



## Testimony

**Statement of  
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# **The Overuse, Underuse, and Misuse of Health Care**

**before the  
Committee on Finance  
United States Senate**

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Mr. Chairman, Senator Grassley, and Members of the Committee, I appreciate the opportunity to appear before you to discuss the importance of getting the right health care to the right patient at the right time—and the existing evidence about how frequently that objective goes unrealized. The breadth and scope of those topics are such that they are not amenable to comprehensive analysis in a single testimony, so I would like to focus today's remarks on several key points:

- Rising health care costs represent the central fiscal challenge facing the country, exerting a larger influence on the long-term fiscal balance than other commonly cited concerns such as the aging of the population.
- Spending for health care varies substantially across the United States, mostly because of variation in the intensity of services provided, but Medicare enrollees in areas with higher spending do not appear to have better health outcomes on average than those in areas with lower spending. Those observations suggest that substantial opportunities exist to reduce costs without harming health overall, but capturing those opportunities will be technically challenging to bring about through changes in policy and may also prove to be controversial.
- Expanded use of health information technology (IT) has the potential to improve the quality and efficiency of the care that patients receive, but realizing that potential would require broader changes in the health care system (including, especially, changes in the financial incentives for doctors).
- One reason that the most appropriate care is not always provided is that, for many conditions, the evidence is limited about which treatments work best for which patients and whether the benefits of more expensive therapies warrant their additional costs. More information about the comparative effectiveness of medical treatments would help to address that problem, especially if the findings were linked to Medicare's payment rates or cost-sharing requirements.
- A growing body of research on behavioral economics suggests that, in addition to financial incentives, norms and default options can exert a strong influence on individuals' choices. Such findings could inform efforts to improve efficiency in the health sector.
- Given the importance of health care issues, the Congressional Budget Office (CBO) is devoting increasing resources to that topic. As part of its effort, CBO is in the process of analyzing a number of options that could improve the efficiency of health care delivery and possibly reduce geographic variation in Medicare spending—including greater bundling of payments and stronger incentives to provide effective care—and plans to release the results of its analysis by the end of the year.

## Background on Health Care Spending and Inefficiency

The most important factor influencing the federal government's long-term fiscal balance is the rate of growth in health care costs. CBO projects that, without any changes in federal law, total spending on health care will rise from 16 percent of gross domestic product (GDP) in 2007 to 25 percent in 2025 and 49 percent in 2082; net federal spending on Medicare and Medicaid will rise from 4 percent of GDP to almost 20 percent over the same period.<sup>1</sup> Many of the other factors that will play a role in determining future fiscal conditions over the long term—including the actuarial deficit in Social Security and a decision about extending the 2001 and 2003 tax laws past their scheduled expiration in 2010—pale by comparison with the impact and challenges of containing growth in the cost of federal health insurance programs.

Concerns about the level and growth of health care costs in this country might be less prominent if it was clear that the spending was producing commensurate gains in health, but substantial evidence suggests that more expensive care does not always mean better care. Although many treatments undoubtedly save lives and improve patients' health—and the aggregate benefits from health care spending probably exceed the costs—evidence also indicates that much spending is not cost-effective and in many cases does not even improve health. Indeed, recent studies have highlighted three types of shortcomings in the quality of care that people receive, each of which may constitute a form of inefficiency:

- **Overuse.** Overuse occurs when a service is provided even though its risk of harm exceeds its likely benefit—that is, when it is not warranted on medical grounds. A more expansive definition would include cases in which the added costs of a more expensive service did not exceed the added benefits it was expected to provide. A number of studies have found, on the basis of after-the-fact reviews by independent panels of doctors, that a sizable share of certain surgeries were performed despite their being clinically inappropriate or of equivocal value; those findings held true under various types of insurance plans.<sup>2</sup>
- **Underuse.** At the same time that some services are overused, others do not get provided even though they would have been medically beneficial. One recent study found that Medicare enrollees frequently did not receive care that was recommended or deemed appropriate; another study, which examined a broader population, found that patients typically received about half of recommended services, whether for preventive care, treatment of acute conditions, or treatment of chronic conditions.<sup>3</sup>

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1. Congressional Budget Office, *The Long-Term Outlook for Health Care Spending* (November 2007).
  2. See Elizabeth A. McGlynn, "Assessing the Appropriateness of Care: How Much Is Too Much?" RAND Research Brief (Santa Monica, Calif.: RAND, 1998), available at [www.rand.org/pubs/research\\_briefs/RB4522](http://www.rand.org/pubs/research_briefs/RB4522).
  3. See Stephen F. Jencks, Edwin D. Huff, and Timothy Cuerdon, "Change in the Quality of Care Delivered to Medicare Beneficiaries, 1998–1999 to 2000–2001," *Journal of the American Medical Association*, vol. 289, no. 3 (January 15, 2003), pp. 305–312; and Elizabeth A. McGlynn and others, "The Quality of Health Care Delivered to Adults in the United States," *New England Journal of Medicine*, vol. 348, no. 26 (June 26, 2003), pp. 2635–2645.

- **Misuse.** That term includes incorrect diagnoses as well as medical errors and other sources of avoidable complications (such as infections that patients acquire during a hospital stay). Over the past decade, the Institute of Medicine has issued several reports documenting the extent of medical errors and their consequences. Recently, Medicare has stopped paying for what are termed “never events”—mistakes such as operating on the wrong body part. The range of avoidable errors is undoubtedly larger, but other types may be more difficult for an insurer to identify.

## Geographic Variation in Spending for Health Care

Perhaps the most compelling evidence suggesting inefficiency in the health sector is that per capita health care spending varies widely within the Medicare program, and yet that variation is not correlated with measures of the quality of care or health outcomes overall. In 2004, for example, Medicare spending per beneficiary ranged from about \$5,600 in South Dakota to about \$8,700 in Louisiana. Yet a comparison of composite quality scores for medical centers and average Medicare spending per beneficiary shows that facilities in states with high average costs are no more likely to provide recommended care for some common health problems than are facilities in states with lower costs (see Figure 1); if anything, it would appear that the opposite might be true. (For the country generally, health care spending per capita also varies widely, ranging from roughly \$4,000 in Utah to \$6,700 in Massachusetts in 2004, but the connection between that variation and health outcomes has not been examined as closely. In addition, Medicaid spending per enrollee also varies considerably among states.)

The observed variations in Medicare spending per enrollee are even greater when examined by the region in which enrollees generally get their hospital care (see Figure 2)—but a link between higher spending and better health is still hard to discern. In 2005, average costs ranged from about \$5,200 in the areas with the lowest spending to nearly \$14,000 in the areas with the highest spending (those averages were adjusted to account for differences in the age, sex, and race of Medicare beneficiaries in the various areas). According to one study, higher-spending regions did not have lower mortality rates than lower-spending regions, even after adjustments were made to control for different rates of illness among patients and in various regions.<sup>4</sup> That study also found that higher spending did not slow the rate at which the elderly developed functional limitations (reflecting their difficulties in taking care of themselves).

Other studies of spending variation reach somewhat different conclusions, even though they also suggest opportunities to improve the efficiency of the health sector. For example, some research suggests that health overall might not suffer in the process

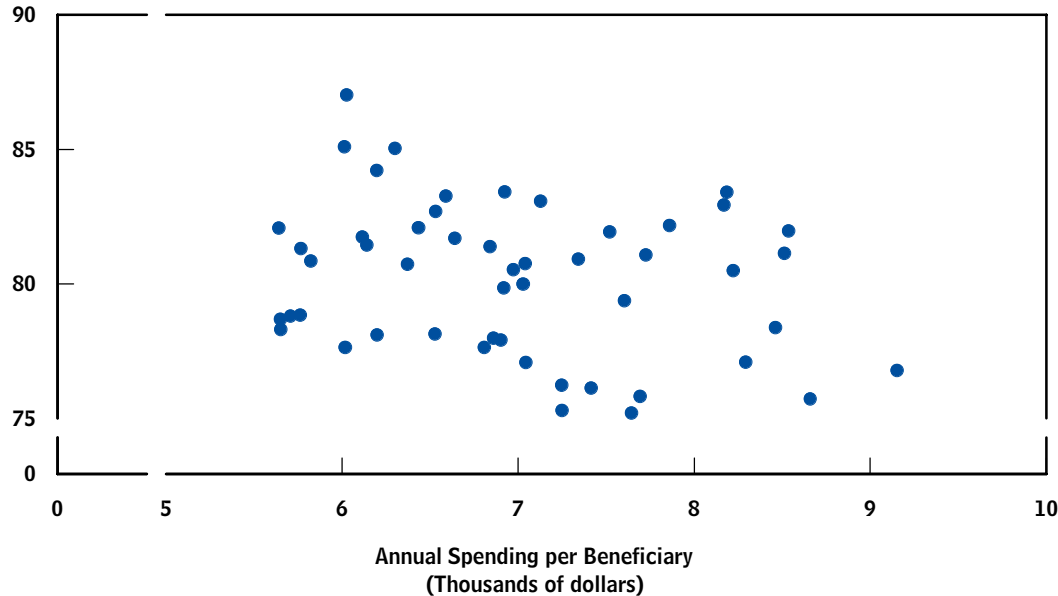
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4. Elliott S. Fisher and others, “The Implications of Regional Variations in Medicare Spending, Part 2: Health Outcomes and Satisfaction with Care,” *Annals of Internal Medicine*, vol. 138, no. 4 (February 18, 2003), pp. 288–298.

**Figure 1.**

## The Relationship Between Quality of Care and Medicare Spending, by State, 2004

(Composite measure of quality of care, 100 = maximum)



Source: Congressional Budget Office based on data from the Centers for Medicare and Medicaid Services and from Department of Health and Human Services, Agency for Healthcare Research and Quality, *National Healthcare Quality Report, 2005* (December 2005), Data Tables Appendix, available at [www.ahrq.gov/qual/nhqr05/index.html](http://www.ahrq.gov/qual/nhqr05/index.html).

Notes: The composite measure of the quality of care, based on Medicare beneficiaries in the fee-for-service program who were hospitalized in 2004, conveys the percentage who received recommended care for myocardial infarction, heart failure, or pneumonia.

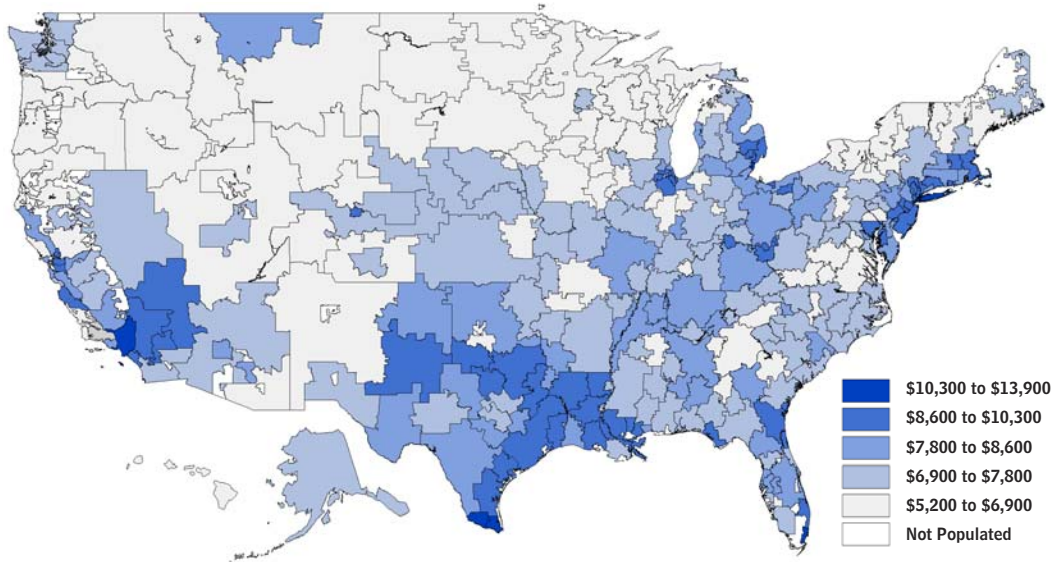
Spending figures convey average amounts by state.

of changing medical practice to match that of lower-cost regions but that patients who would benefit most from more expensive treatments might be made worse off as a result, while patients who would do better with less expensive treatments would gain.<sup>5</sup> Other, older studies of geographic variation indicate that there may be room to reduce spending without harming health in both high-use and low-use areas of the country, because, in both types of regions, a large share of certain surgeries were found to be clinically inappropriate or of equivocal value.

5. See Amitabh Chandra and Douglas Staiger, "Productivity Spillovers in Health Care: Evidence from the Treatment of Heart Attacks," *Journal of Political Economy*, vol. 115, no. 1 (2007), pp. 103–140; and Mary Beth Landrum and others, "Is Spending More Always Wasteful: The Appropriateness of Care and Outcomes Among Colorectal Cancer Patients," *Health Affairs*, vol. 27, no. 1 (January/February 2008), pp. 159–168.

**Figure 2.**

## Medicare Spending per Beneficiary in the United States, by Hospital Referral Region, 2005



Source: Congressional Budget Office based on data from the Centers for Medicare and Medicaid Services.

Note: The data are for Medicare spending per beneficiary in the fee-for-service program, adjusted for age, sex, and race. The geographic unit is the hospital referral region, as defined by the Dartmouth Atlas of Health Care. Areas labeled "Not Populated" include places such as national parks, forests, lakes, and islands.

What factors contribute to geographic variation? Some of the differences in spending reflect varying rates of illness as well as differences in the prices that Medicare pays for the same service (which are adjusted on the basis of local costs for labor and equipment in the health sector). But according to researchers at Dartmouth, differences in illness rates account for less than 30 percent of the variation in spending among areas, and differences in prices can explain another 10 percent—indicating that more than 60 percent of the variation is due to other factors.<sup>6</sup> Differences in income or the preferences of individuals for specific types of care appear to explain little of the variation in spending. Unmeasured differences in the demand for care could be important, but some of the variation in medical practice probably is attributable to regional differences in the supply of medical resources (specialist physicians or health care facilities, for example) and the propensity to take advantage of the financial incentives provided by Medicare or other payers in developing and using those resources. Overall, patterns of treatment in high-spending areas tend to be more intensive than those in low-

6. See John E. Wennberg, Elliott S. Fisher, and Jonathan S. Skinner, "Geography and the Debate Over Medicare Reform," *Health Affairs*, Web Exclusive (February 13, 2002), pp. w96–w97.

spending areas. That is, in high-spending areas, a broader array of patients will receive costly treatments.<sup>7</sup>

How much could spending be reduced? Some analysts have estimated that if spending in high- and medium-cost areas was reduced to the level seen in the lowest-cost areas, Medicare spending would be reduced by as much as 30 percent.<sup>8</sup> Achieving such savings by eliminating only inappropriate and unnecessary care, however, presents substantial technical and policy challenges.

## **The Potential and Limitations of Health Information Technology**

Health information technology has the potential to significantly increase the efficiency of the health sector by helping providers manage information. In particular, electronic health records—comprising electronic documentation of providers’ medical notes, electronic viewing of laboratory and radiological results, electronic prescribing of medications, and an interoperable connection among providers of health care—could have a significant impact on medical practice. When used effectively, electronic health records could reduce the duplication of diagnostic tests; remind physicians about appropriate preventive care; identify harmful drug interactions or possible allergic reactions to prescribed medicines; and help physicians manage the care of patients with complex chronic conditions.

The most auspicious examples of health IT have tended to involve relatively integrated health care systems. Such systems typically involve a hospital network or a health plan that owns the hospitals that provide most care to enrollees, with doctors and other providers who work exclusively for the organization (either for a salary or under contract). In such systems, any savings that are generated by health IT at most points in the process of delivering care would be captured. A number of integrated delivery systems, including Kaiser Permanente, Intermountain Healthcare, Geisinger Health System, and Partners HealthCare, have implemented electronic health records either across their organizations or in some regions, and officials of those systems believe that the efficiency and quality of the care they provide have improved as a result.

For providers and hospitals that are not part of integrated systems, however, the benefits of health IT are not as easy to capture, and perhaps not coincidentally, those physicians and facilities have adopted electronic health records at a much slower rate. Office-based physicians in particular may see no benefit if they purchase such a product—and may even suffer financial harm. Even though the use of health IT could generate cost savings for the health system as a whole that might offset the start-up

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7. For further discussion, see Congressional Budget Office, *Geographic Variation in Health Care Spending* (February 2008).

8. See Wennberg, Fisher, and Skinner, “Geography and the Debate Over Medicare Reform.”



and operating costs involved, many physicians might not be able to reduce their own office expenses or increase their own revenue sufficiently to pay for it. Despite the potential gains from health IT, relatively few providers have adopted it—about 12 percent of physicians and 11 percent of hospitals as of 2006.

The bottom line is that research does indicate that, in certain settings, health IT appears to facilitate reductions in health spending if other steps in the broader health care system are also taken to alter incentives to promote savings. By itself, however, the adoption of more health IT is generally not sufficient to produce significant cost savings.<sup>9</sup>

## **Comparing the Effectiveness of Medical Treatments**

Two potentially complementary approaches to reducing total spending on health care and increasing its efficiency involve generating more information about the relative effectiveness of medical treatments and changing the incentives for providers and consumers of health care. Those steps would address two shortcomings of the U.S. health care system. First, experts in the medical research community report that, for many serious medical conditions, there is surprisingly little hard scientific information about which treatments work best for which patients or whether the benefits of more expensive therapies warrant their additional costs. As a result, treatment choices often depend not only on the experience and judgment of the physicians involved but also on anecdotal evidence and local practice norms. At least in some cases, that method of making decisions does not yield the most effective treatment. Although estimates vary, some experts believe that less than half of all medical care provided in the United States is based on or supported by firm evidence of effectiveness.

Second, the financial incentives for both providers and patients tend to encourage the adoption of newer, more-costly services even in the absence of clear evidence establishing that those services are superior to cheaper, proven alternatives. For doctors and hospitals, those incentives stem largely from fee-for-service reimbursement, which encourages providers to deliver a given service efficiently but also creates an incentive to supply additional or more expensive services—as long as the payment exceeds the costs. Insured patients, for their part, generally pay only a portion of the costs of their care and, consequently, have only limited financial incentives to seek lower-cost treatments; that trade-off is inherent in insurance protection. Private health insurers have some incentive to limit the use of ineffective care but may lack information about which treatments work best for which patients and may be reluctant to be seen as limiting the treatment choices of physicians and patients. For its part, the Medicare program lacks clear legal authority to take costs into account in determining which services are covered and has made only limited use of the available data on relative effectiveness in setting payment amounts.

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9. For further discussion, see Congressional Budget Office, *Evidence on the Costs and Benefits of Health Information Technology* (May 2008).

Analysis of “comparative effectiveness” is simply a comparison of the impact of different options that are available for treating a given medical condition for a particular set of patients. Such studies may compare similar treatments, such as competing drugs, or they may analyze very different approaches, such as surgery and drug therapy. The analysis may focus only on the relative medical benefits and risks of each option, or it may go on to weigh both the costs and the benefits of those options. In some cases, a given treatment may be found more effective for all types of patients, but more commonly a key issue is determining which specific types would benefit most from it.

Such research can also be pursued in various ways, ranging from systematic reviews of previous findings to clinical trials—and one significant potential benefit of health IT that has thus far gone relatively unexamined involves its role in facilitating such research. Widespread use of health IT could make available large amounts of data on patients’ care and health, which could be used for empirical studies that might not only improve the quality of health care but also help make the delivery of services more efficient. By making clinical data easier to collect and analyze, health IT systems could support rigorous studies to compare the clinical effectiveness and cost of different treatments for a given disease or condition—without having to incur the expense of full-scale clinical trials. Then, in response to the studies’ findings, those systems could aid in implementing changes in the kinds of care provided and the way those services were delivered, and they could be used to track progress in carrying out the changes.

To affect medical treatment and reduce health care spending, the results of comparative effectiveness analyses would ultimately have to change the behavior of doctors and patients—that is, to get them to use fewer services or less intensive and less expensive services than are currently projected. Bringing about those changes would probably require action by public and private insurers to incorporate the results into their coverage and payment policies in order to affect the incentives for doctors and patients. Making such changes to the Medicare program would require legislative authority; private insurers would not face the same constraint but might be reluctant to take such action if Medicare did not do so. Because those steps would probably be controversial, some proposals would establish an independent agency—sometimes referred to as a federal health board—that could be given authority to implement those decisions (see Box 1).

Although insurers could choose not to cover drugs, devices, or procedures that were found to be less effective or less cost-effective, they would have a number of additional options as well. They could adjust payments to doctors and hospitals to encourage the use of more-effective care. Alternatively, insurers could require enrollees to pay some or all of the additional costs of more expensive treatments that were shown to be less effective or less cost-effective (in which case enrollees would have to decide whether the added benefits were worth the added costs). Indeed, some recent proposals call for a “value-based” design of insurance, which encourages the use of services when the clinical benefits exceed the costs and likewise discourages the use of services when the

benefits do not justify the costs. Although insurance plans generally vary cost sharing by the type of service provided, that new approach would be tailored to the patient and the treatment.<sup>10</sup>

## **Behavioral Economics and Efficiency Improvements**

What else could be done to improve the efficiency with which health care is delivered—and specifically to reduce the delivery of services with little or no value? In health care, the vast majority of decisions are heavily influenced by doctors and other medical professionals. Restraining cost growth will therefore primarily require changing their choices.

Like other people, doctors tend to follow professional norms of behavior. There are a number of reasons for that tendency—not following professional norms may be a more difficult and time-consuming way to practice and may be perceived to help defend against charges of malpractice. The problem is that the professional norms in different parts of the nation do not always follow evidence-based standards of best practice. Indeed, the regional pattern of health care delivery (apparent in Figure 2) probably reflects, at least in part, differences in norms of practice among doctors. Professional norms may differ by locality because colleagues in the area may have a disproportionate influence and because a tendency to favor the status quo may make norms slow to change in the face of new evidence.

How can norms be shifted? Anesthesiology provides one example of a success story in putting evidence-based standards into practice. In the mid-1980s, after analyzing the most common sources of errors, the American Society of Anesthesiologists promulgated standards of optimal practice (both in procedures and in equipment design).<sup>11</sup> Providers had an incentive to follow the standards because deviations from them made the imposition of malpractice liability more likely. After the standards were adopted, mortality rates fell to about 5 per million encounters, as compared with averages above 100 per million during earlier periods.<sup>12</sup> Thus, aggressively promulgated standards backed by some incentives can alter a long-standing and suboptimal status quo.

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10. For further discussion, see Congressional Budget Office, *Research on the Comparative Effectiveness of Medical Treatments: Issues and Options for an Expanded Federal Role* (December 2007).

11. See Jeffrey B. Cooper, “Getting Into Patient Safety: A Personal Story,” *AHRQ WebM&M: Morbidity and Mortality Rounds on the Web* (Agency for Healthcare Research and Quality, August 2006), available at [www.webmm.ahrq.gov/perspective.aspx?perspectiveID=29](http://www.webmm.ahrq.gov/perspective.aspx?perspectiveID=29).

12. See David A. Hyman and Charles Silver, “You Get What You Pay For: Result-Based Compensation for Health Care,” *Washington and Lee Law Review*, vol. 58, no. 4 (Fall 2001), pp. 1427–1490.

**Box 1.**

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**Considerations in Establishing a Federal Health Board**

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One proposal that has received attention recently would create some type of federal health board; for example, Senator Baucus and Federal Reserve Board Chairman Bernanke expressed interest in that idea during the Finance Committee's recent summit on health care reform.<sup>1</sup> The Congressional Budget Office is in the process of producing a report on options for structuring such a board.

The basic purpose of the board would be to serve as an expert, independent entity with the goals of containing costs and maximizing quality in federal health programs generally and in Medicare in particular.

One role could be to evaluate research on the comparative effectiveness of medical treatments. Such research could help to improve the efficiency of federal health care programs, but applying its results to Medicare's coverage or payment policies would require substantial technical knowledge and would be controversial—involving transition costs and trade-offs that could leave some stakeholders worse off.

The board could be structured in a number of ways. One often cited institutional analog is the Federal Reserve Board, which has substantial insulation from political pressures in setting U.S. monetary policy. Several important considerations would arise in designing the new entity:

- **Effect of Decisions.** The board could either be advisory—tasked with making recommendations to existing executive agencies or the Congress—or be delegated the regulatory authority to make binding decisions with the force of law (over, for example, coverage rules or payment rates). If the decisions were binding, the board's authority would be akin to the powers held by the Federal Reserve with respect to certain interest rates and the regulation of member banks. To the extent the board was advisory, its functions might largely duplicate those of existing entities such as the Medicare Payment Advisory Commission, and in an advisory capacity, the board might have difficulty achieving efficiencies in the many areas that could provoke controversy.

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1. "Prepare for Launch: Health Reform Summit" (seminar sponsored by the Senate Finance Committee, Washington, D.C., June 16, 2008). See also the Federal Health Care Board Act of 2007, S. 2107, 110th Congress, 1st sess. (2007); and Tom Daschle, *Critical: What We Can Do About the Health-Care Crisis* (New York: St. Martin's Press, 2008).

Continued

## Considerations in Establishing a Federal Health Board

- **Extent of Legislative Guidance.** Policymakers would face a trade-off between allowing the board flexibility and, at the same time, providing guidance as to what was to be accomplished. For instance, in setting monetary policy, the Federal Reserve is tasked with the broad objectives of maximizing employment and minimizing inflation but is granted flexibility to make independent decisions about how to balance those often competing objectives.
- **Degree of Independence.** To the extent that policymakers wanted to insulate the board from political pressure, a variety of mechanisms would be available. For instance, board members could be given long terms of service—on the order of a decade or more—as are governors of the Federal Reserve system. Further, appointments could be such that members could be removed only “for cause,” rather than serving at the will of the President (a feature that distinguishes independent agencies like the Federal Reserve Board and the Federal Trade Commission from other agencies of the executive branch). Legislation could also establish an independent source of funding for the board so that it was not subject to the annual appropriation process—as is done with the Federal Reserve system, whose operations are financed primarily by interest earned on its holdings of federal debt and by fees paid for the financial services it provides. Depending on the scope of the federal health board’s decisionmaking authority, however, some policymakers and stakeholders might object to granting substantial authority to an agency with limited accountability.

## CBO’s Activities and Future Analyses of Options

Because future health care spending is the most important factor determining the nation’s long-term fiscal condition, CBO is devoting increasing resources to assessing options for reducing such spending. The agency has expanded the number of full-time-equivalent staff analyzing health care issues from 30 at roughly this time last year to 45 now, with 3 more coming on board within the next three months. Last year, CBO established a panel of health advisers—consisting of experts from academia, industry, and independent research organizations—which meets periodically to examine frontier research in health policy and to advise the agency on its analyses of health care issues. As part of its work generally, CBO continually reviews research conducted both in and outside of government.

As part of its analysis of health care, CBO is examining options that could improve the efficiency of health care delivery and thereby might also reduce geographic variation in Medicare. The options could include the following approaches:

- Increasing the bundling of services in payments to providers (such as those that have been implemented in the Medicare program for payments to hospitals, for example), which could help to curb current incentives to provide increasingly intensive services that produce only modest or no improvement in health.
- Enhancing incentives to provide care consistent with accepted guidelines for low-cost, highly effective care, thus helping to change patterns of medical practice in places that now are characterized by lower-quality, higher-cost care.

Not all interventions that would reduce geographic variation in health care spending would necessarily improve the overall efficiency of medical practice. For example, reducing payments to high-spending areas while increasing payments to low-spending areas would reduce spending variation but could result in worse outcomes if the quality of care declined in the high-spending areas more than it improved in the low-spending ones. To the extent feasible, CBO will take those considerations into account in its analysis.

Late this year, the agency plans to release two significant reports on health policy: One will present budget estimates for numerous specific policy options, and the other will address critical topics related to proposals to make major changes in the health insurance and health care systems. CBO hopes that those efforts will be of significant value to the Congress in assessing ways to address these critical policy issues.