

January 2002

IN THIS ISSUE

- Health Care Report Cards May Fail Patients
- Favorable Effects of Imprisoning Drug Offenders
- Incomes and Mortality Patterns
- No Gain from Reducing G-3 Currency Volatility

Health Care Report Cards May Fail Patients

Health care quality report cards — such as New York’s list of physician and hospital coronary artery bypass graft (CABG) surgery mortality rates — have been the focus of an extensive policy debate. Supporters of report cards argue that they enable patients to identify the best doctors and hospitals, while simultaneously giving providers of care incentives to improve quality. Skeptics counter that report cards may give providers incentives to decline to treat more difficult, severely ill patients, in order to improve their ranking. Whether these report cards are good for patients, and society, depends on whether their financial and health benefits outweigh their costs in terms of the quantity, quality, and appropriateness of the medical treatment they induce.

In **Is More Information Better? The Effects of “Report Cards” on Health Care Providers** (NBER Working Paper No. 8697), authors **David Dranove, Daniel Kessler, Mark McClellan, and Mark Satterthwaite** examine the consequences of the CABG report cards adopted by New York (NY) and Pennsylvania (PA) in the early 1990s. They find evidence that report cards had both beneficial and harmful effects. On one hand, report cards increased the proportion of sicker cardiac patients who were treated at teaching hospitals, which may be better equipped to handle such complex cases. On the other hand, report cards led providers of medical care to shift surgical treatment for cardiac illness toward healthier and away from sicker patients. On net, though, report cards led to higher levels of resource use and worse health out-

comes, especially for sicker patients. Thus, the authors conclude that — at least in the short run — these report cards decreased patient and social welfare.

To assess competing claims about the efficacy of report cards, the authors estimate the effects of report cards on essentially all U.S. elderly heart attack (acute myocardial infarction, or AMI) patients and all elderly patients receiving CABG surgery from 1987 through 1994. They compare the trends in treatments, cost, and quality of care after

without report cards, as measured by hospital utilization in the year before surgery. In addition, report cards led to substantial declines in other intensive cardiac procedures for both relatively healthy and sick AMI patients.

For healthier patients, then, doctors and hospitals substituted CABG for other cardiac surgical treatments. This shift increased expenditures, but failed to produce any measurable health benefits. For sicker patients, doctors and hospitals avoided performing cardiac

“For healthier patients... doctors and hospitals substituted coronary artery bypass surgery for other cardiac surgical treatments. This shift increased expenditures, but failed to produce any measurable health benefits. For sicker patients, doctors and hospitals avoided performing cardiac surgical treatments of all types. These changes were particularly harmful, leading sicker patients to have substantially higher frequencies of heart failure and repeated heart attacks, and ultimately higher costs of care.”

the introduction of report cards in NY and PA to the trends in other states.

The authors document an important benefit from report cards: increased sorting of patients to providers on the basis of the severity of their illness. Hospitals in NY and PA experienced declines in within-hospital variation in their patients’ health status, with those two states’ teaching hospitals picking up an increasing share of patients with more severe illness. However, they also find an important cost: substantial selection by providers. Report cards led to a decline in the illness severity of patients receiving CABG in NY and PA relative to patients in states

surgical treatments of all types. These changes were particularly harmful, leading sicker patients to have substantially higher frequencies of heart failure and repeated AMIs, and ultimately higher costs of care.

The design of report cards offers a distinctive challenge: how to take advantage of the benefits to patients of enhanced information, while avoiding the adverse incentives for doctors and hospitals that the publication of the information may create. Because report cards are not unique to health care — school performance reports raise the same issues — the authors conclude that the debate over report cards is likely to continue. □

Favorable Effects of Imprisoning Drug Offenders

The number of Americans incarcerated on drug-related offenses rose 15-fold between 1980 and 2000, to its current level of 400,000. Despite this enormous increase, there has been no systematic, empirical analysis until now of the implications of the new, tougher drug laws for public safety, drug markets, and public policy.

In **An Empirical Analysis of Imprisoning Drug Offenders** (NBER Working Paper No. 8489), authors **Ilyana Kuziemko** and **Steven Levitt** find that the increase in the prison population held on drug-related offenses led to reductions in time served for other crimes, especially for less serious offenses. This phenomenon is primarily attributable to the limited space available at penal institutions. However, despite this reduction in time served, other crimes did not increase more than a few percent.

The authors also find that incarcerating drug offenders was almost as effective in reducing vio-

lent and property crime as was incarcerating other types of offenders. Furthermore, as a consequence of increases in punishments for drug-related crimes, cocaine prices are 10-15 percent higher today than they were in 1985. This jump in price implies that cocaine consump-

tion fell, perhaps as much as 20 percent.

drug offenders, the authors find that the cost-benefit calculations might be more favorable, because incarceration not only lowers crime, but also drug consumption. Annual expenditures of approximately \$10 billion on drug incarceration almost pay for themselves through reductions in

“Annual expenditures of approximately \$10 billion on drug incarceration almost pay for themselves through reductions in health care costs and lost productivity attributable to illegal drug use, even ignoring any crime reductions associated with such incarceration.”

tion fell, perhaps as much as 20 percent.

The reduction in cocaine use begins to address the long-standing question of whether the enormous costs related to tougher punishment for drug offenses yield similarly large benefits to society. Previous studies suggest that the costs of current levels of incarceration across all crime categories far exceed societal benefits. However, in the case of

health care costs and lost productivity attributable to illegal drug use, even ignoring any crime reductions associated with such incarceration.

The authors stress that their figures are speculative and may not include other relevant costs and benefits. They also do not explore other, potentially more effective ways of reducing drug usage rather than incarceration.

— Les Picker

Incomes and Mortality Patterns

A new study of mortality rates in Britain and the United States finds no simple relationship between income growth, patterns of income inequality, and the substantial declines in mortality rates in the two countries since 1950. In **Mortality, Income, and Income Inequality Over Time in Britain and the United States** (NBER Working Paper No. 8354), NBER Research Associates **Angus Deaton** and **Christina Paxson** cast doubt on the idea that income trends explain mortality trends in the post-war

period, and that rising income inequality is associated with higher mortality. Rather, the researchers highlight the importance of advances in medical technology in explaining death rates as well as the important differences in the health care systems in the two countries.

Deaton and Paxson exploit the similarities and differences in patterns of income in the United States and Britain. The two countries have experienced different patterns of income growth: the growth rate of family income in the United

States was high from 1950 to the early 1970s, low during the 1970s and 1980s, and high again in the 1990s. In contrast, incomes in Britain grew fairly steadily during the second half of the twentieth century, with little slowdown in the 1970s and 1980s.

Although these income growth patterns differ, changes in income inequality are similar in the two countries. Inequality changed relatively little until the early 1970s; it then started to increase in the United States and, in the late-1970s,

in the United Kingdom. The increase in income inequality accelerated in both countries in the mid-1980s, and leveled off in the 1990s.

Despite sharp differences in patterns of income growth, the two countries exhibited similar patterns of mortality decline. Furthermore, the sharpest declines in mortality were coincident with the productivity slowdown in the United States. Therefore it is not plausible that mortality declines are driven by changes in income levels. Furthermore, there is no evidence that changes in income inequality affect changes in mortality. Adult and elderly mortality rates declined most rapidly during the period when income inequality increased.

The patterns of declining mortality in both countries vary across age and gender groups. Men always have higher mortality rates than women in the same age group. Younger groups experienced a more rapid mortality decline before 1970, and much less rapid mortality declines and, in some cases, notably for young men, mortality increases, in the later years. Deaths from AIDS account for almost all of this increase in mortality for young men. For those over age 40, there is a rapid decline in mortality throughout the period with the trend accelerating after 1970. British mortality

is lower for those younger than age 65, but the schedules cross at age 65, after which mortality rates are lower for elderly U.S. citizens.

If changes in incomes and income inequality do not explain mortality patterns, then what does? Two likely candidates are technological advances in health care and differences in the health care systems in the two countries. The researchers show that declines in mortality in the United States are mirrored by mortality declines in

mortality in the two countries. The United States has largely private provision of health care until the age of 65, but not all citizens have access to health services until they are eligible for Medicare. Although Britain has universal access at all ages, less is spent on health care than in the United States, and access to health care is rationed, particularly by age. British elderly are frequently denied access to expensive technologies from which they are likely to benefit. These institutional

“There is no evidence that changes in income inequality affect changes in mortality. Adult and elderly mortality rates declined most rapidly during the period when income inequality increased.”

Britain that occur after a lag of about four years. It may be that medical innovations are introduced first and diffuse more quickly in the United States than in Britain. The authors speculate that the centralized health care system in Britain may impede the adoption of expensive new technologies. In the competitive U.S. health care industry, there may be greater pressure to adopt new technologies as soon as they are feasible, regardless of cost.

Differences in the health care systems also may be responsible for differences in the age patterns of

features are consistent with the observed patterns in mortality, in which the U.S. mortality is higher than Britain’s for younger age groups, but lower after retirement. Because this pattern was established well before the Medicare program began, and because the differences in mortality rates between the two countries begin to narrow with age prior to Medicare eligibility, rationing of care by age likely has more effect on the mortality of British elders than does Medicare on American elders.

— Andrew Balls

No Gain from Reducing G-3 Currency Volatility

As many developing countries have tied their currencies to the U.S. dollar (in varying degrees), some analysts believe that exchange rate volatility among industrialized nations is at least partially to blame for the financial crises that plague emerging markets. Those analysts argue that the Group of 3 — the United States, Japan, and collective-

ly the 12 nations that have adopted the Euro — could reduce such shocks on dollar pegs or quasi-pegs in emerging markets by adjusting interest rates so that their currencies trade within certain “target zones.”

But when co-authors **Carmen Reinhart** and **Vincent Reinhart** examine almost 30 years of capital flows, currency valuations, interest

rate shifts, and economic growth in both emerging and industrialized nations, they uncover no evidence that limiting exchange rate volatility among the G-3 would provide significant benefits for emerging markets. In **What Hurts Most? G-3 Exchange Rate Or Interest Rate Volatility?** (NBER Working Paper No. 8535), they find “no obvious

bonuses to smaller countries should G-3 central banks damp the fluctuations of their currencies” and it could possibly hurt.

In this vein, the authors note that a policy that seeks to limit currency fluctuations could end up fostering more instability in emerging markets because it relies so heavily on swapping exchange rate uncertainties for interest rate uncertainties. The authors do not deny that exchange rates are an important part of the relationship between developed countries in the “North” and emerging markets in the “South,” where governments often show a commitment to low inflation by tying their currencies to the dollar. And they acknowledge that, historically, financial crises have “been more frequent when G-3 exchange rates are more volatile.” But they note that the situation is not that simple. They argue that a closer look at how money flows to emerging markets — for example, foreign direct investment tends to be higher in times of currency instability among the G-3 — shows that over the past

27 years, buying exchange rate predictability among the G-3 with greater uncertainty in international interest rates “would have been a bad bet.”

Reinhart and Reinhart agree that keeping G-3 exchange rates in target zones could indeed lead to

siderable,” the authors write. The important thing to bear in mind, according to Reinhart and Reinhart, is that the relationship between developed and emerging economies is a complex one and focusing on a single issue or set of issues cannot capture their interdependence.

“A policy that seeks to limit currency fluctuations could end up fostering more instability in emerging markets because it relies so heavily on swapping exchange rate uncertainties for interest rate uncertainties.”

more stable prices in emerging markets. However, they point out that the effect on interest rates could make debt-servicing costs much more unpredictable, while producing “income volatility” in developed countries that could decrease demand for emerging market exports. “To the extent that high world interest rates trigger balance sheet problems in emerging markets, the consequences of the tradeoff implied by a target zone among G-3 currencies may be con-

“The consequences for the developing ‘South’ of interest rate, exchange rate, and income volatility in the ‘North’ are only one particular aspect of myriad North-South links,” they write. “As such, issues related to G-3 exchange rate variability should be viewed within the much larger panorama of how economic outcomes in developed countries influence those in less developed economies.”

— Matthew Davis

NBER

The National Bureau of Economic Research is a private nonprofit research organization founded in 1920 and devoted to objective quantitative analysis of the American economy. Its officers are:

*Martin Feldstein — President and
Chief Executive Officer*

*Susan Colligan — Vice President for
Administration and Budget*

Carl F. Christ — Chairman

Michael H. Moskow — Vice Chairman

Contributions to the National Bureau are tax deductible. Inquiries concerning the contributions may be addressed to Martin Feldstein, President, NBER, 1050 Massachusetts Avenue, Cambridge, MA 02138-5398.

The NBER Digest summarizes selected Working Papers recently produced as part of the Bureau’s program of research. Working Papers are intended to make preliminary research results available to economists in the hope of encouraging discussion and suggestions for

revision. The Digest is issued for similar informational purposes and to stimulate discussion of Working Papers before their final publication. Neither the Working Papers nor the Digest has been reviewed by the Board of Directors of the NBER.

The Digest is not copyrighted and may be reproduced freely with appropriate attribution of source. Please provide the NBER’s Public Information Department with copies of anything reproduced.

Preparation of the Digest is under the editorial supervision of Donna Zerwitz, Director of Public Information.

Individual copies of the NBER Working Papers summarized here (and others) are available free of charge to Corporate Associates. For all others, there is a charge of \$5.00 per downloaded paper or \$10.00 per hard copy paper. Outside of the United States, add \$10.00 per order for postage and handling. Advance payment is required on all orders. To order, call the

Publications Department at (617) 868-3900 or visit www.nber.org/papers. Please have the Working Paper Number(s) ready.

Subscriptions to the full NBER Working Paper series include all 500 or more papers published each year. Subscriptions are free to Corporate Associates. For others within the United States, the standard rate for a full subscription is \$1850; for academic libraries and faculty members, \$1070. Higher rates apply for foreign orders.

Partial Working Paper subscriptions, delineated by program, are also available. For further information, see our Web site, or please write: National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138-5398.

Requests for Digest subscriptions, changes of address, and cancellations should be sent to Digest, NBER, 1050 Massachusetts Avenue, Cambridge, MA 02138-5398. Please include the current mailing label.