

- Do Medical Malpractice Costs Affect the Delivery of Health Care?
- Do Changes in the Stock Market Affect Retirement Decisions?
- The Effect of Anti-Fraud Enforcement on Medicare Costs and Quality

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Do Medical Malpractice Costs Affect the Delivery of Health Care?

Rapidly rising medical malpractice premiums have become an issue of increasing concern for physicians, policy makers, and the general public. Premiums rose by an average of 15 percent between 2000 and 2002, according to the Congressional Budget Office, while physicians in certain medical specialties and geographic areas experienced far greater increases — for example, premiums for general surgeons in one Florida county rose by 75 percent, to nearly \$175,000 per year. Some policy makers and interest groups have called for tort reform measures, such as caps on non-economic damages in malpractice suits, to limit the growth of premiums.

The growth in malpractice premiums has the potential to profoundly affect the health care system. Premiums may influence physicians' decisions to join and leave the labor force, their choice of a medical specialty, and their decision of where to locate, creating the potential for underserved patient populations in certain specialties or geographic areas. Rising malpractice premiums may also encourage physicians to practice "defensive medicine," performing more tests and procedures than necessary in order to reduce exposure to lawsuits. Both rising malpractice premiums and defensive medicine practices may contribute to the increase in health insurance premiums.

In **The Effect of Malpractice**

Liability on the Delivery of Health Care, (NBER Working Paper 10709), **Katherine Baicker** and **Amitabh Chandra** explore the relationship between the rise in malpractice costs and the delivery of health care along these dimensions.

Using various sources, the authors assemble annual state-level data on malpractice premiums, payouts from insurers for malpractice claims, the number of practicing physicians, and the frequency of various medical treatments. The authors' strategy is to examine whether the change in premiums between 1993 and 2002 is related to changes in these other variables over the same period. One advantage of this approach is that it controls for any unobservable characteristics of states that might affect both premiums and the other variables of interest, so long as their effect is unchanged over the period.

The authors first explore one potential cause of rising malpractice premiums, escalating payments from insurers to malpractice claimants. They find that while premiums do respond to increases in payments, they do not increase dollar for dollar. This suggests that other factors may also be important in explaining the recent jump in malpractice premiums, such as a less competitive insurance industry or a decline in insurers' investment income.

The authors then turn to the consequences of increasing malpractice premiums, looking first at their

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effect on the size and composition of the physician workforce. They find no evidence that changes in malpractice premiums are linked to changes in either the total number of physicians or the number of physicians working in obstetrics/gynecology, surgery, or internal medicine. There is weak evidence that the entry decisions of young physicians and the exit decisions of older physicians may be affected by malpractice premiums. However, there is stronger evidence that rural physicians are sensitive to change in premiums — a 10 percent increase in premiums results in a 1 percent decrease in rural physicians per capita and a 2 percent decrease in older rural MDs.

The authors also explore the effect of rising malpractice premiums on the frequency of various medical treatments. Although there is no change in the frequency of most treatments, there is increased use of mammography, suggesting that physicians may increase the use

of screening procedures in response to higher premiums. The authors find no effect of premiums on total Medicare expenditures, suggesting that the costs associated with defensive medicine practices may be small, at least for this age group.

The authors caution that their

results may not capture the full effect of rising malpractice premiums if doctors respond to the medical liability situation in states other than their own. Nonetheless, they conclude “the arguments that state tort reforms will avert local physician shortages or lead to greater effi-

ciencies in care are not supported by our findings.”

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Do Changes in the Stock Market Affect Retirement Decisions?

After posting record gains in the late 1990s, the US stock market fell dramatically starting in the year 2000. Over a twelve-month period, the benchmark S&P 500 Index lost one-quarter of its value and the NASDAQ Composite Index lost over sixty percent of its value.

With more workers exposed to the stock market now than ever before, often through participation in 401(k)-type pension plans, it was widely predicted that the market drop would force many older workers to postpone retirement. In fact, as Figure 1 illustrates, retirement rates dropped by two percentage points in 2000, suggesting that such a response may have occurred.

In **Bulls, Bears, and Retirement Decisions** (NBER Working Paper 10779), **Courtney Coile** and

Phillip Levine investigate the relationship between stock market performance and retirement behavior, paying particular attention to the boom and bust periods of the late 1990s and early 2000s. The authors use data from the Current Population Survey, the Health and Retirement Study, and the Survey of Consumer Finances.

The authors begin by noting reasons to be skeptical that Figure 1 reflects a causal relationship between stock market performance and retirement. First, retirement rates did not rise during the market boom of the late 1990s, even after adjusting for the effect of the strong economy. Second, as the sustained market decline only began in September 2000, the retirement response in late 2000 would had to have been very

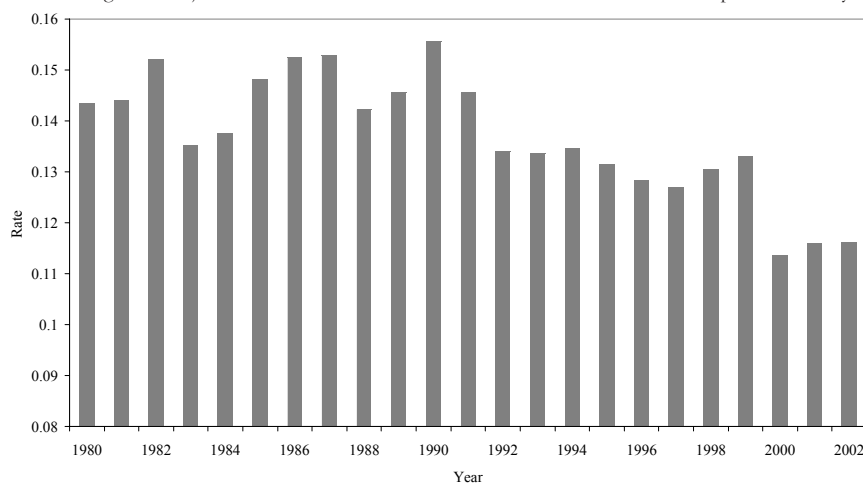
large to drive a two-point reduction for the year as a whole.

To determine the plausibility of a large response, the authors investigate the stock holdings of older households before the market decline. While two-thirds of these households had an individual retirement account (IRA) or 401(k)-type pension plan, fewer than half chose to invest it mostly or entirely in stocks. Moreover, typical stock holdings for these households were roughly equal to one year of household income. Thus for most families, even a sizeable drop in the stock market would result in a relatively small loss and be unlikely to trigger a change in retirement behavior.

To explore this point further, the authors make a simple calculation: assuming that households with no or very low stock assets did not change their retirement behavior as a result of the market crash in 2000, how large would the change in retirement behavior among stock-owning households had to have been to generate a two-point drop in retirement rates? They find that the response among these households would have to have been extremely (even implausibly) strong.

Next, the authors compare the effect of the stock market on the retirement behavior of individuals likely to have been differentially affected by changes in the market, such as people with and without 401(k)-type pension plans. If stock market performance affects retirement, then those who are more likely to own stocks should be more likely to retire in the boom period and less

Figure 1: Adjusted Retirement Rates for Workers 60 to 65 in the Current Population Survey



Note: Rates reflect retirement behavior adjusted for variation in the unemployment rate and the exact age composition of 60 to 65 year olds. The estimates assume an unemployment rate of 5 percent and are measured at the average retirement hazard between age 60 and 65. Year t reflects retirements that take place roughly between March of year t and March of year $t+1$.

likely to retire during the bust.

The authors find little support for this hypothesis. On the contrary, the drop in retirement rates in the bust period is smaller for people who are more likely to own stocks. And there is no evidence of a greater rise in retirement rates in the boom period for those who are more likely to own stocks. The authors also fail

to find any relationship between stock market exposure and labor force re-entry decisions.

The authors conclude that there is little evidence that the stock market affects retirement or labor force re-entry. They attribute this to the relatively small number of older workers with large stock holdings, noting that some individuals who experienced

large gains or losses due to market fluctuations may certainly have responded. They point out that their results leave unexplained the drop in retirement rates in the year 2000 and suggest that the drop in wealth from the market crash may have been reflected primarily in changes in consumption and other behaviors.

The Effect of Anti-Fraud Enforcement on Medicare Costs and Quality

The Medicare program may be subject to fraud and abuse by providers due to the difficulty of observing the health conditions of and treatment received by beneficiaries. Examples of abusive or fraudulent behavior include billing for services not provided, coding patients as having a more severe illness in order to obtain a higher reimbursement, and providing services that were not medically necessary. Reliable estimates of the magnitude of the problem are difficult to obtain, but the Department of Health and Human Services has estimated improper Medicare fee-for-service payments at \$12 to \$23 Billion, or roughly 7 to 14 percent of all reimbursements.

In **Detecting Medicare Abuse**, (NBER Working Paper 10677), **David Becker, Daniel Kessler, and Mark McClellan** investigate the effects of anti-fraud enforcement on Medicare costs and quality.

The authors note that most previous studies rely on a review of medical records to estimate the magnitude of Medicare fraud and the types of claims and providers associated with abuse. But because of their cost, such studies rely on small sample sizes and may not yield precise estimates. Such studies also shed little light on the questions of whether anti-fraud enforcement efforts reduce the frequency of abusive behavior, whether the effects of enforcement differ by patient or provider type, and whether enforce-

ment affects patient outcomes.

To answer these questions, the authors assemble data for a large sample of beneficiaries who experienced one of six illnesses particularly vulnerable to abuse during 1994-1998 from the Medicare Provider Analysis and Review file. This is matched to data on death records, hospital characteristics and state-level Medicaid enforcement expenditures; the authors argue that the latter are a good proxy for Medicare enforcement efforts due to the extensive administrative overlap between the agencies responsive for policing both programs. The rich data allows the authors to control for any unobservable characteristics of patients that vary at the zip code level, such as initial health conditions.

The authors find no significant effect of enforcement expenditures on hospital expenditures. However, as the authors note, if states with high level of abuse tend to invest more in enforcement, this would tend to bias the estimated effect towards zero, so this is not a useful estimate of the likely effect of additional enforcement efforts.

The authors do find significant differences in the effects of enforcement across types of patients and hospitals. When enforcement efforts are greater, hospitals reduce expenditures by more for healthy, young, male patients than for infirm, older, female patients. One explanation for this finding is that hospitals realize that the former group is more likely

to be able to rehabilitate at home with the aid of a spouse.

The authors also report that expenditures are more responsive to enforcement for patients admitted to for-profit hospitals (and to a lesser extent to non-profit hospitals) than to public hospitals. This provides some support for the view that for-profit hospitals are more responsive to incentives in ways that are sometimes socially harmful.

Another notable finding is that expenditures are more responsive to enforcement for patients admitted to hospitals that participate in a physician-hospital organization or provide skilled nursing care than those that do not. This is consistent with the concerns that physician-hospital organizations provide a vehicle for hospitals to disguise illegal compensation to physicians for referrals and that there may be substantial wasteful use of skilled nursing care.

Finally, the authors report that there is no evidence of systematic or substantial effects of enforcement efforts on health outcomes. However, they caution that their data does not allow them to measure all dimensions of health, such as the rapidity or completeness of recovery from illness.

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NBER Profile: *James Poterba*

James Poterba is the Director of the Public Economics program at the NBER and a member of the NBER's programs on Aging, Asset Pricing, Children, Corporate Finance, Education, and Health Care.

He is the Mitsui Professor of Economics and the Associate Department Head at the Massachusetts Institute of Technology, where he has taught since 1982.

Poterba is a Fellow of the American Academy of Arts and Sciences and the Econometric Society and a past member of the Executive Committees of the American Economic Association and the American Finance Association. He is an editor of the *Journal of Public Economics*, and a member of the advisory board of the *Journal of Wealth Management*.

He received a D. Phil. degree in Economics from Oxford University

and an A.B. in Economics from Harvard. Poterba's research focuses on how taxation affects the economic decisions of households and firms. His recent work has explored household saving and portfolio decisions, with particular emphasis on tax-deferred retirement saving programs such as 401(k) plans. He has also explored the role of annuity products in providing retirement income security for older households.

He is married to Nancy Rose, who is also a Professor of Economics at MIT and who directs the Industrial Organization program at the NBER. They have a daughter and two sons, aged 9, 13, and 15. In his free time, Poterba enjoys coaching his daughter's soccer team, organizing family ski and beach outings, and losing to his sons on the tennis court.



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