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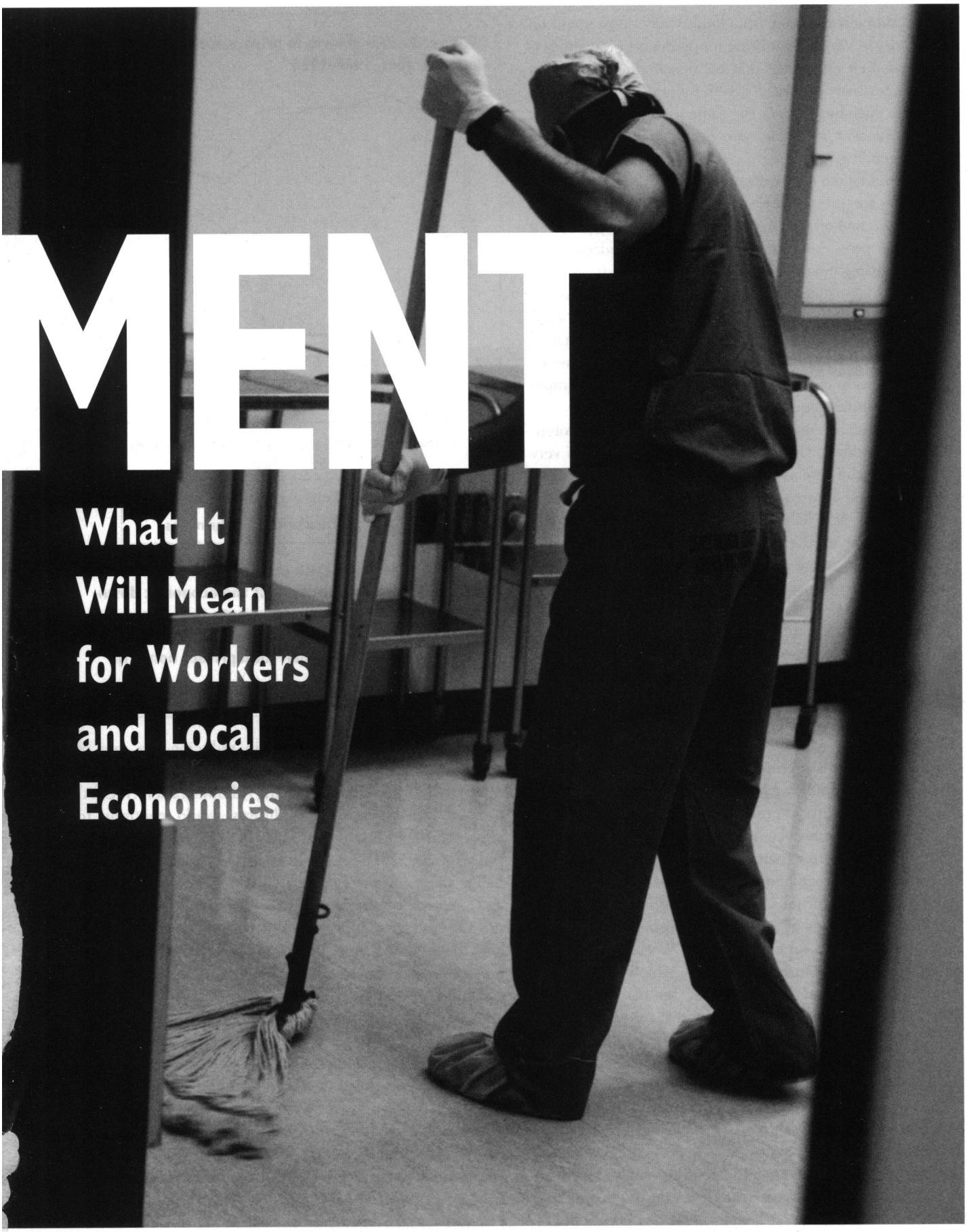
Health Cost CONTAIN

SYNOPSIS

AFTER DECADES OF RAPID growth, the rate of increase in health services spending appears to be moderating. Although a slowdown in health expenditure growth would release resources for other uses in the economy, concerns have been raised about the effects of a spending slowdown on health workers and regional economies. Based on projections carried out by the Bureau of Labor Statistics during the health reform debate and on state health sector employment data, the author concludes that health workers may experience costly dislocation as health spending growth slows, and some regions may be more affected than others. However, the appropriate response is a general economic policy supporting economic growth and full employment: policy with regard to health expenditure growth cannot be held hostage to concerns about employment effects.

THE MEDIA ARE TRUMPETING a respite from exploding health expenditures. Although Americans spent a staggering total of one trillion dollars on health services in 1996, this was only 4.4% greater than 1995 spending, representing the slowest growth in decades.[1] Adjusted for inflation, 1996 spending was up only 1.9% from 1995, continuing a dramatic downward trend in the rate of growth in real spending.

The proportion of our Gross Domestic Product (GDP) devoted to health services, once expected to soar to one-fifth or even higher by the end of this century, has now held steady at 13.6% for four years in a row.[1] After countless attempts to control the growth of health spending, a combination of market developments and public policy initiatives appears to be reining in the rate of growth in health spending. The result should mean more take-home pay in workers' pockets, more discretionary income for retirees, and less pressure on public budgets.



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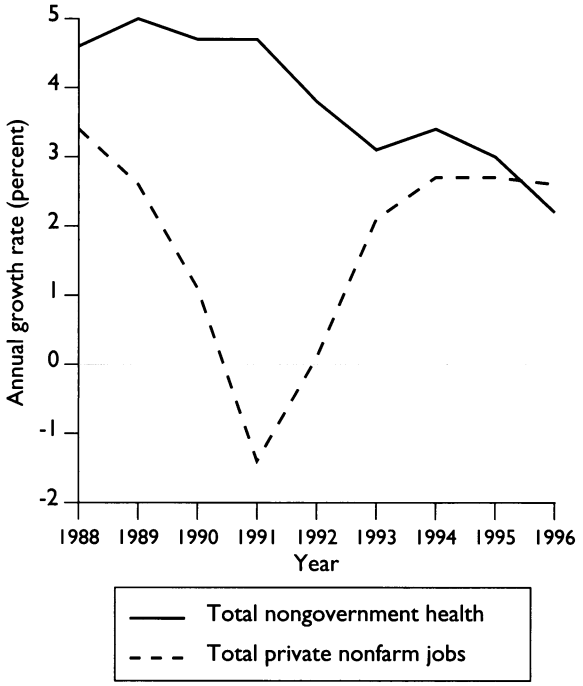
What It Will Mean for Workers and Local Economies

But this silver lining has a cloud. Every dollar spent on health care is a dollar of income for producers of health services and their employees and for the producers of goods and services that supply the health industry. Lower rates of growth in spending are not the same as spending cuts, but slowing the flow of dollars into health and thus diverting health spending to other uses could impose hardships on workers and health enterprises. Already, health care workers are feeling the pressures of a more competitive system. In some areas, laid-off hospital workers are fighting for their jobs in the press, sounding alarms about the adequacy of hospital staffing. Some regional economic analysts are forecasting dire aftershocks of hospital downsizing.[2–4] There is growing recognition that the health sector has become a significant source of jobs for Americans and a vital mainstay of community economic health. If we succeed in containing future expansion of health services, what will be the implications for workers and for regional economies?

The evidence suggests a future for current and potential health workers that is far from grim: it appears very unlikely that the demand for health workers will fall under any conceivable future scenario for health spending. However, the mix and location of jobs must shift with the reconfiguration of the health sector. As in any rapidly changing sector, some workers and some regions will bear disproportionate transition costs. Policy makers should be prepared to consider their needs but national goals should not be held hostage to them as the nation pursues more rational use of health resources.

Figure: Annual growth in private sector employment, 1988–1996



Annual growth in health employment remained steady and strong throughout the economic downturn of the early 1990s, but growth then began to slow. By 1996, nongovernment health jobs were growing more slowly than total private nonfarm jobs.

CURRENT TRENDS IN HEALTH SPENDING, EMPLOYMENT, AND EARNINGS

The health services sector is a major employer. Excluding government employees, over 9.5 million workers—almost one in ten private sector employees in the United States—work to produce health services.[5] On average, health jobs pay better than those in the rest of the economy: in 1996, average hourly earnings for non-supervisory private health sector jobs reached $12.85 per hour, 8.8% higher than earnings of jobs in the non-health portion of non-farm private sector employment.[5] Workers' pay is part of our vast expenditures for health, which have grown faster than the total U.S. economy for many years. In 1996, over one-eighth of the productive resources of our economy, 13.5 cents out of every dollar's worth of inputs (labor and capital), were used to produce health services, up from only 5.1 cents of every dollar of GDP in 1960.[1] While this enormous increase in expenditures has provided substantial health benefits, neither private purchasers nor public programs have been willing to accept out-of-control growth in health spending. Massive growth in health care expenditures year after year has been a fact of American life, and cost containment has been a policy goal for decades. Yet progress in reducing the rate of spending growth has come as a surprise: as recently as 1995, the Health Care Financing Administration (HCFA) predicted that health expenditures would continue to grow at a rapid rate and would reach 17.9% of GDP by the year 2005.[6] The 4.4% growth rate for 1996 was well below the 7.9% projected by HCFA less than two years ago and even below the most recent baseline estimates of the Congressional Budget Office, which projected 1996 growth at 5.3%.[7] Analysts have been hesitant to greet these historical low rates as permanent, and projections continue to show future rates of growth in the 8% to 10% annual range. But the growth of private and Medicaid managed care and the Medicare cost containment measures in the Balanced Budget Act of 1997 are likely to reinforce the downward pressure on costs.

The slowdown in growth in health spending has led to reverses in long-standing trends in health sector employment. Between 1988 and 1996, private health sector employment grew at a 3.7% average annual rate, substantially faster than the 1.6% annual growth in jobs in the private non-farm economy as a whole.[5,8] The health sector

was responsible for almost one-fifth of the net new jobs added to the private economy between 1988 and 1996: the health sector added 2.4 million jobs while total private employment grew by 12.3 million over this period. Moreover, health sector employment is insulated from the business cycle and has grown steadily over time regardless of short-run downturns in the economy.

But demand for health workers is driven by health spending, and health sector employment cannot maintain its rapid, steady upward pace as the expenditure growth slows. The latest available employment statistics show that total non-government health jobs grew only 2.2% between 1995 and 1996, slightly slower than total jobs for the private non-farm economy, which grew 2.6% (see Figure).[5] The mix of jobs is changing, consistent with shifts in spending within the health sector. Table 1 shows decreased growth in hospital jobs, both government and non-government, and strong job growth in outpatient medical care and in home health care. In addition, pay for health workers is not increasing as rapidly as in the past, a further signal of slackening demand.[9] Job composition is in part responsible for this effect: employment shifts within the health sector have been toward lower-paying sub-sectors and jobs.[7]

Effects on Employment of Slower Growth in Health Spending

Slowing job growth and shifts within the health sector are early warning signals of turbulence ahead. But how large a problem will slowing growth be for health workers? The occupational forecasting model developed by the Bureau of Labor Statistics (BLS) can help us anticipate any major effects on health sector jobs of a long-term slowdown in health expenditure growth. Disseminated to educators and career guidance counselors, BLS projections by occupation and industry form the basis for career and training plans throughout the economy.[9]

The BLS generates forecasts by occupation and industry of the number of jobs that will exist at a given point in the future by predicting the occupational requirements of 187 industries in the American economy. This is based on an input-output model developed by the Bureau of Economic Analysis (BEA) of the Department of Commerce.[10] This input-output model recognizes that for one industry to produce goods or services for final demand (goods and services bought by consumers and governments and capital goods bought by producers) requires both (*a*) labor and other inputs employed directly by that industry and (*b*) the inputs purchased by that industry to use in production, called *intermediate* inputs.

In the case of health services, for example, the BEA model shows the value of labor and capital and of production purchased from non-health sectors required to produce a dollar's worth of health services. This recognizes that health producers buy uniforms from the apparel industry, paper from the paper industry, telephone services from the communications industry, vehicles from the auto industry, and so on. These interlocking demands ripple

Table 1. Private health services employment and employment in government hospitals, 1988, 1996, and rate of growth 1988–1989 and 1995–1996

Setting	1988 Number of jobs	1988 Percent of total	1996 Number of jobs	1996 Percent of total	Annual growth 1988–1989 Percent	Annual growth 1995–1996 Percent
Hospitals						
Private hospitals	3294	39.2	3814	35.5	4.4	0
Federal hospitals	241	2.9	231	2.2	-5.8	0.4
State hospitals	446	5.3	377	3.5	-0.9	-1.2
Local government hospitals	619	7.4	660	6.1	2.1	-3.7
Other health services						
Medical offices and clinics	1199	14.3	1678	15.6	5.8	5.7
Dental offices	484	5.8	609	5.7	3.3	1.7
Nursing homes	1311	15.6	1732	16.1	3.4	2.3
Home health services	216	2.6	665	6.2	13.0	9.1
Other nongovernment health services	601	7.1	970	9.0	9.3	4.8
Total	8411	100.0	10,738	100.0	4.2	2.0

NOTE: All percentages do not add to 100 due to rounding errors.
SOURCES: References 5 and 8.

through the economy: the paper industry also buys goods and services from the telephone industry, and vice versa.

The BEA model applies this logic to the entire economy in order to estimate the total production of each industry that will be needed for a given amount and mix of final demand. The model is updated every five years using industry data. (The latest version, based on the way goods and services were produced in 1992, was released in late 1997; the estimates discussed here are based on the 1987 model.) The model can take new estimates of spending by consumers and governments and forecast the value of production by industry.

To use the results of the BEA model to generate occupational forecasts, the BLS has computed factors that show how many jobs are associated with a dollar's worth of output for each of 187 industry groups and the occupational mix of employment in each industry.[10] These factors are updated periodically for trends in productivity and occupational mix. Using projected values for production for each industry group, the BLS can then project how many workers will be employed in each industry, for 1027 occupational categories. When the projected number of workers in a given occupational category, for example, clerical workers, is added up for every industry, the result is a projection of future demand for workers by occupation for the whole economy.

During the health reform debate, analysts at the BLS used this occupational forecasting model to anticipate the employment implications of a slowdown in the growth in health spending that might accompany national cost containment efforts.[11] They did this by projecting jobs by occupation for the year 2005 for two scenarios representing different rates of growth for the health sector. Both scenarios assumed that economic growth for the total economy will be 2.1% per year, a rate consistent with past growth. The first, or "historical growth," scenario assumed that health spending would follow the historical trend, with real health spending (expenditures adjusted for inflation) assumed to grow at a 3.2% annual rate. The occupational projections model forecast an increase in health jobs of about five million between 1990 and 2005 under the "historical growth" scenario (Table 2). In contrast, the "slow health growth" scenario used a 2.0% annual increase for health sector spending, assuming a slowdown in the growth rate. This "slow health growth" scenario, envisioned by Pfleeger and Wallace in 1993, is tracking well with current trends: although a 2.0% health spending growth rate would have been considered an astounding cost-containment achievement just a few years ago, the actual 1996 health spending growth, adjusted for inflation, was even slightly lower.[1]

The BLS analysts assumed for the "slow health growth" scenario that the slowdown would occur as it in fact appears to be happening—with a substantial slowdown in growth in hospital spending, shifts from inpatient to outpatient and home-delivered services, and steady growth in the provision of the nursing home care needed by the aging population. The effect of these shifts on health sector jobs was projected to be substantial: under the "slow health growth" scenario, 2.3 million fewer health sector jobs would be available for the workers of 2005 than under the "historical growth" scenario.

But even with the slowdown in health job growth projected under the "slow health growth" scenario, health sector jobs were still projected to grow at an annual rate of 1.6% from 1990 through 2005, more rapidly than was pro-

Table 2. Projected employment for the year 2005, Bureau of Labor Statistics model

	Health industries			*Other industries*			*Total*		
	Number of jobs	*Difference from 1990*	*Average annual growth 1990–2005*	*Number of jobs*	*Difference from 1990*	*Average annual growth 1990–2005*	*Number of jobs*	*Difference from 1990*	*Average annual growth 1990–2005*
			Percent			*Percent*			*Percent*
1990 employment	9752	—	—	112,276	—	—	122,028	—	—
Historical growth scenario	14,705	4953	2.8	132,777	20,501	1.1	147,482	25,454	1.3
Slow health growth scenario	12,362	2610	1.6	134,440	22,164	1.2	146,802	24,774	1.2
Difference between scenarios in health sector growth	-2343	—	—	1663	—	—	-680		

NOTE: For the "historical growth" scenario, the Bureau of Labor Statistics assumed that the health sector would grow at 3.2% per year, and for the "slow health growth" scenario, the health sector was assumed to grow at 2.0% per year. For both scenarios, total final demand was assumed to grow at 2.1% per year.
SOURCE: Reference 11.

Table 3. Projected employment for the year 2005 for selected health occupations, Bureau of Labor Statistics model

Occupation	1990 actual	Percent of selected health occupations	2005: slow health growth scenario	Annual percent growth 1990–2005	2005: historical health growth scenario	Annual percent growth 1990–2005	Difference: historical vs. slow health growth scenarios
Registered nurses	1730	33.5	2216	1.7	2601	2.8	-385
Physicians	528	10.2	666	1.6	751	2.4	-85
Licensed practical nurses	613	11.9	804	1.8	920	2.7	-116
Clinical lab technologists and technicians	248	4.8	302	1.3	329	1.9	-27
Radiologic technologists and technicians	151	2.9	222	2.6	264	3.8	-42
Medical secretaries	214	4.1	290	2.0	341	3.2	-51
Nursing aides, orderlies, and attendants	1215	23.5	1632	2.0	1903	3.0	-271
Home health aides	303	5.9	839	7.0	827	6.9	12
Medical assistants	164	3.2	266	3.3	308	4.3	-42
Total, selected health occupations	5166	100.0	7237	2.3	8244	3.2	-1007
Total, all occupations	122,028	—	146,802	1.2	147,482	1.3	-680

NOTE: For the "historical growth" scenario, the Bureau of Labor Statistics assumed that the health sector would grow at 3.2% per year, and for the "slow health growth" scenario, the health sector was assumed to grow at 2.0% per year. For both scenarios, total final demand was assumed to grow at 2.1% per year.
SOURCE: Reference 11.

jected for total jobs in the economy. According to these projections, a full 2.6 million jobs would be added in the health sector between 1990 and 2005 and growth in other sectors would also occur due to continued demand for intermediate inputs by health industry producers.

More important, the model highlights an economic reality: a slowdown in spending for health services would allow more of the economy's growing productive capacity to become available for other uses. A "health dividend" of resources freed by lower growth in health spending would be diverted to other goods and services that the public wants, so other types of production will take up the slack left by health spending. In the BLS model, this is shown in the growth of jobs outside the health sector. Employment outside the health sector, expected to grow by about 20.5 million jobs between 1990 and 2005 in the "historical growth" scenario would grow by 22.2 million jobs if health sector demand slowed down as assumed in the "slow health growth" scenario, for a net increase of almost 1.7 million jobs by 2005. (Because output per worker is higher on average in other industries than in health services [that is, slightly more worker hours are needed to produce a dollar's worth of health services than to produce other goods and services], this increase in non-health jobs would not fully compensate for the loss in health jobs: the total jobs projected for 2005 for the "slow health growth" scenario were 680,000 below the "historical growth" projections, representing nearly a half percent of total employment.)

By applying occupational coefficients to these estimates of employment by industry, the BLS estimated employment by occupation for the year 2005 under both scenarios (Table 3). (Industries outside the health sector employ some workers in these occupations—for example, industrial nurses and physicians—and jobs in health occupations are only a portion of the jobs in the health sector. Thus, under either scenario, the projected growth for the selected occupations as a group differs from projected growth in total health sector jobs.)

The model projections imply that the impact on employment would be felt most strongly by registered and licensed practical nurses, with 385,000 and 116,000 fewer jobs in 2005 than if strong health growth continued, but these occupations were still projected to grow at close to 2% annually over this period. Employment of lower skilled workers—for example, nursing aides, orderlies, and attendants—was predicted to grow at about 2% annually, instead of the over 3% rate that would hold if health spending growth continued at a rapid pace. Because the "slow health growth" scenario assumed that a shift from inpatient to home-based care would accompany cost containment efforts, the model predicts that home health aide employment will grow at a slightly faster rate under the "slow health growth scenario" than under the "historical growth scenario," with greater employment predicted for 2005 than if health spending continued to grow at its historical rate.

In short, the 1993 BLS projections showed that slower health sector growth would lead to the creation of fewer new jobs over the period from 1990 to 2005 than if spending growth continued unabated. But because demand for health services will continue to grow, if only at a slower pace, employment was not projected to decline for any of these health occupations. This contains the reassuring message for current health workers that jobs in their occupations are unlikely to disappear as health spending growth slows. But it also represents a warning for young people seeking health careers that fewer new jobs will be available in the future.

At the same time, it is important to recognize that both the translation from spending to total jobs in the BLS model and the matrix used to divide those jobs by occupation are based on the relationship between health spending and jobs by type that existed in 1987. In every industry, shifts in production technology and product mix change these relationships over time, but advances in medical technology have always added new jobs to a growing base. Cost pressures are now moving care out of high tech, high-cost hospital beds, and changing financial arrangements are generating clerical and managerial jobs instead of direct care jobs. If health spending continues recent trends that match the "slow health growth" scenario projected by the BLS analysts, we can confidently use their results to project total health employment over the next decade. But the details—the mix of new jobs by occupation and sub-sector—may look quite different because of changing technology, new financing arrangements, and policy initiatives. For example, new pharmaceutical approaches to substance abuse could change the mix of personnel required to treat substance-abusing patients; Medicare cost containment measures in the Balanced Budget Act are likely to reduce the growth in demand for home health aides; and restrictions on funding for medical education could, by reducing the availability of house officers, increase hospitals' demand for advanced practice nurses.

Regional Concentration of Health Employment

If growth in health spending continues to moderate, we should also be concerned about the location of jobs. Even if the total number of jobs in each occupational category is maintained as health sector growth slows, some regions and local labor markets may be disproportionately affected by shifts in demand. The direct employer of one-tenth of all workers nationwide, the health sector plays an even larger role in the economic life of certain states and local labor markets. State-by-state differences in health employment as a proportion of total employment (see Table 4) suggest several kinds of dependence on health employment. Some urban economies have spawned large, complex medical centers, such as those found in Massachusetts, New York, and Pennsylvania. Employment in health-related industries, such as insurance and pharmaceuticals, is concentrated in certain states, including Indiana, Connecticut, New Jersey, and Minnesota. And health employment also stands out in areas such as West Virginia and North Dakota, where the smaller scale of non-health employment makes health services a dominant employer. Some analysts and advocates have raised the specter of regional recession caused by reductions in the rate of health spending. Are these special pleadings or realistic warnings?

As will be shown below, regional economies, even those with large health sectors, are unlikely to be badly harmed by health cost containment. But there are other, more individual, concerns: both the anticipated occupational shifts in the composition of health employment and the anticipated regional changes may be highly disruptive for some workers in some markets, even when local economies can adjust to these changes.

The effect of a slowdown in the growth of health spending on regional economic health is likely to be far less problematic than, for example, the effect of the defense spending cuts of the last decade. First, a slowdown in spending growth is not a cut in spending, and we do not expect absolute reductions in total health jobs in the nation as a whole. But also, unlike goods produced by the defense industry, health services are for the most part purchased and consumed locally, rather than being part of the *economic export base* of an area. Regional economists distinguish industries that provide the economic base of a region from (*a*) the general business suppliers that sell to these industries and (*b*) the industries that sell consumer goods and services to workers employed by these industries and their families and other residents.[12] Demand for the goods and services produced by economic base industries comes from outside the region and fuels non-base production activities through a multiplier effect. If national spending for a region's main export declines, the nation as a whole will spend more for other goods and services than for that export, but these dollars are lost to the region—they flow to the regions that produce the newly desired goods and services. A reduction in the economic base—a loss of auto manufacturing, for example, or defense production, or the closure of a university serving out-of-state students—reverberates throughout the local economy, affecting local jobs in industries from transportation and communications to retail trade and consumer services.

Most health production does not look like the typical economic base industry: a high proportion of the dollars flowing into the local health sector come from local residents instead of coming from outside the region. The difference is also indicated by employment statistics, which

Table 4. Health employment as a proportion of total employment, by state, 1994

Region/state	All health industries	Health services[a]	Health exports[b]
United States	9.88	9.13	0.75
New England			
Connecticut	11.32	10.15	1.16
Maine	9.93	9.76	0.17
Massachusetts	12.08	11.27	0.82
New Hampshire	9.00	8.69	0.30
Rhode Island	10.73	10.54	0.18
Vermont[c]	5.23	5.20	0.02
Middle Atlantic			
New Jersey	10.78	8.91	1.87
New York	11.45	10.66	0.79
Pennsylvania	12.21	10.96	1.24
South Atlantic			
Delaware	7.34	7.33	0.01
District of Columbia	8.41	8.39	0.03
Florida	10.30	9.82	0.48
Georgia	8.02	7.70	0.33
Maryland	9.95	9.43	0.52
North Carolina	8.62	7.78	0.84
South Carolina	6.77	6.48	0.29
Virginia	8.12	7.80	0.32
West Virginia	11.27	11.10	0.17
East South Central			
Alabama	9.57	9.52	0.05
Kentucky	10.06	9.75	0.31
Mississippi	8.25	8.15	0.11
Tennessee	9.85	9.15	0.70
West South Central			
Arkansas	8.93	8.89	0.04
Louisiana	11.46	11.27	0.18
Oklahoma	10.48	10.14	0.34
Texas	8.83	8.41	0.41
East North Central			
Illinois	9.19	8.64	0.55
Indiana	10.58	9.35	1.23
Michigan	9.63	8.93	0.70
Ohio	9.92	9.43	0.50
Wisconsin	9.39	8.65	0.74
West North Central			
Iowa	9.36	9.18	0.18
Kansas	10.31	10.07	0.24
Minnesota	10.48	9.18	1.30
Missouri	10.79	10.28	0.52
Nebraska	8.59	8.11	0.48
North Dakota	12.44	11.69	0.75
South Dakota	10.32	10.32	0.00
Mountain			
Arizona	7.59	7.40	0.19
Colorado	8.16	7.55	0.61
Idaho	7.24	7.21	0.03
Montana	9.77	9.73	0.04
Nevada	5.60	5.37	0.23
New Mexico	7.63	7.60	0.03
Utah	5.54	4.40	1.14
Wyoming	6.67	6.67	0.00
Pacific			
Alaska	3.18	3.18	0.00
California	8.53	7.72	0.80
Hawaii	6.91	6.91	0.00
Oregon	7.67	7.21	0.46
Washington	8.12	7.63	0.49

NOTE: The Bureau of Labor Statistics reports employment for private employers and some government units by industry, using Standard Industrial Classification (SIC) codes. The Bureau does not report state employment when an industry classification includes fewer than three establishments. At least one component of the estimated health services employment was not reported for all but the following states: CA, CO, FL, IL, IN, KY, MD, NY, NC, PA, TN, and WI. At least one component of the estimated health exports employment was not reported for all but the following states: CA, IL, MA.

[a]For this table, estimates of health services employment were derived by adding private employment in health services (SIC 80) to state, Federal, and local government employment in hospitals (SIC 806).

[b]Health export industry employment was estimated by adding employment in the following SIC categories: SIC 6321 (accident and health insurance); 6234 (hospital and medical service plans); SIC 2833-2836 (pharmaceutical-related industries); SIC 384 (medical equipment and supplies); SIC 3861 (ophthalmic goods).

[c]It is likely that the figures for Vermont are substantially understated, since Vermont reported no private hospital employment in 1994.

SOURCE: Reference 18.

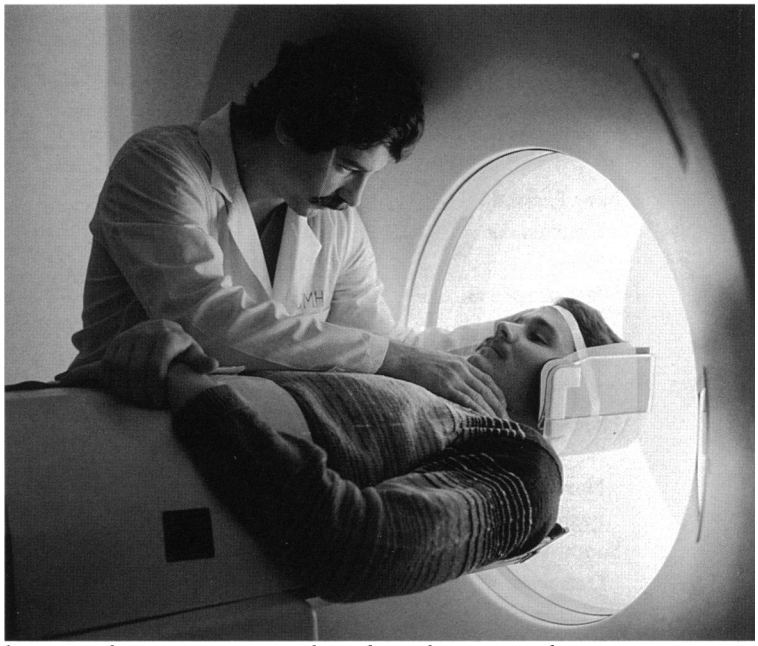
show that health services employment is not as concentrated in specialized geographic areas as is employment in, say, automobiles or computers: health employees are producing services for local consumer needs, which are relatively evenly distributed across regions.[13] Because health services are purchased locally, containment of health spending eventually returns resources to local consumers, who can spend this "health dividend" on other goods and services. At least some of these goods and services will be purchased locally, opening new non-health jobs for local workers. This contrasts sharply with the effect on jobs of recent cutbacks in defense spending. Defense is a base or export industry for local economies. Little if any "peace dividend" was returned to the local economies where spending was cut.[14]

What about the portion of health services spending

that flows into states and localities from outside? Federal health programs purchase health services in every state, and some states receive large net inflows of Federal health purchasing power (health spending less contribution to these programs through taxes and premiums). If the growth in Medicare spending is slowed, there will be no compensating increase in the discretionary income of local consumers. The effects of a slowdown in the growth in Federal Medicare spending are amplified for some regions when health spending cuts are designed to produce a more uniform distribution of health resources across the nation—for example, through policies that distribute Medicaid funds more evenly or through a uniform national fee structure, as provided for in the Balanced Budget Act of 1997. Table 4 shows that the Mountain and Pacific regions have especially lean health services systems while other states and areas devote much more of their resources to serving local health needs. It is possible and even likely that lean states will maintain their health employment levels through any spending slowdown while states with larger capacity and above-average health spending per capita may actually lose jobs.

Some parts of the health sector act more like export industries, in that a reduction in demand could reduce the growth of the economic base for a local area. Employment in industries that produce specialized inputs for health services—pharmaceuticals, medical equipment and supplies, and health insurance services—is highly concentrated in certain states, including New Jersey, Connecticut, Pennsylvania, Minnesota, and Utah. If demand for these products slackens, the economies of these states will be affected. On the other hand, the pattern of cost containment may actually increase the demand for certain health sector goods and services. For example, managed care, technological advances, and the aging of the population have fostered shifts in treatment from surgical to medical interventions and from inpatient to outpatient care and are increasing the resources devoted to treatment of chronic disease. These trends increase the demand for pharmaceutical therapies. Health insurance is another export industry whose future is unclear in a health spending slowdown: changing organizational and financing arrangements may increase or diminish the role of health insurance providers over the coming decades.

Research and medical education are also important regional exports that are hidden in health employment statistics. It is impossible to split out employment figures for these aspects of the health economy that have a national rather than a local demand base. Such activities are probably significant portions of the economic base for certain regions; for example, the regional economies of New York and Boston are more dependent on medical education and medical research than are less concentrated centers. If a cutback in medical education subsidies reduces economic



base employment in research and teaching in such a specialized region, the region will experience a greater loss in total employment through a multiplier effect. In addition, concentrated research and educational activity may have stimulated regional economic growth through spillover effects that fostered the growth of research firms and high tech employers,[15] and to the extent that economic growth has been fueled by new technologies spun off by health education and provider-based research, some regions' economic growth could slow in an era of cutbacks.

POLICY IMPLICATIONS

At the aggregate level, a slowdown in runaway growth in health sector expenditures is a welcome development, with few anticipated negative side effects. The BLS occupational predictions forecast continuing growth in total health employment, albeit at a lower rate, and no absolute declines in employment by occupation. Because a substantial proportion of local health production is bought by local consumers, local economies should not be devastated when their health costs grow less rapidly and they are able to spend more on other goods and services. Consumers and governments will find new uses for any "health dividend" generated by health cost containment, and both national employment and local economies should remain on an even keel.

But when we look more closely, we see costs associated with slower growth. The turbulence in health markets is bringing unexpected uncertainty to a once-stable source of jobs and job growth. And although advocates for threatened health care institutions may sometimes overstate the case, local health service providers have been a steady mainstay of local economies. Furthermore, regions providing disproportionate amounts of the nation's medical train-

ing and research are vulnerable to market developments that streamline these activities.

What does this mean in human terms? Because rapid health sector growth has provided abundant new, stable jobs, offering insurance and other benefits, to relatively unskilled workers, groups that have depended on these jobs, in particular minority women, may face more difficult times ahead.[16] The nurse with years of specialized experience laid off by a closing hospital will not be reassured by continuing growth in nursing employment if the only vacant jobs are in fields that do not match her experience and pay less than she is accustomed to making. The center-city hospital food-service worker will find it difficult to fill a new nursing home job in the suburbs and almost certainly cannot take the job in insurance in another region. For individuals caught in these sectoral transitions, there is little comfort in the knowledge that the health sector is employing ever more workers or that health jobs are available in other states or communities.

How can public policy makers respond to the plight of these current and prospective health workers? The health sector is no different from any other sector: when growth slows in the demand for any good or service, demand will slacken for resources that have been devoted to its production. The nation's need for a more efficient and effective health sector cannot be held hostage to concerns about the redistribution of employment, whether by occupation or region, and health cost containment policy cannot simultaneously protect jobs. But we must be aware that some workers and communities will bear more of the costs than others. Policies should be designed to cushion the shock of needed change when this is possible.[17] Local policy makers should prepare for transitions that will have to be made by vulnerable communities and metropolitan regions. Job seekers, career changers, and young people making education decisions deserve accurate information about the job implications of health market and policy changes. Communities might build job search and training programs into their requirements for hospitals that consolidate or convert to for-profit status. Ultimately, maintenance of strong aggregate demand is the answer to this problem: a growing economy will be the best antidote for the burdens of transition toward a more efficient health system.

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