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New perspectives on health and health care policy

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Health care reform has been the primary focus of policymakers for much of the past year, culminating with the Patient Protection and Affordable Care Act that was signed into law by President Obama on March 23, 2010. The vigorous national debate on the act has highlighted the importance of innovative, high-quality research on health and health care policy.

For more information on the conference, visit www.chicagofed.org/webpages/events/2010/new_perspectives_on_health_and_health_care_policy.cfm.

The New Perspectives on Health and Health Care Policy Conference, held on March 22 and 23, 2010, at the Federal Reserve Bank of Chicago and cosponsored by the Chicago Fed and the Institute of Government and Public Affairs at the University of Illinois, featured presentations of the latest academic research in health policy. This *Chicago Fed Letter* discusses the conference and summarizes the presentations.

Impact of Medicare

The conference opened with a historical analysis of the effects of the introduction of Medicare in 1965. Kenneth Chay of Brown University presented new research showing that Medicare led to dramatic improvements in access to health care and reductions in mortality among the elderly in the years following its enactment. Chay utilized newly available data that enabled him to investigate age-specific insurance coverage rates both prior to and after Medicare's enactment. Using data from 1963 onward, Chay estimates that Medicare caused hospital and surgical insurance rates for those 65 and older to increase by more than 20%.

Chay also found strong evidence that Medicare increased hospital utilization and decreased mortality among the elderly. The sharpest mortality reductions were in acute causes of death, such as heart disease. He estimated that the cost of Medicare's introduction per each additional patient life-year was less than $200 (1982–84 dollars). As we continue to debate expanding or contracting the Medicare program, Chay's work suggests we need to better understand why the program was so successful at its inception.

Competitiveness of health insurance markets

Three conference presentations focused on the competitiveness of the health insurance industry. The first one, by Leemore Dafny of Northwestern University, explored mergers of health insurance companies over the past decade and the impact of consolidation on the health insurance market.

The past decade has seen sharp increases in both health insurance premiums and the level of consolidation within the health insurance industry. Dafny noted that between 1998 and 2006, average health insurance market concentration across local markets, as measured by the widely used Herfindahl–Hirschman Index, increased by 31%. Meanwhile, growth in health insurance premiums has far exceeded both inflation and growth in workers' earnings.

Despite these trends, it is not clear whether there is a causal relationship between industry concentration and premiums.

Increased industry concentration could be anti-competitive if greater market power allows insurers to raise premiums. Conversely, mergers may be pro-competitive and lead to lower premiums if they generate efficiencies. This could arise from improved management, superior distribution systems, or increased investment in technology, for example.

Dafny's research focused on the Aetna–Prudential merger of 1999. Aetna and Prudential had market shares that varied significantly across many local markets, allowing Dafny to identify the causal effect of consolidation by comparing markets that became significantly more concentrated as a result of the merger with those that experienced only small increases. Using data on premiums paid by ten million Americans between 1998 and 2006, she estimated that premiums rose about 3% overall as a result of the rise in industry concentration. Dafny emphasized that this increase, although significant, is a small fraction of the overall increase in premiums during this time.

Dafny's study also provided evidence that health insurers in more concentrated markets exercise monopsonistic power.[1] In a heavily concentrated market, a single insurer is likely to exercise control over reimbursement rates of health care workers, potentially leading to suboptimal provision of care. Dafny's results confirmed that in more consolidated markets, both physician earnings and physician employment are reduced while nurse earnings increase.

James Hilliard of the University of Georgia used a complementary approach to study the effects of consolidation in the insurance market. He examined whether rising concentration affects the stock market performance of *rival* insurers operating in the same markets. Hilliard's hypothesis was that as the health care industry consolidates, rival firms benefit from the increased market concentration, which increases their expected returns. Using data on 36 mergers between 1999 and 2007, Hilliard found that rivals' stock prices rose after a merger announcement, and the effect was more pronounced for mergers among larger firms. Like Dafny's results, Hilliard's evidence also points to an anti-competitive effect of mergers.

The final presenter on this topic, Mark Votruba of Case Western Reserve University, analyzed how "search frictions"—difficulties in finding an appropriate health plan—affect health insurance markets. Many factors make it difficult for employers who provide insurance to their employees to shop for health insurance plans, including the types of drugs covered, which physicians are part of the provider networks, and the structure of co-payments, fees, and deductibles for various providers and services.

Votruba developed a theoretical model in which search frictions give insurers market power, allowing them to raise premiums. This in turn leads to three undesirable results. First, identical insurance products are available at different prices in different markets. Second, insurance turnover is high, as employers have difficulty initially shopping for the best product. Increased turnover is especially harmful as it reduces insurers' incentives to invest in the future health of policy holders, reducing preventive care and disease management. Third, insurers have a strong incentive to engage in excessive marketing.

Votruba found direct empirical evidence that search frictions lead to inefficiencies by comparing the prices of insurance for self-insured groups with those of fully insured groups. Since self-insured groups mostly search for administration services, they would be expected to encounter less search friction than fully insured groups. Votruba found that there was greater dispersion in prices for fully insured groups than for self-insured groups. Further, he estimated that search frictions transfer 13% of consumer surplus from employers to insurers and increase employer group turnover by 64% for the average insurance policy.

The 2010 New Perspectives on Health and Health Care Policy Conference brought together leading researchers to present new studies on several salient health care policy topics.

Panel discussion on health care policy

The conference featured presentations on health care policy by two of the country's leading health care experts, David Cutler of Harvard University and Mark Pauly of the University of Pennsylvania. Both presenters focused their remarks on the new federal legislation. Cutler, who was previously on the Council of Economic Advisors and the National Economic Council and advised the presidential campaigns of Bill Bradley, John Kerry, and Barack Obama, said that the health care reform act is important because it will expand coverage and improve the value of health care. He argued that the health care industry can improve itself by implementing organizational changes that focus on better use of information technology, engaging workers and consumers in continuous quality improvements, and creating compensation arrangements that reward value. He also noted that the act will begin evaluations of several cost-saving ideas to determine which will be most effective, including transitional care and bundled payments for care from different providers.

Pauly has consulted for the Department of Health and Human Services and served on the Medicare Technical Advisory Board and on the National Institutes of Health National Advisory Committee. He argued that expanding coverage should be the sole focus of health care reform. He said he did not believe it was possible to increase the quantity and quality of care and lower costs at the same time. Expanding coverage, he argued, has positive health benefits for the uninsured and helps in the prevention of communicable disease.

Pauly pointed to a few challenges the act presents. It will not slow the rate of growth of health care costs, he contended, as both demand for improved technology and the wages of health care workers continue to rise. Among methods for cutting costs, he said he preferred capping the tax exclusion for employer-based health coverage, as it would raise

revenue and reduce the incentive of workers to over-consume health care. Since the impact of the act on costs is uncertain, Pauly said he favored the inclusion of better rules for making future adjustments so that the act's initial impact can be observed.

Changing behavior to reduce costs

Recently, employer wellness incentive-based programs have become popular as a way for companies to improve employee health and reduce health care costs. Heather Royer of the University of California, Santa Barbara, and Karen Norberg of Washington University in St. Louis presented new research that finds that these programs can improve individual health behaviors and outcomes.

Royer conducted a randomized field experiment at a Fortune 500 company to study employee exercise habits. Individuals were assigned to one of three groups. The first group was a control group. The second group received a financial incentive of $10 per visit to the company gym for up to three visits per week for up to four weeks. The third group received the same incentive and, after the four weeks, they were invited to complete a commitment contract that required them to forfeit their earned money if they did not continue regular exercise.

Royer found that both the financial incentive group and the commitment contract group had higher exercise levels during the first four weeks, with the commitment contract group having the highest levels. The commitment contract group's higher exercise levels persisted beyond the first four weeks. These effects existed for both non-gym members, who may not have been exercising regularly before the experiment, and gym members, who were more likely to have been exercising regularly. In future work, Royer plans to examine the impact on participants' health and the cost effectiveness of the program.

Norberg examined the results of an insurance-based wellness intervention. In 2004, a hospital introduced a smoking cessation program for its employees. One year later, this hospital introduced a larger program that offered a generous health plan for employees who signed a health pledge, provided health measures annually, and enrolled in a smoking cessation program if necessary. The program health plan offered an extra annual employer contribution that was up to $1,647 more than what was offered under the non-program health plan.

Using claims data from 2003 through 2006, Norberg compared 30,212 enrollees per month at the hospital with the intervention with 31,567 enrollees per month at two other area employers without the intervention. The program reduced hospitalization for targeted conditions, including diabetes and heart disease, by 31% and reduced all hospitalizations by 12%. Prescriptions filled were also reduced significantly.

Comparative effectiveness research

Comparative effectiveness research (CER) aims to assess the efficacy and costs of alternative medical treatments. It has emerged as a critical topic in health care policy and is potentially an important way to improve the efficiency of health care spending.

Tomas Philipson of the University of Chicago argued that it is important to understand the market and government response to CER in order to understand CER's impact. He emphasized that CER often results in one treatment being deemed superior to all others, without accounting for the possibility of heterogeneous treatment effects, i.e., that different treatments may be best for different patients.

Philipson presented several theoretical models of the effects of CER. He showed that if there are no heterogeneous treatment effects, then a government subsidy for only one treatment will improve the overall health of the population. In the heterogeneous case, however, it is not clear whether overall health would improve. Patients who would respond better to the non-subsidized treatment may choose the more cheaply available subsidized treatment. In either case, he argued that overall spending could rise or fall, because the fall in spending on the non-subsidized treatment may or may not be offset by spending increases for the subsidized treatment.

Philipson used a real-world example, a 1999 trial of antipsychotic drugs, to illustrate the potential importance of accounting for heterogeneous effects. He found that if Medicaid had eliminated coverage for the treatments deemed least effective and patients were assumed to respond homogeneously to treatments, then the trial would result in large savings of Medicaid class sales in non-elderly adult patients with schizophrenia. However, accounting for heterogeneity in treatment response, the trial would result in a net loss. Philipson argued that CER can be beneficial, but care must be taken to interpret the results of trials properly and take into account patient-specific responses in implementing policy.

Another real-world example of CER's impact was provided by David Howard of Emory University, who examined the response by health care providers to a May 1999 American Society of Clinical Oncology study of breast cancer treatments. While the use of high-dose chemotherapy followed by hematopoietic stem cell transplantation (HDC/HCT) had been a popular treatment in the 1990s, the 1999 randomized control trial found the treatment to be entirely ineffective.

Howard found that while the study resulted in discontinuation of the treatment, the rate of discontinuation was

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not nearly as rapid as one would expect. Howard estimated that the trials reduced medical spending by about $120 million per year. However, the median time for hospitals to stop providing HDC/HCT was about 15 months. Hospitals with greater volumes of HDC/HCT were slower to move away from the treatment. He also presented evidence that the pattern of discontinuation more closely resembled a passive approach than an active one, indicating that hospitals were motivated to abandon HDC/HCT by a fall in treatment demand from patients rather than by information about the treatment's ineffectiveness.

New medical technologies

Laurence Baker of Stanford University presented a study of the effect of physician ownership of MRI equipment on health outcomes. Physicians who own equipment have a strong financial incentive to use their MRI equipment, rather than referring patients to other providers. This may lead to inefficient overuse as physicians use the equipment in cases where they would not have otherwise done so. Using Medicare claims data from 1998 to 2005, Baker compared physicians who acquired MRI equipment with those who did not and found a strong effect of equipment ownership. Ownership caused physicians to prescribe 28 more MRIs per 1,000 patients in the first 30 days after acquiring equipment; and acquiring equipment increased MRI spending by about $1,400 in the first 90 days. Spending on other complementary procedures, such as X-rays, also increased. These increases far outweighed the $600 fall in spending on outpatient procedures associated with MRI ownership.

Developmental origins of health

Nobel Laureate James Heckman of the University of Chicago concluded the conference with a keynote address in which he presented a framework for studying the effects of policy interventions on health over the life cycle. He presented evidence that a number of factors contribute to overall health and wellness, emphasizing the importance of both cognitive and non-cognitive skills and synergies between different interventions.

Heckman used longitudinal data from the British Cohort Study of 1970, from which he could observe people at birth, age ten, and age 30, to study the impact of education on health. He compared health outcomes at 30 of those who had education beyond the compulsory level in Britain with health outcomes of those who had only the compulsory level of education. He found that education significantly affected health, and the effects were strongest for those with low non-cognitive ability and those with high cognitive ability. However, the effect of education could only account for part of the observed differences in health outcomes at age 30. One's cognitive and non-cognitive skills and health at age ten (which are of course unaffected by later education) explained as much as half of the difference in physical and mental health outcomes at age 30. Heckman's work demonstrates the importance of development in the early years for health and well-being throughout one's lifetime.

Conclusion

The New Perspectives on Health and Health Care Policy Conference produced fruitful discussion on a variety of important topics. A common theme across the sessions was that new and innovative methodological approaches have yielded interesting and often nuanced findings that can inform policymakers. The research presented at the conference also serves as a stepping stone to further work that will help guide efforts to improve the health care system.

[1] Monopsonistic power refers to cases where a single buyer controls a large share of the market. This is sometimes the case when there is a single employer in a geographic area.