.133	.064	6.502
.885	.454	.313	.113	.095	.112	.067	3.115
2.809	2.369	2.177	.648	.316	.496	.310	14.049
1.688	1.515	1.189	.334	.242	.470	.224	8.242
.140	.163	.404	.124	.060	.125	.089	2.426
.357	.460	.453	.110	.098	.155	.079	2.530
.316	.099	.097	.035	.012	.030	.022	.891
.113	.128	.074	.026	.011	.053	.018	.696
.245	.075	.210	.071	.019	.029	.034	1.027
.202	.474	.137	.039	.047	.092	.035	1.409
.388	.210	.160	.038	.048	.089	.026	1.299
.067	.071	.057	.016	.009	.022	.010	.389
5.252	5.750	5.981	1.377	.864	1.375	.768	32.664
.081	.108	.108	.027	.051	.050	.011	.506
4.001	4.410	4.600	1.034	.564	.938	.536	24.853
.142	.089	.179	.024	.119	.088	.021	.907
.544	.369	.339	.117	.007	.111	.078	2.353
.483	.774	.756	.175	.123	.188	.121	4.046

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