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Managed Care Has Slowed Growth in Medical Spending

After years of increasing at double-digit rates, the growth in health insurance costs has ground to a halt. What accounts for the dramatic change? In **Managed Care and the Growth of Medical Expenditures** (NBER Working Paper No. 6140), NBER Research Associate **David Cutler** and co-author **Louise Sheiner** conclude that managed care is the explanation. Spending grows much more slowly, they find, in states with high enrollment in managed-care plans.

In the last 15 years, there has been a huge shift in health-care insurance toward managed care. In 1980, only about 5 percent of the privately insured population was in managed care. By 1987, that was up to 25 percent, and today, over 75 percent of the privately insured population is enrolled in managed care. Enrollment in the most restrictive form of managed care—Health Maintenance Organizations (HMOs)—rose from 16 percent of insured workers in 1987 to 48 percent in 1995. During that same time, enrollment in Pre-

ferred Provider Organizations (PPOs), the next most restrictive form of managed care, rose from 11 percent to 25 percent. But the extent of the managed-care revolution varies dramatically across states. In California, for example, about 80 percent of the insured population is in managed care, whereas in Alaska and Wyoming, managed care is almost non-

spending in managed-care states could be attributable to the fact that managed care tends to be adopted in high-spending states and that high-spending states naturally will have lower growth of spending over time.

Even allowing for this possibility, the authors find that for every 10-percentage-point increase in the HMO enrollment rate, the growth of

“Today, over 75 percent of the privately insured population is enrolled in managed care. Enrollment in the most restrictive form of managed care—Health Maintenance Organizations (HMOs)—rose from 16 percent of insured workers in 1987 to 48 percent in 1995.”

existent. Cutler and Sheiner use this fact to compare spending growth across states.

The impact of managed care shows up clearly. In 1980, they note, California’s per capita spending was 17 percent above the national average; by 1993, California’s per capita spending equaled the national average. Of course, the lower growth of

health spending falls by 0.5 percentage points per year. Increases in HMO enrollment cause spending on hospital care to fall even more. Some of this fall is offset by a rise in spending on doctors, suggesting that HMOs shift some health care from the hospital to the doctor’s office. Interestingly, HMOs have no significant effect on the number of admis-

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sions per person; rather, the entire reduction in hospital spending is attributable to a reduction in costs per admission, and most of this reduction is caused by a reduction in the length of stay at hospitals.

"Lengths of stay," the authors write, "can fall only so much." For managed care to keep spending growth lower permanently, it must slow the adoption of new technologies. Cutler and Sheiner study the diffusion of five groups of new technologies: cardiac technologies (catheterization lab, open heart surgery facilities, and angioplasty facilities), radiation therapy (megavoltage radiation, radioactive implants, therapeutic radioisotope, x-ray therapies, and stereotactic radiosurgery), diagnostic radiology (CT Scanner, diag-

nostic radioisotope, MRI, ultrasound, positron emission tomography, and single photon emission computed tomography), transplantation services (kidney, organ, tissue, bone marrow), and extracorporeal shock wave lithotripters. They find that increased HMO enrollment slows the diffusion of such new technologies. This suggests that increased HMO enrollment may have a long-run influence on the growth of medical spending.

In a related study, **Managed Care and Health Care Expenditures: Evidence from Medicare, 1990–1994** (NBER Working Paper No. 6187), **Laurence Baker** and **Sharmila Shankarkumar** suggest that increases even in non-Medicare HMO enrollment in an area, by changing

the way that health care providers practice, reduce traditional Medicare fee-for-service expenditures. An increase in the system-wide HMO market share from 10 to 20 percent reduces Medicare Part A (hospital) expenditures by 1.9 percent. Increasing the system-wide HMO market share from 20 to 30 percent reduces those expenditures by 2.5 percent. For Medicare Part B (physician) expenditures, increases in system-wide HMO enrollment from 10 to 20 percent reduce expenditures by 1.7 percent. Baker and Shankarkumar conclude that "...these results suggest that managed care transforms the functioning of the entire health care system."

—David R. Henderson

Giving Workers a Voice Increases Productivity

Giving workers more of a say in how a business is run may raise productivity, according to research by **Sandra Black** and NBER Research Associate **Lisa Lynch**. Using data from a 1994 survey of establishments conducted by the Census Bureau, they discover that those

Previous studies had found links between employee involvement and productivity in an individual plant or a specific industry, but Black and Lynch were the first to examine a nationally representative sample of businesses (both manufacturing and nonmanufacturing). Many of the manufacturing companies in their survey thus could be matched with the

quality management nor profit sharing exclusively for managers increased productivity (although profit sharing for non-management workers did increase productivity). Black and Lynch also find that unionization had a mixed impact on productivity. Unionized plants with traditional manager-worker relations had extremely low productivity; unionized plants that have adopted new workplace practices such as incentive-based compensation and employee participation not only were more productive than their old-fashioned unionized peers, but also outperformed nonunion plants that had adopted similar new workplace practices. In sum, Black and Lynch find that practices that encourage workers to think and interact to improve the production process are strongly linked to increased productivity.

—Justin Fox

"Practices that encourage workers to think and interact to improve the production process are strongly linked to increased productivity."

manufacturing plants in which workers played a significant decisionmaking role were markedly more productive than plants where they did not. Black and Lynch also find that plants where a high proportion of non-managerial workers used computers were more productive than other plants, as were plants whose workers had high average education levels.

Census Bureau's longitudinal database on manufacturing establishments.

In **How to Compete: The Impact of Workplace Practices and Information Technology on Productivity** (NBER Working Paper No. 6120), they also find that some practices which companies have adopted to increase productivity have had no impact. For example, neither total

Young People in U.S. and Europe are Increasingly Happy

Young people in the United States and Europe seem to be getting happier through time, according to a recent paper by NBER Research Associate **David Blanchflower** and **Andrew Oswald**. In **The Rising Well-Being of the Young** (NBER Working Paper No. 6102), they report on surveys of random samples of young men and women who were asked how happy they feel, and how satisfied they are with various aspects of their lives.

In 1972, 16 percent of young Americans (under 30) reported themselves as "not too happy" and 30 percent said that they were "very happy." By 1990, according to the U.S. General Social Surveys, 9 percent of young Americans were not too happy and 33 percent were very happy. Older Americans, by contrast, indicated little change in their degree of happiness.

Eurobarometer Surveys asked a slightly different question: "On the whole, are you very satisfied, fairly

satisfied, not very satisfied, or not at all satisfied with the life you lead." The surveys, from 1973 to 1992 in 13 nations of Europe (Belgium, Denmark, West Germany, Greece, Spain, France, Ireland, Italy, Luxembourg, Netherlands, Portugal, and Great Britain) produced similar results to those in the United States. When the data for the 13 nations is pooled, life satisfaction has been growing noticeably faster in the under-30 age group

23 percent in 1992.

What does offer a clue to these findings is the fact that most of the increase in young people's well-being is to be found in the unmarried group. "It may be that young men and women have benefited from society's recently increased tolerance of those living outside marriage, and from their consequent ability to live in less formal relationships," they write. "It suggests that

"In 1972, 16 percent of young Americans (under 30) reported themselves as 'not too happy'; by 1990, only 9 percent."

for 11 of the countries. Why Britain and Northern Ireland miss the upward trend in youth well-being is a puzzle, the two authors note.

In Europe about 20 percent of those in the youngest group, under age 20, were very satisfied in the early 1973 to 1975 period. This proportion had grown to 28 percent by 1992, whereas about 20 percent of the over-30s gave the "very satisfied" answer at the start of the surveys and

the ultimate answer is somehow connected to the role of family life and personal freedom."

Happiness and life satisfaction first fall and then rise over one's lifetime, reaching their minimum at age 30, and reportedly highest among women, whites, married people, the highly educated, and those with high incomes. Happiness is especially low among the unemployed, the authors find.

—David R. Francis

Stronger Protection or Technological Revolution: What Is Behind the Recent Surge in Patenting?

From 1900 through 1980, applications to the U.S. Patent Office by U.S. inventors ranged from 40,000 to 80,000 per year. But in the decade from 1985 to 1995, patent applications by American inventors surged to all time highs of about 120,000 per year, leaving economists to wonder why.

In **Stronger Protection or Technological Revolution: What Is Behind the Recent Surge in Patenting?** (NBER Working Paper No. 6204), NBER Faculty Research

Fellows **Samuel Kortum** and **Josh Lerner** attempt to determine what is behind the recent skyrocketing patent applications.

Kortum and Lerner examine three competing explanations for the increase in patent applications. They conclude that patent applications have increased because of improvements in the management of research in the United States. This effect has been enhanced by applying new information technologies to the research process itself, which has accelerated the pace and productivity of research and development.

Finally, these two trends have occurred in an R and D environment in which a movement toward more applied research has further accelerated discoveries that lead to patents.

The authors reject a popular explanation for the rise in patent applications, which they dub the "friendly court" hypothesis. More patent legislation was passed by Congress in the first few years of the 1980s than in the previous two decades. In addition, the Court of Appeals of the Federal Circuit, set up by Congress in 1982 specifically to hear patent cases arising from federal

courts, has been perceived as having a "pro patent" orientation. By broadening the rights of patentees, some have suggested, the Court has encouraged more patent applications.

If this "friendly court" hypothesis accurately explained the increase in patent applications, then the United States should have increased relative

home and abroad who display the biggest jump in patenting.

Another possible explanation for the increase in patent applications is that entrenched firms, those with larger and well-developed patent application mechanisms in place, will benefit selectively from patent reforms. They will therefore both

and less frequent patentees actually increasing in the past decade. That calls into question whether the increase in patent applications is driven by larger, entrenched firms.

It is not technology alone that has driven the increase in patent applications, however, since the jump is not concentrated in any particular technology, such as biotechnology or software. In fact, the patent increases were uniform across a broad spectrum of industries. The authors suggest that changes in the management of technology must have contributed to the increase. Specifically, the trend toward more applied activities, a by-product of which is more patentable discoveries, helps to explain the huge increase in patent applications over the past decade.

—Les Picker

"Patent applications have increased because of improvements in the management of research in the United States."

to other countries as a destination for patent protection for inventors from around the world. That is not the case. Worldwide patent applications have risen, but not particularly for patent protection in the United States. Rather it is U.S. inventors seeking patent protection both at

lobby for such reforms and respond to any reforms by patenting more aggressively.

But, as Kortum and Lerner point out, the increase in patent applications is approximately evenly distributed among small and large firms, with the share of new, small

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