PERSPECTIVE FOODBORNE DISEASE IN 2011

uments to reduce the risk from the most significant foodborne contaminants" and to "establish minimum standards for the safe production and harvesting of fruits and vegetables based on known safety risks." It further requires the FDA "to allocate resources to inspect facilities and imported food according to the known safety risks of the facilities or food; and [to] establish a product tracing system to track and trace food that is in the United States or offered for import into the United States." It gives the FDA authority to order a recall of a food when it is contaminated or implicated in an outbreak. Finally, it "requires U.S. importers to perform risk-based foreign supplier verification activities to verify that imported food is produced in compliance with applicable requirements related to hazard analysis and standards for produce safety and is not adulterated or misbranded."

Although all these new forms of authority will substantially enhance the FDA's ability to prevent foodborne disease and respond more effectively when an outbreak occurs, the new law has a major shortcoming: dollars. There was no appropriation approved by the Congress for the act or authorization in the bill for the FDA to assess fees on the companies that it inspects. The Congressional Budget Office estimated that implementing this legislation would require \$1.4 billion between 2011 and 2015.5 Though the bill authorizes the FDA to collect fees when a facility requires reinspection and a recall fee for mandatory recalls, these fees are expected to provide minimal resources. In short, the actual effect of this important law will at best be extremely limited if Congress and the administration don't appropriate and sign additional legislation providing the necessary funds to carry out its mandates. Recent reports in the media calling this act "historic legislation" must be tempered by the reality that without the necessary resources, requiring the FDA to carry out the law's required activities will be like trying to get blood out of

a rock. And in the end, food safety in the United States cannot be expected to improve in more than an incremental manner.

As Paul Harvey would have said, "That's the rest of the story."

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From the Center for Infectious Disease Research and Policy, University of Minnesota, Minneapolis.

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- 1. Mead PS, Slutsker L, Dietz V, et al. Foodrelated illness and death in the United States. Emerg Infect Dis 1999;5:607-25.
- **2.** Scallan E, Hoekstra RM, Angulo FJ, et al. Foodborne illness acquired in the United States major pathogens. Emerg Infect Dis 2011;17:7-15.
- **3.** Scallan E, Griffin PM, Angulo FJ, Tauxe RV, Hoekstra RM. Foodborne illness acquired in the United States unspecified agents. Emerg Infect Dis 2011;17:16-22.
- **4.** Preliminary FoodNet data on the incidence of infection with pathogens transmitted commonly through food 10 states, 2009. MMWR Morb Mortal Wkly Rep 2010; 59:418-22.
- **5.** Congressional Budget Office. Senate File 510: Food Safety Modernization Act as reported by the Senate Committee on Health, Education, Labor, and Pensions. August 12, 2010. (http://www.cbo.gov/ftpdocs/117xx/doc11794/s510.pdf.)

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Increased Price Transparency in Health Care — Challenges and Potential Effects

Anna D. Sinaiko, Ph.D., and Meredith B. Rosenthal, Ph.D.

Slowing the growth of health care costs is critical to the long-term fiscal stability of the United States and is the direct or indirect focus of most U.S. health policy initiatives today. One tactic for reducing spending is to increase price transparency in health care — to publish the prices that providers charge or those that a patient would pay for medical care — with the aim of lowering prices overall. More

than 30 states are considering or pursuing legislation to increase price transparency (see table). Most initiatives focus on publishing average or median withinhospital prices for individual services, though information on total and out-of-pocket costs for episodes of care across different sites are available in some markets (e.g., New Hampshire). At the federal level, three bills designed to increase transparency

were introduced in Congress in 2010 and attracted some early bipartisan support. In addition, several commercial health insurance plans release information to their members about the prices charged by hospitals and physicians for common services and procedures.

At one level, it's the wide variation in medical prices within U.S. markets that creates an opportunity for transparency to

Selected State-Level Price-Transparency Initiatives*			
State	Type of Provider	Information Reported	Source
California	Hospitals	Median charge by hospital for common surgeries, including digestive, female system, heart and circulatory, male system, obstetrical, skeletal, thyroid, urinary procedures. Quality data by hospital are also available elsewhere on Web site.	www.oshpd.ca.gov/commonsurgery
Massachusetts	Hospitals, medical groups	Both summary and detailed average costs that commercial health plans pay, by provider, for common cardiac, imaging, obstetrics, orthopedic, pulmonary, and select other procedures. Listed alongside provider-level quality information, if available.	http://hcqcc.hcf.state.ma.us
Minnesota	Clinics, medical groups, hospitals	Average payment made by insurance plans for select gastrointestinal procedures, laboratory services, mental health services, obstetrical services, office visits, surgical procedures. Quality ratings by site of care are also available at same Web page.	www.mnhealthscores.org
New Jersey	Hospitals	Average hospital charges and length of stay for most common major diagnostic categories and diagnosis-related groups.	www.njhospitalpricecompare.com
New Hampshire	Hospitals, surgery centers, physicians, other health care professionals	Expected out-of-pocket and total price of preventive health services, emergency visits, radiology procedures, surgical procedures, and maternity services by insurance plans (includes prices for uninsured).	www.nhhealthcost.org

^{* &}quot;Charges" (California and New Jersey) reflect the prices that hospitals first charge for a procedure and are much higher than the actual rates paid by public and private payers. Information is from the National Conference of State Legislatures and the individual Web sites listed in the table.

reduce spending. This variation exists even for relatively common procedures. In New Hampshire in 2008, the average payment for arthroscopic knee surgery was \$2,406 with a standard deviation of \$1,203 in hospital settings and \$2,120 with a standard deviation of \$1,358 in nonhospital settings.¹ In Massachusetts, the median hospital cost in 2006 and 2007 for magnetic resonance imaging (MRI) of the lumbar spine, performed without contrast material, ranged from \$450 to \$1,675.²

Since consumers are generally ignorant of such price differences, publishing price information could both narrow the range and lower the level of prices, in part by permitting consumers to engage in more cost-conscious shopping and select lower-cost providers and in part by stimulating price competition on the

supply side, forcing high-priced providers to lower their prices (or accept smaller annual increases) in order to remain competitive. Proponents argue that consumers have price information and compare costs when purchasing just about any other good (imagine buying a car, a house, or a computer without knowing its price) and that health care should be no different.

Health care does differ from other consumer goods in a few important ways, however, that are likely to affect patients' responses to price information. First, most patients are insured, so they pay very little of the cost of their medical care, which dramatically weakens or eliminates their incentive to choose a lower-cost provider. Second, patients are concerned about the quality of their care as well as its cost, and

it's much more difficult to assess the quality of medical care than that of other goods. Timely and salient comparative quality information is often unavailable, so patients may rely on cost as a proxy for quality. The belief that higher-cost care must be better is so strongly held that higher price tags have been shown to improve patients' responses to treatments through the placebo effect.3 Moreover, the lack of independent information on the quality of care may reinforce patients' tendency to rely on physicians for advice about where to receive their care, and patients may be unwilling to go against a clinician's advice in the interest of saving a few dollars.4 Finally, determining the cost of medical care is different from determining the cost of other goods because it is often hard to know in

advance what exact combination of services a patient will need. For this reason, the average price for a particular procedure or service, which is the most readily available information, doesn't capture a patient's actual cost of care and may be a misleading indicator of true cost differences.

On the supply side, there are concerns that providers could respond to transparency initiatives in a way that leads to an increase in prices. If there is weak consumer response to the availability of comparative price information, lower-priced providers in a given market may be inspired to raise their rates to the levels of their higher-priced peers, reducing price variation but raising the overall price level. The extent to which such increases will occur is uncertain, because lower-cost providers may lack the necessary market power to make such demands (which might be why their prices were lower to begin with). It is also unclear whether such an effect could persist over time. In reasonably competitive provider markets, purchasers and health plans should be able to use price information to pressure providers to lower their prices or to improve the efficacy of tiered networks or other similar efforts.

There is a dearth of evidence on the effects of price transparency in medical care, in part because such efforts are nascent. A study of New Hampshire's early experience showed no decrease in price variation 1 year after the release of price information for 30 (mostly imaging or outpatient surgical) procedures — primarily because there is not much competition among providers in the state, owing to their small numbers in rural areas

and the favorable reputations of major providers in urban areas.¹

Price-transparency initiatives will have to address several major challenges if they are to have the desired effect. First, it's not clear which prices to report: although average unit costs (e.g., the price of an MRI of the knee) are the most readily available, personalized, episode-level costs would be more meaningful to patients (e.g., the price that an enrollee in a Blue Cross Blue Shield preferred-provider organization would pay at a particular hospital for a knee replacement, including all related doctor's visits, tests, facility charges, and so forth). Moreover, meaningful information about quality must be delivered alongside prices so that patients can make decisions by comparing care choices on both dimensions.

Finally and most fundamentally, consumers must be engaged in considering price information in their decisions to use medical care. Consumers with health plans requiring them to pay a higher share of their medical expenses (e.g., enrollees in high-deductible plans and those with substantial coinsurance) have more at stake in their utilization decisions and should be more cost-conscious shoppers. Procedures that are elective, for conditions that are not life-threatening, and that can be performed in various settings may also be most appropriate for price comparisons. There is evidence that consumers will "shop" for prescription drugs, a less complex type of medical care, when they bear significant costs of their care.5 Targeting transparency initiatives toward these consumers and toward less complex procedures could increase their impact. It may also be necessary to explain to patients the factors that could account for differences in the price per service or episode of care, so that they do not automatically associate higher prices with better care.

It is difficult to defend the obscuring of health care prices. The challenges associated with leveraging price transparency to moderate overall health care spending, however, may explain the limited role that this tactic has played in health care reform proposals. Attempts to increase cost-conscious shopping and reduce spending through pricetransparency programs are appealing, however, because these efforts can be implemented without disrupting current payment systems and because marketbased approaches to health care reform generally enjoy broad political support.

Although it is too early to tell what the outcome of experiments with increased transparency will be, in the event that they do not reduce overall spending, the urgent need to reduce cost growth in health care is probably incompatible with permitting the current level of price variation to continue. How long are payers and policymakers willing to wait to see whether market-based transparency intitiatives will work before moving to other, potentially more onerous, polices, such as increased regulation? That is the question.

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From the Department of Health Policy and Management, Harvard School of Public Health, Boston.

1. Tu HA, Lauer JR. Impact of health care price transparency on price variation: the New Hampshire experience. Issue brief no. 128. Washington, DC: Center for Studying Health System Change, 2009.

- 2. Massachusetts Division of Healthcare Finance and Policy. Measuring healthcare quality and cost in Massachusetts. (http://www.mass.gov/Eeohhs2/docs/dhcfp/r/pubs/09/measuring_hc_quality_cost_mass_nov-09.pdf.)
- 3. Waber RL, Shiv B, Carmon Z, Ariely D.
- Commercial features of placebo and therapeutic efficacy. JAMA 2008;299:1016-7.
- 4. Sinaiko AD. How do quality information and cost affect patient choice of provider in a tiered network setting? Results from a survey. Health Serv Res 2010 December 9 (Epub ahead of print).
- **5.** Hsu J, Fung V, Price M, et al. Medicare beneficiaries' knowledge of Part D prescription drug program benefits and responses to drug costs. JAMA 2008;299:1929-36.

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Designing Transparency Systems for Medical Care Prices

David Cutler, Ph.D., and Leemore Dafny, Ph.D.

In the contentious political en-Lvironment surrounding health care reform, calls for increased price transparency in health care are among the few areas of general agreement. In each of the past 2 years, leading congressional Democrats and Republicans have introduced legislation to mandate price transparency. According to the American Hospital Association, 34 states now require reporting of hospital charges or reimbursement rates, and 7 states provide a forum for voluntary price reporting. The rationale for price transparency is compelling. Without it, how can consumers choose the most efficient providers of care? But though textbook economics argues for access to meaningful information, it does not argue for access to all information. In particular, the wrong kind of transparency could actually harm patients, rather than help them.

A major issue facing transparency systems is what prices to publish. Many proponents of price transparency favor complete disclosure of all prices paid to every provider by every payer for every service. This strategy of openness resonates with a population frustrated by secret deals and payoffs that contribute to escalating costs, and it follows the lead of the Physician Payments Sunshine Act, which will establish a searchable database of all payments from

pharmaceutical and device companies to physicians.

Applying the sunshine rule in the provider-payer context, however, could have the opposite of the intended effect: it could actually raise prices charged to patients. To understand why, consider the case in which a wellregarded hospital contracts with two insurers. Suppose the hospital charges a lower price to Insurer 1 because otherwise Insurer 1 would steer patients to a different institution. If the hospital must publicly reveal both prices, it will be less likely to offer the low price to Insurer 1, because Insurer 2 would then pressure the hospital to lower its price as well. So the sunshine policy would create a perverse incentive for the hospital to raise prices (on average), and as a result its rivals could do the same. This adverse effect of price transparency would arise only in cases in which the buyer or supplier in question had some leverage (market power), but such leverage is fairly common in health care settings, including many local hospital markets.

There is only limited research on the effects of transparency initiatives for medical prices. Two recent studies found no effect of hospital price transparency in New Hampshire or California, but these analyses were (of necessity) limited to 1 or 2 years of post-initiative data.^{1,2} However, the competitive effect of price transparency is akin to that of a frequently employed contractual agreement called a "most-favored nation" (MFN) clause, and the history of such clauses in health care is not encouraging.

Under an MFN arrangement with a particular buyer, a supplier formally agrees not to charge a lower price to any other buyer. If a hospital signed an MFN agreement with Insurer 2, for example, it could not lower its prices to Insurer 1 without also lowering its prices to Insurer 2. Again, prices to Insurer 1 would rise. The MFN clause has a particularly pernicious effect in this setting, because it limits competition among insurers: how can new insurers enter a market if they cannot use innovative models to negotiate lower prices? Indeed, many insurers favor MFN clauses for exactly this reason.

This fear that such arrangements can raise prices is not a matter of idle speculation. The Department of Justice recently filed suit against Blue Cross Blue Shield of Michigan in part because it paid some hospitals higher prices in order to get them to charge its rivals an even higher price, thereby raising prices for everyone. In a case brought by a competitor of Blue Cross Blue Shield of Kansas (Reazin v. Blue Cross and Blue Shield,