

# Geography And The Debate Over Medicare Reform

*A reform proposal that addresses some underlying causes of Medicare funding woes: geographic variation and lack of incentive for efficient medical practices.*

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## **ABSTRACT:**

**Medicare spending varies more than twofold among regions, and the variations persist even after differences in health are corrected for. Higher levels of Medicare spending are due largely to increased use of "supply-sensitive" services—physician visits, specialist consultations, and hospitalizations, particularly for those with chronic illnesses or in their last six months of life. Also, higher spending does not result in more effective care, elevated rates of elective surgery, or better health outcomes. To improve the quality and efficiency of care, we propose a new approach to Medicare reform based on the principles of shared decision making and the promotion of centers of medical excellence. We suggest that our proposal be tested in a major demonstration project.**

In some regions of the United States Medicare pays more than twice as much per person for health care as it pays in other regions. For example, age-, sex-, and race-adjusted spending for traditional, fee-for-service (FFS) Medicare in the Miami hospital referral region in 1996 was \$8,414—nearly two and a half times the \$3,431 spent that year in the Minneapolis region.[1](#)

Even after differences in price levels across regions are adjusted for, there are no obvious patterns that suggest why some areas spend more than others. Spending in urban areas in the Northeast tends to be higher than average, but spending in rural regions in the South and urban areas in Southern California is as high or even higher. And the dollar transfers involved are enormous. The difference in lifetime Medicare spending between a typical sixty-five-year-old in Miami and one in Minneapolis is more than \$50,000, equivalent to a new Lexus GS 400 with all the trimmings.[2](#)

Regional differences in spending have a more immediate consequence for the elderly who are enrolled in Medicare health maintenance organizations (HMOs), since capitated Medicare payments to HMOs under the Medicare+Choice (M+C) program are tied directly to local FFS per capita costs.[3](#) Thus, HMOs in high-cost areas get paid more per subscriber and can therefore provide their clients with drug

benefits and prescription eyeglasses, services that HMOs in low-cost regions cannot provide.<sup>4</sup> Efforts by the federal government to raise HMO capitation rates in low-cost areas have generated problems of their own. A recent report to Congress by the Medicare Payment Advisory Commission (MedPAC) ultimately targeted variation in FFS Medicare payments as the culprit:

If a large portion of the [geographical] difference is due to differences in practice patterns that have no apparent effects on quality of care, then Congress may want to examine whether Medicare payment policy should accommodate that variation...The answer will not lie in changing M+C policy alone. Policies to limit variation in practice patterns will have to be implemented in the FFS sector as well.<sup>5</sup>

In light of the policy recommendations above, we consider four distinct questions. First, can the variations in Medicare spending be explained by differences in illness? In other words, is spending higher in some regions simply because people there are sicker? Second, how do the patterns of practice vary, and what types of health care services do the elderly receive in high-spending regions that they do not get in low-spending regions? Do residents of high-spending regions receive more elective surgery or more effective care? Third, how efficient is this additional spending? Do people in high-spending regions prefer the additional care or experience better health as a result? Finally, how can the Medicare system (and the health care system more generally) be reformed to improve both the quality of care and the efficiency of the health care system?

## **Do Differences In Illness Levels Explain Higher Medicare Spending?**

Health services use is, of course, strongly related to health status. Data from the Medicare Current Beneficiary Survey (MCBS) show that those who reported excellent health spent an average of 1.5 days per year in the hospital, while those in poor health spent an average of 4.2 days in the hospital.<sup>6</sup> There also are differences in health status across regions. We created an "illness index" that uses regional rates of heart attack, stroke, hip fracture, cancer, gastrointestinal hemorrhage, and death of Medicare beneficiaries to quantify the underlying disease burden in a region. These measures were chosen because the hospitalization records for the illnesses are accurate reflections of their true incidence in the population; nearly every elderly person with a hip fracture ends up in the hospital. (Not surprisingly, the Social Security Administration is assiduous about measuring mortality accurately.) Using regression analysis, we found that the health of enrollees in Grand Junction, Colorado, one of the healthiest regions in the United States, implies that their per capita Medicare spending should be about 20 percent below the national average. By contrast, the regression suggests that those living in Birmingham, Alabama, one of the least healthy regions, should receive about 24

percent above the national average.<sup>7</sup> These estimated differences in underlying health are substantial and could be used, for example, in "risk-adjusted" regional capitation payments for Medicare enrollees. Still, they explain just 27 percent of the (weighted) variation in Medicare spending across regions. Consequently, illness-adjusted Medicare spending differs greatly across regions.<sup>8</sup> Other studies with homogeneous patient populations (such as those with hip fracture or heart attack) confirm that substantial differences in Medicare use and spending across U.S. regions are largely independent of beneficiaries' need for services.<sup>9</sup>

## How Do Practice Patterns Differ In High-Spending Regions?

We considered these questions by examining variations in three categories of services: effective care, preference-sensitive care, and supply-sensitive care. The categories of care are distinguished by the relative roles of medical theory and opinion, medical evidence, the per capita supply of medical resources, and the importance and appropriateness of patients' preferences in choosing a treatment option ([Exhibit 1](#)).

**Effective care.** Effective care comprises services whose use is supported by well-articulated medical theory and strong evidence for efficacy, as determined by clinical trials or valid cohort studies. The category is further restricted to interventions that virtually all patients should want as part of the contract they make with their health care systems. Effective-care indicators, based on Health Plan Employer Data and Information Set (HEDIS) measures and expanded for the *Dartmouth Atlas of Health Care*, include vaccination for pneumococcal pneumonia; mammography screening for breast cancer and screening for colon cancer; eye examinations for diabetics; HgA1c and blood lipid monitoring for diabetes; and, for heart attack victims, the prescription of aspirin therapy, beta-blockers, angiotensin converting enzyme (ACE) inhibitors and early reperfusion with thrombolytic agents, or percutaneous transluminal coronary angioplasty (PTCA). For each of these services, use rates vary extensively among hospital referral regions. For example, among patients with heart attacks who were considered "ideal candidates" for beta-blockers, those who actually got the needed drug ranged from 5 percent to 92 percent of patients among the 306 *Dartmouth Atlas* Hospital Referral Regions (HRRs). Unfortunately, most regions exhibited substantial underuse: Compliance with evidence-based practice guidelines exceeds 80 percent of patients in only eight regions; in ten regions, compliance was less than 20 percent. The percentage of female Medicare beneficiaries (ages 65-69) who received a mammogram at least once over a two-year period (as recommended by the US Preventive Services Task Force) ranged from 21 percent to 77 percent, with all regions falling below the "best-practice" benchmark provided by Kaiser Permanente South. The most important explanation for such variation in effective care appears to be the lack of

infrastructure to ensure compliance with well-accepted (evidence-based) standards of practice.

The important question for our purpose is, Does higher Medicare spending buy better quality? [Exhibit 2](#) suggests that it does not. On average, there is as much underuse in high-cost as in low-cost regions, which suggests that greater spending does not purchase the infrastructure needed to ensure compliance with the standards of practice dictated by evidence-based medicine.

**Preference-sensitive care.** Preference-sensitive care is clinical services where for many patients at least two valid alternative treatment strategies are available. Since the risks and benefits of the options differ, the choice of treatment involves trade-offs. In theory, these treatment choices should depend on informed patients' making decisions based on the best clinical evidence. In practice, however, treatment choices appear to be determined largely by local medical opinion concerning the value of surgery or its alternatives. For example, cardiac bypass surgery rates exhibit about a fourfold range of variation, from three per thousand (adjusted for age, sex, and race) in Albuquerque, New Mexico, to more than eleven per thousand in Redding, California. The rates are strongly correlated with the numbers of per capita cardiac catheterization labs in the regions but not with illness rates as measured by the incidence of heart attacks in the region. Surgery for back pain varies even more, but the rates are not strongly correlated with supply of beds or surgeons.

While there is a large body of research on bypass surgery, there is much less for other surgical procedures. For example, the surgical decision regarding treatment of low back pain must be made in the absence of evidence from clinical trials. It seems likely that individual physicians' opinions, rather than patients' preferences, explain the more than sixfold variation in surgery rates among the 306 hospital referral regions. Indeed, regions do not show consistently high or low rates across surgical procedures, and for most procedures the patterns are not explained by the supply of surgeons. Rather, the patterns are idiosyncratic, with high rates for some discretionary procedures and low rates for others—a phenomenon we refer to as the "surgical signature." The use of discretionary surgery is, on average, not higher in regions with greater spending ([Exhibit 2](#)).

**Supply-sensitive services.** In contrast to effective care and preference-sensitive care, the medical theory governing decisions about the use of hospitals as a site of care or the frequency of physician visits and diagnostic tests is much less well developed. Medical texts and journals, for example, are silent on the incremental value of three-month versus six-month intervals between physician visits for patients with such conditions as diabetes or hypertension. These sources are similarly uninformative with regard to the indications for hospitalization, use of intensive care, and use of imaging and other diagnostic tests for patients with a host of chronic illnesses. Regions differ greatly in these measures of intensity.

These variations are particularly pronounced during the last six months of life, a period of time when many Medicare enrollees are quite sick and which accounts for more than 20 percent of total Medicare expenditures.<sup>10</sup> During 1995-96 the average numbers of visits to medical specialists ranged from two per decedent in Mason City, Iowa, to more than twenty-five in Miami, Florida.<sup>11</sup> The average number of days per decedent spent in hospital ranged from 4.6 in Ogden, Utah, to 21.4 in Newark, New Jersey.

A similar pattern holds for admissions to intensive care units (ICUs) in the last six months of life, with nearly half of all decedents experiencing an ICU admission in Miami, Florida, compared with only 14 percent in Sun City, Arizona. These variations cannot reasonably be attributed to differences in illness: During the last six months of life most people are ill, regardless of where they live. Moreover, similarly situated communities often have strikingly different rates. For example, while in Sun City, Arizona, only 14 percent of decedents experience an ICU admission in the last six months of life, 49 percent and 45 percent of decedents in Sun City, California, and Sun City, Florida, respectively, do so. The local supply of medical specialists and acute care hospital capacity explains 41 percent of the variation in end-of-life care intensity across HRRs.<sup>12</sup> We therefore adopt the term "supply-sensitive" to capture these indicators of health care intensity for chronically ill patients.<sup>13</sup>

The incremental Medicare dollar spent in regions with higher-than-average spending tends to be for medical specialist visits, diagnostic tests, and use of intensive care and hospitalizations for medical conditions.<sup>14</sup> [Exhibit 2](#) shows the close correlation between per capita Medicare spending for the entire Medicare population and the average number of specialist visits for those in their last six months of life. Thus we view the incremental Medicare dollar as flowing not simply toward more specialist visits in the general elderly population but, more specifically, toward specialist visits concentrated among the population with chronic and ultimately life-threatening diseases. Many of these patients do not survive and are thus well represented in our sample of people in their last six months of life.<sup>15</sup>

The strong associations between higher spending and greater use of supply-sensitive care, and the lack of association between more spending and more preference-sensitive or effective care, can be seen in the medical care of residents of four regions that represent either very high or very low levels of overall spending: Miami, Florida; Orange County, California; Portland, Oregon; and Minneapolis, Minnesota ([Exhibit 3](#)). Age-, sex-, and race-adjusted spending in Miami, for example, is 2.45 times greater than in Minneapolis. During the last six months of life the "extra" spending purchases 6.55 times more visits to medical specialists, 2.13 times more hospital days, and 2.16 times more admissions to an ICU. By contrast, rates for effective care and preference-sensitive care are slightly lower in Miami than in Minneapolis.



## Is More Better?

We considered this question for each of the three categories of service. It seems clear that for our eleven indicators of effective care, more is better. One study suggested that regions with better quality are associated with better survival rates in the Medicare population.[16](#) On these measures of quality, all regions in the United States are practicing subpar medicine—use rates are too low.

In the case of preference-sensitive care, the significance of the variation in use rates cannot be strictly interpreted from the point of view of the patients' welfare, since it is not clear whether patients actually had much of a say in determining which treatment they received. Clinical studies of shared decision-making programs designed to inform patients about the treatment options available for low-back pain, prostatic hyperplasia, and stable angina do, however, suggest that the amount of surgery now provided in many regions exceeds what an informed Medicare population would demand.[17](#)

Does greater overall health care intensity from the provision of "supply-sensitive" medical care result in better health outcomes? To address this question, we have evaluated the natural experiments afforded by the variations in care intensity among regions. Studies at the population level indicate no net advantage in terms of life expectancy for Medicare enrollees living in regions with more hospital resources (and hospitalizations) and greater care intensity as measured by more aggressive treatment patterns during the last six months of life.[18](#) Longitudinal (cohort) studies of patients with similar diseases (such as hip fracture) who have been followed for a number of years also show that patients living in high-care-intensity regions gain no survival advantage over those in low-intensity regions.[19](#)

The major limitation of these studies is the possibility that beneficiaries in high-spending regions could achieve gains in their quality of life. Several lines of research provide at least suggestive evidence that quality of life in high-intensity regions may not be better than in low-intensity regions. First, case-mix-adjusted longitudinal studies of Medicare beneficiaries found that those residing in high-intensity regions achieved no gain in relief from angina or improvement in function.[20](#) Second, two randomized trials testing the impact of greater medical care intensity for patients with chronic disease found no benefit in terms of functional status and quality of life.[21](#) Third, evidence from the Study to Understand Prognoses and Preferences for Outcomes and Risks of Treatment (SUPPORT) study suggests a poor match between patients' preferences and how patients with severe chronic illness are actually treated. Patients who stated that they would prefer an out-of-hospital death were no less likely to die in a hospital than were patients who expressed a preference for an in-hospital death. What did matter was local hospital capacity: The overall supply of hospital resources in the region effectively predicted whether the patient died in a hospital.[22](#) Because most elderly

people express a preference for a less intensive approach to care as death approaches, greater intensity could lead to poorer quality of care among this group.

## **Budgetary Effects Of Reducing Regional Disparities**

How much money is at stake? We have used benchmarks for Medicare spending from low-cost regions to estimate how much money would be "saved" if regions with higher spending were brought down to the level of the benchmark. Our estimates are based on 1996 spending. In that year, spending under traditional Medicare was about \$138.3 billion, and per capita spending reached \$4,990. If, on an age-, sex-, and race-adjusted basis, spending levels in the lowest decile were realized in all higher regions, total spending would have been just \$98.2 billion, or a savings of \$40 billion (28.9 percent).<sup>23</sup> In theory, these savings could be used to fund a prescription drug benefit without any increase in taxes or in elderly persons' premiums. Any balanced-budget reform would entail winners and losers, but we argue that every region ultimately would gain if such reallocation were to occur, because the elderly would receive prescription drug benefits of great value to them and would lose medical services of little, or possibly negative, value.<sup>24</sup>

In theory, the government could effect the entire \$40 billion in savings simply by imposing regional budgetary caps benchmarked (on the basis of age, sex, and illness) to the low-cost areas. Under this approach, local regions would receive a fixed budget for Medicare services. If the quantity of services provided is above the benchmarked levels, the only way to meet the budgetary cap is to slash how much Medicare pays per procedure or physician visit. Such a reform would generate adverse political repercussions, as well as perverse incentive effects. Some physicians would work harder to maintain their prior level of income, while others might stop seeing Medicare patients because of the lower reimbursement rates. Physicians practicing conservative medicine in high-intensity areas would be punished the most. Most important, these incentives would do nothing to address the fundamental questions about the value of Medicare services raised by the variation phenomena.

## **Improving The Quality And Efficiency Of Medicare**

We suggest that the first task for Medicare reform is to improve the quality of care. We have identified three categories of unwarranted variation affecting the quality and efficiency of care supported by the Medicare program. To address these shortcomings, we propose the following goals for Medicare reform: (1) eliminate underprovision of effective care; (2) establish patient safety; (3) reduce scientific uncertainty through outcomes research; (4) establish shared decision making for preference-based treatments, chronic disease management, and end-of-life care; (5) establish accountability for capacity; and (6) promote conservative practice when greater care is wasteful if not harmful. The strategies described below have been demonstrated in selected specific settings to achieve these goals.

## **Strategies to ensure that effective care is provided and medical errors are minimized.**

The organizational structure of medical care is critical in ensuring that effective care is not underused. Integrated health systems such as staff- and group-model HMOs can deliver effective care to almost all of their enrollees, although they are losing market share to less tightly structured health plans. (By contrast, HMOs that contract with individual physician groups [the "network" model] have been less successful in implementing these quality standards.) A few exemplary organizations, working voluntarily, have developed the administrative and research infrastructure to implement "best practices" and have consequently reduced mortality and morbidity resulting from medical errors. Notable projects include the Northern New England Cardiovascular Study Group and Intermountain Health Systems.<sup>25</sup> Yet these examples are not common, and there is no mechanism in the Medicare program designed to reward providers that adopt these best-practice strategies.

## **Strategies to improve the quality of patient-physician decisions regarding treatment for which patients' preferences should play a role.**

Research on health outcomes is important to remedy significant gaps in scientific knowledge. Throughout the 1990s the Agency for Healthcare Research and Quality (AHRQ) undertook programs that encouraged leading health care organizations to develop research programs, and, more recently, the National Institutes of Health (NIH) has supported networks of clinical trials to evaluate the outcomes of treatment options involving preference-sensitive surgery.<sup>26</sup> The Maine Medical Assessment Foundation has demonstrated that providers will respond to practice variations by participating in outcomes research.<sup>27</sup> Many surgical procedures involve important tradeoffs that should depend on patients' preferences.<sup>28</sup> Shared decision making, in which decision support systems are used to provide patients with balanced information about treatment options for their specific disease, is designed to provide a better match between patients' preferences and the treatment they receive. It also has led to changes in the demand for intensive treatments. In most studies of shared decision making, overall surgery rates have declined. Shared decision making has not been widely implemented, perhaps because of providers' fears about loss of autonomy and income.

## **Strategies to promote accountability for capacity and conservative practice where more care is wasteful, if not harmful.**

Attempts to limit hospital capacity through public-sector health planning have met with only limited success. The classic HMO (in contrast to the network HMO model) is generally the only entity that practices private-sector health planning based on population benchmarks in reaching decisions on how many hospital beds to build (or contract for) and how many physicians and other health care workers to hire. Promoting more conservative practice styles, particularly for end-of-life care, is the goal of an increasing number of physicians, notably primary care physicians,

hospitalists, geriatricians, and palliative care physicians. However, to affect overall Medicare efficiency, efforts to promote conservative practice styles also must lead to a reduction in excess capacity.

While these approaches have led to improvements in quality of care, they are often piecemeal reforms. Also, the Medicare program is not structured to ensure that these efforts receive the support they deserve; indeed, conservative strategies toward health care are typically rewarded with lower Medicare reimbursements. We next propose an approach that encourages and rewards health care organizations that improve the quality and efficiency of health care.

## **Establishing Comprehensive Centers For Medical Excellence**

We propose a new structure for Medicare reforms that focuses simultaneously on increasing the use of effective care and reducing medical errors, improving the quality of medical decision making, and reducing supply-sensitive care. We believe that this structure can help to meet Medicare's goals for medical excellence as set forth above. In traditional FFS Medicare, bills are paid whether or not the service was appropriate and whether the hospital or provider is of high or low quality. Only in the case of outright fraud might Medicare shrink from paying. The idea behind our proposed Comprehensive Centers for Medical Excellence (CCMEs) is to allow Medicare to reward both quality and efficiency.

To qualify, hospitals, provider networks, or organizations representing regional coalitions would agree to establish "best-practice" models such as those discussed above to address the underlying causes of variation. CCMEs would in turn partner with the Medicare program, AHRQ, and the NIH to develop a systematic, long-term approach to building the organizational and scientific infrastructure required to bring about fundamental improvements in the performance of the US health care industry. The feasibility of the CCME program thus depends on the willingness of the leading US health care organizations and the federal government to establish a partnership. As the essential first step, we suggest that the federal government undertake a major demonstration project to test the hypothesis that the partnership can fruitfully address each category of unwarranted variations.

**Promote effective care and patient safety.** As noted above, staff- and group-model HMOs (the so-called classic HMOs) provide the best model for implementing organizational structures that ensure effective care. Like classic HMOs, CCMEs would be expected to develop procedures and processes of care that, when used with "real-time" Medicare claims or internal data, could develop strategies for assuring the provision of safe and effective care.

The remedy for unexplained variations in surgical mortality rates and other problems of patient safety depends on the active participation of health care providers in programs to improve their practices. Under the CCME project, participating organizations would be expected to develop collaborative strategies to discover the cause of medical errors and create solutions that improve patient safety, following the best-practice models discussed above. The federal government, through Medicare and AHRQ, would provide financial support and scientific peer review to build and sustain the necessary infrastructure regarding quality standards. The CCME structure also could be used to facilitate additional proposals developed in the recent Institute of Medicine (IOM) study on improving health care quality.[29](#)

### **Reduce unwarranted variation in preference-sensitive care.**

First, CCME organizations would be asked to provide shared decision-making tools (such as videos) to patients with diseases such as breast cancer, prostate cancer, angina, and lower back pain. Second, they would be encouraged to participate in clinical research designed to improve the quality of medical knowledge about the outcomes of specific treatments for a wide spectrum of patient characteristics. This research could include outcomes research programs, including clinical trials, sponsored by AHRQ and the NIH.

**Reduce overuse of supply-sensitive care.** CCMEs would be asked to develop clinical programs to reduce unwarranted variations in end-of-life care and other examples of overuse of supply-sensitive service, fostering the approach championed by geriatricians and palliative care physicians. Attention also should be paid to the developing role of hospitalists in the reduction of overuse of hospitalizations and ICU stays.[30](#)

Like classic HMOs, CCMEs would strive to become accountable for their capacity by adopting population-based approaches to resource allocation in the planning of facilities and the hiring of the workforce. They would seek to base their resource decisions about the size of each sector of care on benchmarks provided by efficient health care organizations. Medicare would provide real-time claims data to compare local capacity with national benchmarks.

Our strategy for achieving accountability for capacity and fostering conservative practice styles is based on research showing that the practice styles of individual health care organizations can be profiled with regard to their use of supply-sensitive care. Under FFS Medicare a given organization typically serves a "defined population," a loyal group of patients who receive most of their care from that institution. Loyalty is particularly strong for patients with chronic illness. Thus, adjusted for age, sex, race, illness, and price, relative performance can be measured and (relatively) efficient health care organizations identified. Even within traditionally high-cost regions, overall costs vary widely among hospitals.[31](#)

A critical role of a demonstration project will be to refine approaches to reducing unwarranted levels of supply-sensitive services without leading to the public perception that this means a reduction in the quality of care. We hope that increased awareness of how capacity and greater intensity affects the quality of life for those with chronic and life-threatening disease (for example, increased use of mechanical ventilators, painful diagnostic testing, and the risk of dying in an ICU) will help to create popular consensus for limiting the intensity of supply-sensitive care in high-cost regions for reasons of quality, not just cost containment.

**Refine monitoring systems.** Another important objective of the demonstration project would be to refine the monitoring systems used to evaluate performance in meeting the goals for medical excellence. While routine claims data serve well as the basis for patient registries required to evaluate performance, the advantages and limitations of these databases need to be better understood. Moreover, claims data need to be augmented by critical information extracted from patient records and obtained directly from patients. AHRQ and the participating health care organizations should work together to assure that validated performance measures are available to objectively measure progress in reducing unwarranted variations. These measures are essential for the selective-contracting process.

**Reward more efficient resource use.** An important objective of the demonstration project would be to develop appropriate approaches (including financial incentives) that reward more efficient resource levels without unreasonable disruptions of infrastructure and professional careers. The present Medicare FFS reimbursement system does not reward physicians and health care organizations that devote professional time to improving patient safety or reducing underuse of effective care. Physicians (and their institutions) who encourage shared decision making face negative economic consequences when their patients prefer less care. Institutions that reduce supply-sensitive care are unable to retain the savings to invest in productive uses, even when their overall per capita spending rate is low. Federal participation and willingness to support experiments in the fee schedule to remedy these disincentives are critical to the success of the project.

**Promote implementation.** If successful, the demonstration project would provide real-world performance standards or best-practice models for achieving medical excellence.<sup>32</sup> The next step would be to promote their wide implementation, which may require cooperative as well as competitive strategies. In regions where population density can support more than one integrated health care system, a market strategy could be used to encourage FFS patients to seek care from the higher-quality provider. Medicare could establish a "preferred provider" through selective contracting. By choosing this option, Medicare enrollees would benefit through a reduction in premiums and copayments for services provided at the CCME. Under a premium support program like that in the Breaux-Thomas

proposal, Medicare could subsidize the price of insurance policies (or FFS care) centered at CCMEs.[33](#)

In many nonurban areas the population is not large enough to support more than one integrated health care system.[34](#) In such regions, cooperative rather than competitive strategies are required to build the infrastructure to assure that all segments of the population have access to high-quality care. Cooperative strategies also may prove effective in urban regions; one example is the Pittsburgh Regional Health Care Initiative, a coalition of regional hospitals, clinicians, health plans, and major corporate purchasers.

We are fully aware that major political barriers will exist in the implementation phase. We believe, however, that lessons learned from the demonstration projects can reduce those barriers, and we therefore urge that the organizations selected for participation be located in both rural and urban settings. We also encourage the use of strategies that encompass both cooperative and competitive approaches. Perhaps the most difficult barrier to overcome is the lack of trust and the cynicism that pervades relations between doctors, patients, health plans, and government. A demonstration project that brings the prestige of the NIH and AHRQ and leading US health care organizations into a partnership for quality may help to overcome these barriers.

## **Implementation Steps**

There are serious defects in the quality of care now provided in FFS Medicare. The gains from improving the quality of care are too large to be ignored.[35](#) They include preventing and reducing morbidity and saving lives and money. The gains from reducing disparities in Medicare spending are also too large to be ignored. The goals are not unreasonable; after all, large metropolitan areas such as Minneapolis and Portland are getting along just fine with relatively modest Medicare expenditures.

We propose addressing the quality issues and the savings issues simultaneously through a new approach that relies on CCMEs, provider groups, hospitals, and regional consortia that provide high quality and efficient care. We suggest a two-step implementation process.

The initial step, which has been the primary focus of this paper, is a demonstration project to test the hypothesis that leading health care organizations will partner with the federal government to reduce unwarranted variations and meet six goals for medical excellence. The demonstration is designed to help us understand what works and what does not work. At the local level, "test-case" innovations in the traditional Medicare benefit package to improve quality, adopt shared decision making, and create incentives to redirect health providers toward more caring and less intensity would yield best-practice models on which to base a national program. The project would include health care organizations serving urban and

rural regions and would be designed to gain information on the feasibility of cooperative as well as competitive strategies for achieving high quality and efficiency.

The second step would be to assure that all Medicare enrollees have access to high-quality care and to reduce the variation in Medicare spending among regions, to move the country toward the benchmarks provided by low-cost regions such as Portland and Minneapolis. While incrementalism is more likely in the near future, at some point in the not-so-distant future major Medicare reform will be inevitable. We believe that this inevitability should add urgency to our suggestion of a major demonstration project. The more we know about what works and what does not, the brighter will be the future of health care in the United States.

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## NOTES

1. J.E. Wennberg and M.M. Cooper, eds., *The Quality of Medical Care in the United States: A Report on the Medicare Program, The Dartmouth Atlas of Health Care 1999* (Chicago: American Health Association Press, 1999).
2. This lifetime calculation assumes that the relative differences in Medicare spending persist, life expectancy conditional on reaching age sixty-five is fifteen years, the discount rate is 3 percent, and the annual rate of growth in real per capita Medicare spending is 2 percent. See D. Feenberg and J. Skinner, "Medicare Transfers across States: Winners and Losers," *National Tax Journal* (September 2000): 713-732.
3. The HMO payment schedule (the adjusted average per capita cost, or AAPCC) is based on a blend of national risk-adjusted rates (10 percent) and local FFS expenditures (90 percent).
4. See T.D. McBride, "Disparities in Access to Medicare Managed Care Plans and Their Benefits," *Health Affairs* (Nov/Dec 1998): 170-180; and E. Martin, "Tough Times as Medicare HMOs Fold," *ACP-ASIM News* (February 1999), <[www.acponline.org/journals/news/feb99/tough.htm](http://www.acponline.org/journals/news/feb99/tough.htm)>.
5. Medicare Payment Advisory Commission, *Report to Congress: Medicare Payment Policy* (Washington: MedPAC, March 2001), 115.
6. J.E. Wennberg and M.M. Cooper, eds., *The Dartmouth Atlas of Health Care 1998* (Chicago: American Health Association Press, 1998).
7. These estimates are based on a least-squares regression where age-sex-race-price-adjusted Medicare spending is the dependent variable and the independent variables are age-sex-race-adjusted incidence of the "low variation" illnesses (and mortality) discussed in the text. See also J. Skinner and E. Fisher, "Regional Disparities in Medicare Expenditures: Opportunity for Reform," *National Tax Journal*

(September 1997): 413-425. A full set of illness adjustment measures by region is available at <[www.dartmouthatlas.org](http://www.dartmouthatlas.org)>.

8. A recent study explained up to 70 percent of the variation in regional Medicare spending by including a variety of additional health and demographic variables. D. Cutler and L. Sheiner, "The Geography of Medicare," *American Economic Review* (May 1999): 228-233. The additional health variables alone did not improve the predictive power of the regression by a significant degree. And while the demographic variables such as the percentage of deaths occurring at older ages and the percentage of the population that is Hispanic were suggestive, they also could be reflecting other variables at the population level. M. Susser, "The Logic in Ecological: I. The Logic of Analysis," *American Journal of Public Health* (May 1994): 825-829. For example, the authors find that HRR-level Medicare expenditures are positively associated with the Hispanic share of the population. However, at the micro level, per capita Medicare expenditures for Hispanics are slightly lower than those for non-Hispanics. Centers for Medicare and Medicaid Services, *Health and Health Care of the Elderly Population: Data from the 1996 Medicare Current Beneficiary Survey* (2000), Table 4.8. We suspect that expenditures for both non-Hispanic and Hispanic enrollees are higher in Florida and Texas, states with a larger number of Hispanic residents. Similarly, a larger fraction of elderly persons dying at older ages predicts lower Medicare expenditures, even among those who do not die in that year. This finding is consistent with the development of a more conservative strategy for all their patients by physicians in regions with a larger fraction of deaths among the oldest Medicare enrollees (age eighty-five and older). For more detail on this finding, contact John Wennberg, [john.wennberg@dartmouth.edu](mailto:john.wennberg@dartmouth.edu).

9. See C.A. Gatsonis et al., "Variations in the Utilization of Coronary Angiography for Elderly Patients with an Acute Myocardial Infarction: An Analysis Using Hierarchical Logistic Regression," *Medical Care* 33, no. 6 (1995): 625-642; E.S. Fisher et al., "Hospital Readmission Rates for Cohorts of Medicare Beneficiaries in Boston and New Haven," *New England Journal of Medicine* 331, no. 15 (1994): 989-995; and D. Chau, E.S. Fisher, and J. Skinner, "The Importance of Regional Practice Style in a Cohort of Elderly Hip Fracture Patients" (Unpublished manuscript, Dartmouth Medical School, 2001).

10. J.D. Lubitz and G.F. Riley, "Trends in Medicare Payments in the Last Year of Life," *New England Journal of Medicine* 328, no. 15 (1993): 1092-1096.

11. For more on dramatic variations in physician revisit intervals, see J.K. Tobacman et al., "Variation in Physician Opinion about Scheduling of Return Visits for Common Ambulatory Care Conditions," *Journal of General Internal Medicine* 7, no. 3 (1992): 312-316; L.M. Schwartz et al., "Setting the Revisit Interval in Primary Care," *Journal of General Internal Medicine* 14, no. 4 (1999): 230-235; and H.G. Welch et al., "The Role of Patients and Providers in the Timing of Follow-up Visits," *Journal of General Internal Medicine* 14, no. 4 (1999): 223-229.

12. This comes from a regression that explains end-of-life care per decedent, at the HRR level, with hospital bed supply, primary care physicians, and specialists, all on a per capita basis. The regression is weighted by the population age sixty-five and

older in each HRR. One could question whether the capacity is itself sensitive to greater demand for specific services. However, we find that much of the variation in hospital capacity is the consequence of migration and not health needs; people move away, but the hospital beds stay, or people migrate to an area, but relatively few hospital beds are built.

13. The delineation between supply-sensitive and preference-sensitive treatment is more a matter of degree than an absolute difference. While patients' preferences will not likely affect clinical decisions regarding the stabilization of a hip fracture, they may play a role in end-of-life care for the chronically ill.

14. J.S. Skinner, E.S. Fisher, and J.E. Wennberg, "The Efficiency of Medicare," NBER Working Paper no. 8395 (Cambridge, Mass.: National Bureau of Economic Research, July 2001), available at <[www.dartmouthatlas.org](http://www.dartmouthatlas.org)>.

15. The higher levels of specialist visits are not simply the same specialists visiting much more often; the fraction of patients in their last six months visited by more than ten separate specialists is highly correlated with overall specialist visits. See Wennberg and Cooper, eds., *The Dartmouth Atlas of Health Care 1999*, 192.

16. Skinner et al., "The Efficiency of Medicare."

17. For example, see M.J. Barry et al., "Patient Reactions to a Program Designed to Facilitate Patient Participation in Treatment Decisions for Benign Prostatic Hyperplasia," *Medical Care* 33, no. 8 (1995): 771-782; and M.W. Morgan et al., "A Randomized Trial of the Ischemic Heart Disease Shared Decision Making Program: An Evaluation of a Decision Aid," *Journal of General Internal Medicine* (April 1997) (supp.): 62.

18. See E.S. Fisher et al., "Associations among Hospital Capacity, Utilization, and Mortality of US Medicare Beneficiaries, Controlling for Sociodemographic Factors," *Health Services Research* 34, no. 6 (2000): 1351-1362; H. Krakauer et al., "Physician Impact on Hospital Admission and on Mortality Rates in the Medicare Population," *Health Services Research* 31, no. 2 (1996): 191-211; and Skinner et al., "The Efficiency of Medicare."

19. See Chau et al., "The Importance of Regional Practice Style"; and D.P. Kessler and M.B. McClellan, "Is Hospital Competition Socially Wasteful?" *Quarterly Journal of Economics* 115, no. 2 (2000): 577-616.

20. E. Guadagnoli et al., "Variation in the Use of Cardiac Procedures after Acute Myocardial Infarction," *New England Journal of Medicine* 333, no. 9 (1995): 573-578.

21. See J. Wasson et al., "Telephone Care as a Substitute for Routine Clinic Follow-up," *Journal of the American Medical Association* 267, no. 13 (1992): 1788-1793; and M. Weinberger, E.Z. Oddone, and W.G. Henderson, "Does Increased Access to Primary Care Reduce Hospital Readmissions?" *New England Journal of Medicine* 334, no. 22 (1996): 1441-1447.

22. See the SUPPORT Principal Investigators, "A Controlled Trial to Improve Care for Seriously Ill Hospitalized Patients: The Study to Understand Prognoses and Preferences for Outcomes and Risks of Treatment (SUPPORT)," *Journal of the American Medical Association* 274, no. 20 (1995): 1591-1598; and R.S. Pritchard et al., "Influence of Patient Preferences and Local Health System Characteristics on

the Place of Death, SUPPORT Investigators, The Study to Understand Prognoses and Preferences for Outcomes and Risks of Treatment," *Journal of the American Geriatrics Society* 46, no. 10 (1998): 1242-1250.

23. This figure includes adjustments for the higher reimbursement rates prevailing in high-cost regions such as New York City and San Francisco. See Wennberg and Cooper, eds., *The Dartmouth Atlas*, 1999.

24. Detailed information describing the impact of such a reform on each region is available at <[www.dartmouthatlas.org](http://www.dartmouthatlas.org)>.

25. G.T. O'Connor et al., "A Regional Intervention to Improve the Hospital Mortality Associated with Coronary Artery Bypass Graft Surgery," *Journal of the American Medical Association* 75, no. 11 (1996): 841-846.

26. For example, the NIH has provided support for clinical trials of back surgery based at eleven medical centers across the country.

27. R.B. Keller et al., *Searching for Quality in Medical Care: The Maine Medical Assessment Foundation Model*, Pub. no. 00-N002 (Rockville, Md.: Agency for Healthcare Research and Quality, 2000).

28. For example, research on benign prostatic hyperplasia (BPH) demonstrated that while surgery was superior to other treatments in reducing symptoms, its use involved significant tradeoffs that depended on patients' preferences: Surgery altered sexual function in a way that some men found very objectionable. The research led to shared decision making, a strategy for clinical decision making that invites the active participation of patients to assure that the patient's own point of view determines the choice of treatment. See J.E. Wennberg et al., "An Assessment of Prostatectomy for Benign Urinary Tract Obstruction: Geographic Variations and the Evaluation of Medical Care Outcomes," *Journal of the American Medical Association* 259, no. 20 (1988): 3027-3030; and Barry et al., "Patient Reactions to a Program."

29. M.P. Hurtado, E.K. Swift, and J.M. Corrigan, eds., *Envisioning the National Health Care Quality Report* (Washington: National Academy Press, 2001).

30. D. Meltzer et al., "Effects of Physician Experience on Costs and Outcomes on an Academic General Medicine Service: Results of a Trial of Hospitalists" (Unpublished manuscript, University of Chicago, January 2001).

31. For example, over several years of follow-up, the per capita use of acute hospital care by cohorts of patients with hip fractures, cancer of the colon, coronary artery disease, and other chronic illness was shown to vary almost twofold among Boston and New Haven teaching hospitals. See Fisher et al., "Hospital Readmission Rates."

32. In preparation for the implementation phase, an important task is to determine who sets the quality standards. The six goals for medical excellence provide a direction, and CCMEs' best-practice strategies will provide benchmarks on which to base criteria for selective contracting. However, finding a consensus view on quality standards and on the measures for monitoring performance will clearly require the participation of national scientific organizations such as the IOM. We suggest that such an agency be given a role in the demonstration project and be asked to make

recommendations on how and by whom the quality standards and performance measures could be set and monitored during the implementation phase.

33. The Breaux-Thomas plan proposed to replace the existing Medicare program with one modeled on the Federal Employees Health Benefits Program; enrollees would receive a fixed-dollar contribution (or "premium support") that could then be used to purchase coverage from a set of approved health insurance options. See <[medicare.commission.gov/medicare/index.html](http://medicare.commission.gov/medicare/index.html)>.

34. R. Kronick et al., "The Marketplace in Health Care Reform: The Demographic Limitations of Managed Competition," *New England Journal of Medicine* 328, no. 2 (1993): 148-152.

35. See Hurtado et al., eds., *Envisioning the National Health Care Quality Report*.

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## EXHIBIT 1

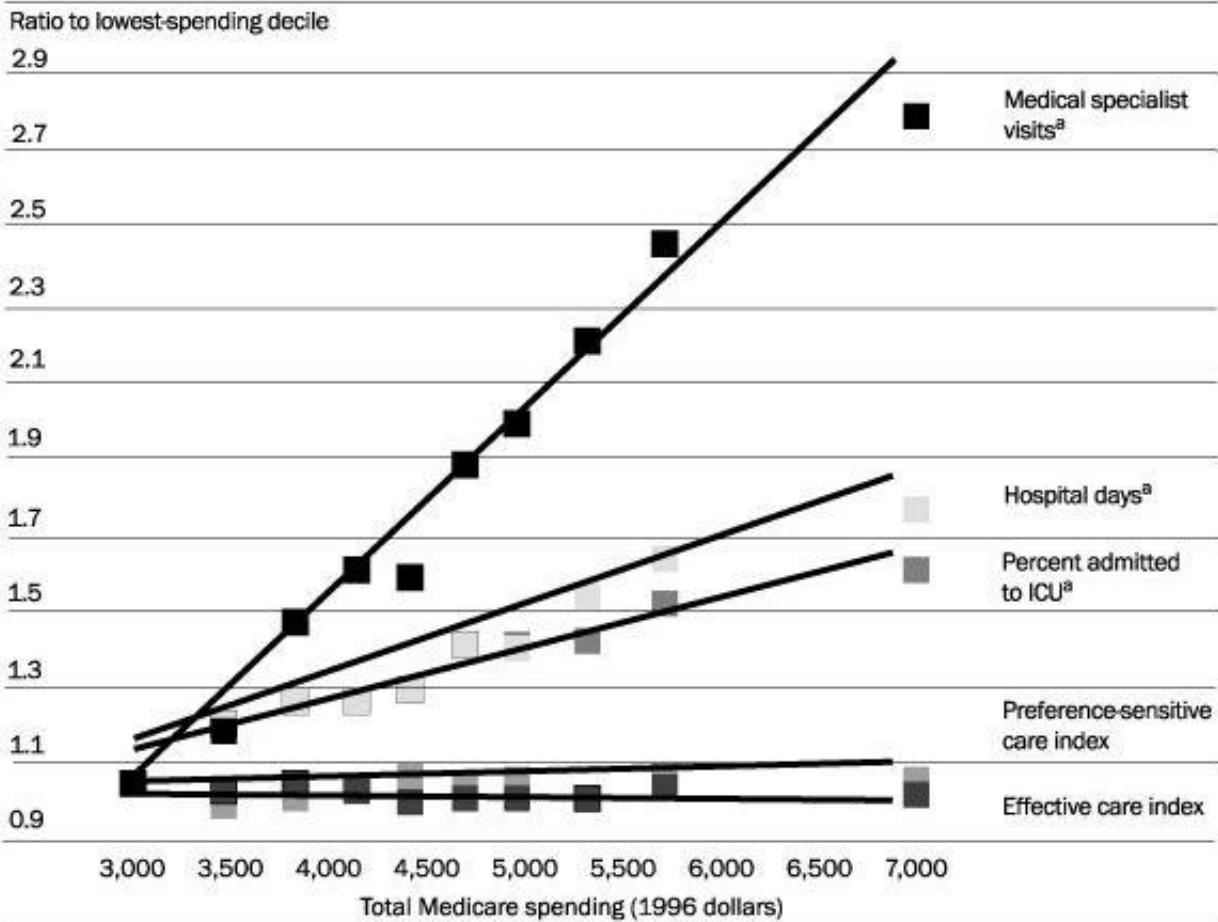
### Categories Of Medical Services

	Factors that influence utilization			
	Medical theory	Medical evidence	Per capita supply of resources	Importance of patients' preferences
Effective care	Strong	Strong	Weak	Weak
Preference-sensitive care	Strong	Variable	Variable	Strong
Supply-sensitive care	Weak	Weak	Strong	Variable

SOURCE: Authors' analysis.

NOTES: *Effective care* refers to services of proven effectiveness that involve no significant trade-offs—all patients with specific medical needs should receive them. Conflict between patients and providers over the value of care is minimal. *Preference-sensitive care* involves trade-offs; decisions should therefore be based on patients' preferences and values. Although opinions are strongly held by clinical advocates, supporting scientific evidence may be weak or strong. The effect of supply on rates of discretionary care is variable. Patients' and providers' values are often in conflict. *Supply-sensitive care* is generally provided in the absence of specific clinical theories of benefit governing the relative frequency of use. Medical texts provide little or no guidance on when to schedule a revisit, perform a diagnostic test, hospitalize, or admit to intensive care. However, utilization rates are strongly influenced by the supply of resources. In some cases, patients' preferences and values should play a central role, particularly for end-of-life care.

**EXHIBIT 2**  
**Use Of Effective Care, Preference-Sensitive Care, And Supply-Sensitive Care**  
**Among Hospital Referral Regions, Grouped By Per Enrollee Spending Level**



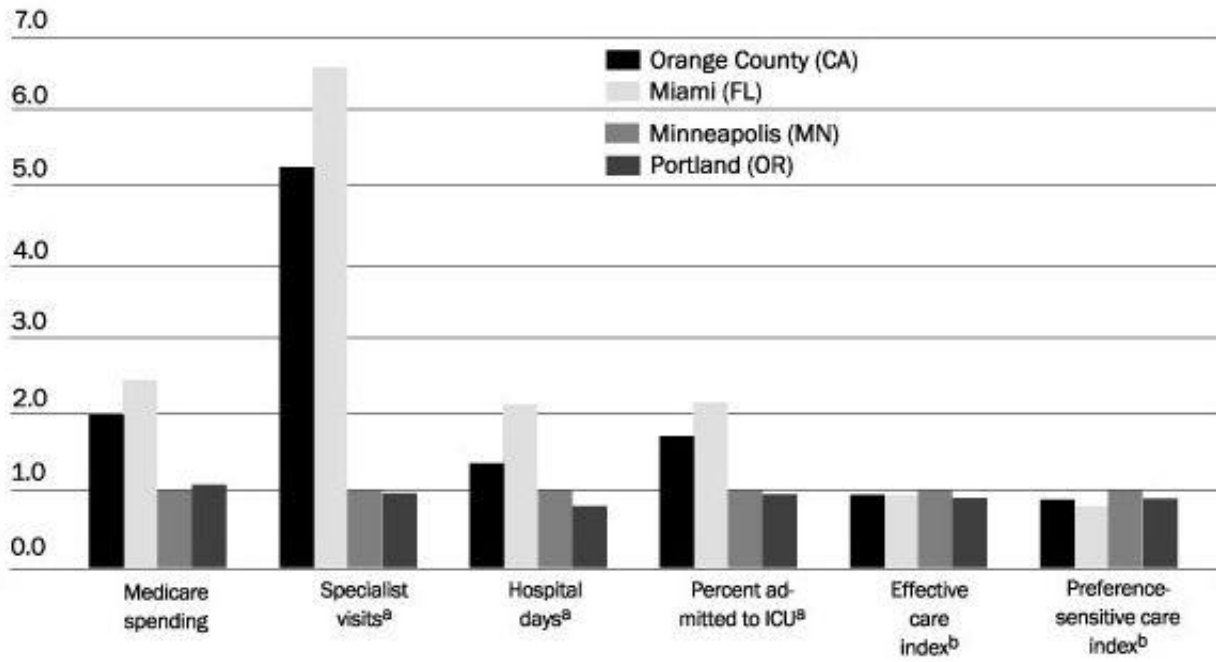
**SOURCE:** Dartmouth Atlas of Health Care, 1998 and 1999.

**NOTES:** Hospital referral regions were ranked according to per enrollee spending adjusted for age, sex, and race and put into ten groups. The exhibit gives the average per enrollee spending in each group. Use rates for each category of utilization were calculated and expressed as a ratio to rates in thirty-one hospital service areas with lowest spending. Medical specialist visits, hospital days, and percent admitted to ICU are all measures of supply-sensitive care. The index for effective care use is the sum for rates for the eleven indicators cited in the text; the index for preference-sensitive care is the sum for rates for the ten surgical procedures profiled in the 1999 Dartmouth Atlas of Health Care. ICU is intensive care unit.

<sup>a</sup> Care provided per decedent in the last six months of life.

**EXHIBIT 3**  
**Comparison Of Medicare Spending, Supply-Sensitive Care, Preference-Sensitive Care, And Effective Care For Orange County, Miami, Minneapolis, And Portland Hospital Referral Regions, 1995–1996**

Ratio to Minneapolis region



**SOURCE:** Dartmouth Atlas of Health Care, 1995–96 database.

**NOTE:** Rates are given as ratio to Minneapolis hospital referral region (valued as 1.0).

<sup>a</sup> Care provided per decedent in the last six months of life.

<sup>b</sup> See Exhibit 2 for definitions.

# Geographic Variation In Medicare Spending And The Real Focus Of Medicare Reform

*Congress should move ahead on what it can do now to strengthen Medicare.*

by Max Baucus and Elizabeth J. Fowler

Medicare is one of our nation's most successful government programs. This success is well deserved, as the program provides universal coverage to a vulnerable population for a wide range of health care services, and it does so efficiently and without the application of means testing. Since its enactment, Medicare has played a major role in reducing poverty among the elderly and increasing life expectancy. Growth in health spending under Medicare is consistent with—and often lower than—that of the private sector. Medicare is also an extremely popular program. Key findings from a report based on focus groups confirm that beneficiaries are very satisfied with the current system.<sup>1</sup>

Despite its wide popularity and success, Medicare faces substantial challenges that threaten to become greater with time. First and foremost, the program's benefit package is outdated and should be modernized to include prescription drugs and long-term care. Further, Medicare spending is projected to increase dramatically as a result of rising health costs, a doubling of eligible beneficiaries in the next thirty years from the retirement of the baby-boom generation, and significant growth in the number of "oldest old," who require more care and more intense levels of care than other beneficiaries do.

## Competitive Pricing Demonstration: Best Solution?

John Wennberg and his colleagues identify another important issue facing Medicare: the wide variation in spending across geographic regions. This variation, which can be as great as twofold, cannot be explained by age, sex, race, pricing differences, or health status. According to the authors, increased spending does not necessarily translate into better health outcomes.

The reasons for this variation in health spending are unknown and subject to controversy. The authors suggest that inefficient practice patterns in certain parts of the country contribute to the problem. As a solution, they advocate a major demonstration project aimed at rooting out inefficiencies in Medicare by employing shared decision-making processes and centers of medical excellence. The potential gains from eliminating unexplained regional variation in spending provide an enticing incentive: annual savings of \$40 billion, enough to fund a prescription drug benefit (at least in the short term).

**Political viability.** As a policy solution, however, we believe that this plan may not be politically practical. In the past, concerns of Medicare's provider-constituents have translated into legislative efforts, and occasionally litigation, to circumscribe major demonstrations to the point that their utility is compromised. Despite initial enthusiasm, similar demonstrations have fallen victim to a prevailing "not in my back yard" attitude. Policymakers are eager to experiment with new solutions to America's policy dilemmas, as long as these experiments do not disrupt the status quo in their own state or district.

Political opposition to such demonstrations should not be surprising. Medicare accounts for a significant share of the nation's health care economy—31 percent of total hospital revenues, for example.<sup>2</sup> Efforts to reduce and redistribute Medicare outlays almost certainly would require many communities to face job loss or beneficiaries to forgo health care services.

**Derailed demonstrations.** The most prominent example of a derailed demonstration is, of course, the competitive pricing demonstrations for Medicare+Choice (M+C) plans. For some time, a broad consensus of health policy experts has agreed that the existing payment system for M+C is seriously flawed and that a competitive pricing system might offer a better, more efficient solution.<sup>3</sup> Successive demonstrations planned for Baltimore, Denver, Kansas City, and Phoenix, however, have been indefinitely stalled or canceled altogether in the face of opposition. Although details and circumstances of these projects varied, the fate of each experiment was the same.

The experience of competitive pricing conveys an important lesson to health policymakers. Policy ideas must not only be backed by force of logic; they must also be politically viable. In testimony to the Senate Finance Committee, Len Nichols, a member of the Competitive Pricing Advisory Committee, posited that "without the support of Congressional leadership, no [Medicare] demonstration project can withstand sustained constituent fear and opposition."<sup>4</sup>

## Policy Goals Within Reach

**Prescription drug coverage.** As the senior senator and staff representing a state with one of the lowest levels of Medicare spending per beneficiary in the nation (Montana), we are well aware of the severity and implications of such variations in spending.<sup>5</sup> But Medicare faces other, equally significant challenges for which more politically viable solutions are within reach. The most important of these is the need to add coverage for prescription drugs. This coverage should be universal, voluntary, and affordable and should not rely principally on the private insurance market to deliver the benefit.

**Coordinated care and burdensome regulations.** Other priorities to improve Medicare include providing coordinated care and disease management to rural communities and other areas where M+C has not flourished. In addition,

Congress can take some important measures to address legitimate concerns raised by physicians and other providers about the program's burdensome regulations and paperwork. Medicare can and should provide outreach and assistance so that providers can keep track of the myriad payment and policy changes. Legislation passed by the House and pending in the Senate would make much progress toward this goal.[6](#)

**Fraud and abuse.** At the same time, relieving providers of regulatory requirements should not undermine efforts to curb fraud and abuse in the Medicare program. Over the past five years, the Centers for Medicare and Medicaid Services (CMS) has made great strides in reducing improper payments. Annual audits conducted by the Office of Inspector General indicate that Medicare's payment error rate dropped from 14 percent in 1996 to 6.8 percent in 2000—a decrease from an estimated \$23 billion in fee-for-service payments to \$12 billion.[7](#) Further progress can be made, however, as recent reports indicate that Medicare payments for some covered services, equipment, and supplies remain much higher than market prices.[8](#)

**Low-income assistance.** Another meaningful policy goal to improve Medicare is raising the level of enrollment in programs designed to assist low-income beneficiaries. Most low-income seniors are eligible for cost-sharing assistance through either the Qualified Medicare Beneficiary (QMB) program, the Specified Low-Income Medicare Beneficiary (SLMB) program, or the Qualified Individual (QI) program. Because of a lack of information, burdensome application procedures, and lukewarm outreach effort by many states, however, only 60 percent of eligible beneficiaries participate in the QMB or SLMB program, and only 3 percent of those eligible for QI-1 assistance were enrolled in the program in the first year.[9](#)

We agree that efforts should be made to encourage the CMS to become a more prudent purchaser of care for beneficiaries and that Congress must work to rectify vast regional disparities in Medicare spending. But this is no easy task, and the authors' prescription to remedy the problem may not be successful in the near future. In the meantime, Congress is capable of improving the Medicare program in important ways. Adding a prescription drug benefit is certainly within our grasp, although it will take concessions from both sides of the aisle to overcome the current impasse. Increasing enrollment in the QMB and SLMB programs is also an achievable goal—and would go a long way toward providing assistance to low-income seniors, who spend an average of 35 percent of their income on out-of-pocket health expenses.[10](#) Congress should move ahead on what it can do now to make Medicare stronger.

*The authors thank Mike Mongan, research assistant with the Senate Finance Committee, for his assistance with this paper. They also appreciate comments and input from others who reviewed earlier drafts.*

## NOTES

1. Public Opinion Strategies and Peter D. Hart Research Associates, *Medicare and Prescription Drug Focus Groups: Summary Report* (Washington: Henry J. Kaiser Family Foundation, 2001).
2. Centers for Medicare and Medicaid Services, "Hospital Care Expenditures Aggregate and Per Capita Amounts and Percent Distribution, by Source of Funds: Selected Calendar Years 1960-99," <[www.hcfa.gov/stats/nhe-oact/tables/t5.htm](http://www.hcfa.gov/stats/nhe-oact/tables/t5.htm)> (4 January 2002).
3. B. Dowd, R. Coulam, and R. Feldman, "A Tale of Four Cities: Medicare Reform and Competitive Pricing," *Health Affairs* (Sep/Oct 2000): 9-29.
4. Len M. Nichols, testimony on "Lessons from the Competitive Pricing Advisory Committee Experience for the Medicare+Choice Program and Long Term Reform," before the Senate Finance Committee, 3 April 2001.
5. "Medicare Spending per Beneficiary, FY 2000," <[www.statehealthfacts.kff.org](http://www.statehealthfacts.kff.org)> (9 January 2002); and Congressional Research Service, "Memorandum to Senate Finance Committee: Estimated Fee for Service Costs by State," 13 March 2001.
6. *Medicare Appeals, Regulatory, and Contracting Improvement Act of 2001*, S. 1738, cosponsored by Sens. Kerry, Murkowski, Baucus, and Grassley; and *Medicare Regulatory and Contracting Reform Act of 2001*, H.R. 3391, cosponsored by Reps. Johnson, Stark, Toomey, and Berkley and passed under suspension of the rules by the House, 4 December 2001.
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8. See, for example, U.S. General Accounting Office, *Medicare: Payments for Covered Outpatient Drugs Exceed Providers' Costs*, Pub. no. GAO/HEHS-01-1118 (Washington: GAO, 2001); GAO, *Medicare+ Choice: Payments Exceed Cost of Fee-for-Service Benefits, Adding Billions to Spending*, Pub. no. GAO/HEHS-00-161 (Washington: GAO, 2000); and GAO, *Medicare Payments: Use of Revised "Inherent Reasonableness" Process Generally Appropriate*, Pub. no. GAO/HEHS-00-79 (Washington: GAO, 2000).
9. J. Lamphere and M.L. Rosenbach, "Promises Unfulfilled: Implementation of Expanded Coverage for the Elderly Poor," *Health Services Research* (April 2000, Part II): 207-217; and P. Nemore, *Variations in State Medicaid Buy-In Practices for Low-Income Medicare Beneficiaries: A 1999 Update* (Washington: Henry J. Kaiser Family Foundation, 1999).
10. See Nemore, *Variations in State Medicaid Buy-In Practices for Low-Income Medicare Beneficiaries*.

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# **We Can't Reward What We Can't Perform: The Primacy Of Learning How To Change Systems**

*Patient need, not medical supply, must dictate care.*

**by Karen Wolk Feinstein**

The pioneering work of John Wennberg and his Dartmouth colleagues has served as a model for the Pittsburgh Regional Healthcare Initiative (PRHI). This coalition of hospitals, clinicians, health plans, and major corporate and small-business association purchasers uses risk-adjusted outcomes databases and constructs clinical data registries to improve outcomes in five areas of clinical practice. The coalition also seeks to eliminate medication errors and nosocomial infections and has put in place common patient safety reporting and shared learning platforms to reach its goal of zero. Finally, to apply its learnings with precision at the point of patient care, the coalition has launched experiments with scientific method-based, problem-solving approaches (the Toyota Production System, or TPS) in hospital units.

The paper by Wennberg and colleagues invokes evidence of unexplained variation in the processes of care across the country; reimbursement levels from Medicare that do not correlate with patient outcomes; and utilization patterns that correlate with the amount of delivery system infrastructure, rather than morbidity, to constitute a rationale for both the evidence-based medicine movement and constructive rethinking of national health care policy. Wennberg and colleagues suggest that Medicare could do more to support providers, institutions, and regions that are committed to providing just what each patient needs, when they need it, without error or waste.

For obvious reasons, we at the PRHI strongly support federal investment in community demonstrations to systematically apply and measure the tools of informed, shared decision making; evidence-based medicine; patient safety; and system improvement in patient care. Federal agencies should organize to participate as active learning partners in these demonstrations, jointly and systematically investigating the policy implications of experiments to deliver best-practice care to every patient. To date, there has been virtually no federal investment in such demonstrations and no organized, coherent approach linking policy development to "on-the-ground" experiments.

However, here is a caveat. Wennberg, a pioneer in evidence-based medicine, indicates through his paper that our health care providers lack a framework to systematically apply error-free best practices with anything like the precision we demand in aviation or nuclear power or even the production of automobiles. Removing financial disincentives and adding new rewards might provide momentum over time to improve providers' performance. Alone, however, they will fail if our health systems do not know how to fundamentally restructure their

process of delivering care—a process that must be painstaking, deliberate, and circumspect.

Enacted too hastily and prematurely without support and direction for time-consuming process improvement, payment directives could actually impede real improvement in performance. In the meantime, health care providers must acquire the capacity for sustained improvement of care, and Medicare must develop a capacity to measure actual performance. This requires introducing reimbursement incentives in the right context and sequence. Ultimately, if the needs of informed patients—including their values and preferences as well as medical contingencies—become the organizing principle for health care, patient- and not payer-derived directives will remove overuse, underuse, and misuse of medical services on their own. Let me explain.

In the Pittsburgh region we have evidence that providers are prepared to undertake the demanding process of care improvement. They are engaged right now in installing the databases, training care teams, and experimenting with new process improvement strategies in which patients' needs dictate every intervention. This infrastructure is essential if we are to capture and understand real performance improvement and build on it continuously.

Locally, we rely on principles derived from the TPS model to demonstrate how health care teams at the point of care reduce cost, error, and overcapacity. When teams deliver only the care the patient needs and approves, supply no longer dictates care. When reimbursements are "pulled" by best practices and only to support the needs of an individual patient, institutions will lose money trying to sustain unneeded capacity. Wennberg's solutions respond to a current condition in which patient need is not the organizing principle of providers and insurers. The key is to engage all stakeholders in the elimination of waste from error and poor quality through clinical excellence. Therefore, we propose that the Centers for Medicare and Medicaid Service (CMS) embed the Wennberg demonstration in the following context.

**Encourage flexibility of regional models.** Allow each region to customize its own approach to perfect, efficient care delivery based on patient need. While the categories outlined by Wennberg and colleagues are fundamental, the demonstration would benefit from encouraging and measuring the relative efficiency of different strategies based on common goals and outcomes.

**Invest in and support infrastructure to improve the system.** The 30-50 percent potential gains in the efficiency of health care that have been documented in the PRHI's early stages are not possible without support for institutions that install and aggressively apply critical platforms and tools for informed, shared decision making; patient safety; and evidence-based medicine. These demonstrations will require the CMS to (1) provide financial incentives for infrastructure investments, possibly tied to the coming Medicare payment adjustments; (2) test new Medicare standards for patient-centered platforms

including those necessary for an electronic medical record; and (3) measure carefully the costs, savings, and outcomes of units restructured for clinical excellence.

**Relax counterproductive policy directives.** A primary example of these are the proposed Health Insurance Portability and Accountability Act (HIPAA) regulations, which frustrate health services research and evaluation.

**Continue federal experimentation.** Disclosures of patient outcomes by institution, modeled on Medicare's dialysis center outcomes data project, should be launched only in areas where data can be clearly interpreted and protected from gaming and where the painstaking, multiyear "buy-in" from clinicians and institutions regarding the legitimacy of the data has been achieved.

**Introduce appropriate sequencing.** After all of the above steps have been taken, federal experiments tying "bonus payments" to prescribed levels of performance should be implemented. However, the CMS must stringently prevent the gaming of the system. This will probably require reliable Medicare and state data tracking systems and the full cooperation of all participating providers.

Karen Feinstein is chair of the Pittsburgh Regional Healthcare Initiative and president of the Jewish Healthcare Foundation.

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# Saving Lives While Saving Money

*A senator's contribution to long-term Medicare reform.*

**by James Jeffords**

John Wennberg is to be commended for his many contributions over the past thirty-five years to improving our nation's health care system and in particular for this latest paper. This critical monograph offers concrete answers to many of the challenges facing Congress as we struggle to reform Medicare to ensure that high-quality care is available for future generations of Americans.

In the paper Wennberg and his colleagues propose that a new system of care for Medicare beneficiaries be tested in demonstration projects that implement the principle of ensuring that effective care is provided and medical errors are minimized. The demonstration projects also would focus on improving the quality of physicians' and patients' decisions regarding discretionary surgery and would promote accountability for capacity and conservative practices.

**New demonstration authority.** Recently, I introduced S. 1756, the Medical Excellence Demonstration Program Act of 2001, in the U.S. Senate, to advance the recommendations contained in Wennberg's paper. S. 1756 establishes a new demonstration authority under which the secretary of health and human services would conduct ten population-based demonstration projects. These projects would be designed to test the use of providing incentives to centers for medical excellence that reduce scientific uncertainty in the delivery of care through outcomes measurement and research. The project also would encourage shared decision making for specific treatments and would reward the centers for improving the quality of care and achieving efficient allocation of resources.

In addition, a health information system modeled after the *Dartmouth Atlas of Health Care* would be developed under S. 1756 to provide information on practice variations. I strongly believe that the act's demonstration program for these centers for medical excellence will provide Congress with important lessons as it undertakes fundamental reform of the Medicare program in the future.

**The case of Vermont.** Wennberg has been a national leader in the field of practice variations for more than three decades. In 1969 he completed a study that showed unexplained variations of health care resource use among communities. I had great interest in his research, since his sample included the hospital in Rutland, Vermont—the town where I was born. Some of the Vermont hospitals in his sample were outliers—providing more surgical interventions than other communities without significant differences in outcomes of health. As a result of his study, Vermont hospitals started looking more closely at their use of resources, which resulted in a

commitment to full disclosure of data to allow public comparison of costs and outcomes by service area.

Vermont's health care community joined with its business community to make a commitment to data-driven, high-quality care and supportable outcomes. A statewide ethics network provided education to community members regarding end-of-life decisions and other ethical dilemmas faced in health care. They continued to work with Wennberg and his associates and to use their data as the benchmarks of success. In 1995 an unofficial group of health care leaders and senior members of Gov. Howard Dean's administrative staff, under the governor's direction, developed a vision and made a commitment to the assurance of healthy communities throughout the state of Vermont.

A commitment to integrated health and social services within communities to assure the best health outcomes at the lowest possible price continues to be the principal focus of all health care providers and payers in my state. Vermont's health care costs have consistently been ranked as some of the lowest in the country, as has its utilization. Yet its health outcomes have ranked at the top. Vermont's track record appears to support Wennberg's conclusions that the pursuit of medical excellence does not necessarily translate into higher health care costs.

**Goals for Medicare reform.** Wennberg and colleagues' work reveals continuing and unwarranted variations in spending among geographic regions and health care organizations with no evidence of variation in health outcomes. Yet Medicare's spending shows a variation of more than twofold among regions, even after correcting for differences in health status. The paper shows that people make consistent choices when they are involved in their care, and it provides an important model to test these findings. It proposes an approach to Medicare reform that includes preventing and reducing morbidity, saving lives, and saving money—goals we can all support.

We can provide needed care to all Americans and control costs, but it will require a partnership between the government, the community, and health care providers. Wennberg and colleagues have shown us the road we need to travel. I intend to do all I can in Congress to ensure that their findings are major milestones in our journey. I believe that the passage of S. 1756 will provide examples of the changes we must make to reform the Medicare program. I am committed to do all I can to make these findings a reality.

Sen. James Jeffords (I-VT) is chair of the Senate Environment and Public Works Committee.

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# Traditional Medicare Versus Medicare+ Choice: A View From Congress

*Medicare+Choice provides the best structure for solving the care delivery problem,  
but "both Medicares" must be improved.*

by Nancy Johnson

John Wennberg and colleagues have offered useful insight into the variation of Medicare spending across the country and suggest that if we can structure the health care system to deliver effective care based on evidence-based medicine, we can both control spending and improve the quality of care for all seniors. Their paper also illuminates the inherent limitations of the current fee-for-service (FFS) Medicare program in producing better outcomes and providing more coordinated, integrated care. Papers such as this one should shatter the illusion that unfettered FFS provides the best care for patients.

While I agree with the authors that we need to create incentives to change local practice patterns through rewarding science-based, best-practice approaches, that will be a tremendous challenge. Policymakers have consistently maintained, since the program's inception, that Medicare would not engage in the "practice of medicine." Therefore, local practice patterns have evolved on their own with little intervention by the federal government. Medicare's FFS structure has given both providers and beneficiaries little incentive to alter treatment patterns and modalities, and therefore it is not surprising that Wennberg and colleagues have discovered huge regional variations in health spending.

## Medicare's Deficits

**Capricious payment policies.** It is ironic that although there is local control of the practice of medicine, the federal government micromanages Medicare's payment and regulatory structures in every community. In four of the past five years Congress has enacted four detailed Medicare bills. This legislation has been followed by thousands of pages of rules, regulations, guidance documents, and program memoranda to interpret and implement the legislation. The result has been a confusing web of detailed payment and regulatory policies that defies rationality and rarely reflects the true costs of delivering health care. Our Medicare laws are now replete with caps, budget-neutrality provisions, outdated and arbitrary geographic payment areas, and other legal devices that result in capricious reimbursement policies.

For example, our physician reimbursement law is inappropriate to the dynamic future of Medicare. With advice from the Medicare Payment Advisory Commission (MedPAC), Congress enacted the sustainable growth rate (SGR) payment formula, which tied physician payments to gross domestic product (GDP) growth and spending targets. As a result, we have seen an irrational, saw-tooth pattern of funding, from two consecutive years of about 5 percent updates followed by a negative 5 percent update in 2002. No physician practice can operate with such uncertainty. The reality of practicing medicine has no connection to fluctuations in the economy, and MedPAC has now told Congress to scrap the entire SGR system.

**Widely disparate prices.** In addition, each separate payment system provides widely disparate prices for the same service in different facilities. For example, three similar patients recovering from the identical surgery may be placed in three separate payment structures depending on where they receive care: resource utilization groups (RUGs) in skilled nursing facilities, functional-related groups (FRGs) in rehabilitation hospitals, or diagnosis-related groups (DRGs) in acute care hospitals. This promotes increased service fragmentation-the opposite of the integrated model of care the authors argue is appropriate. Increased fragmentation also makes it more difficult to improve the quality of care, let alone to pay rationally for services for similar patients.

**Outdated data.** Most destructive is that in managing these complex and irrational payment systems, policymakers must depend on outdated Medicare data. While the most sophisticated private businesses have access to real-time data, and the most unsophisticated businesses have access to quarterly data, Medicare policymakers must rely upon data that are two or three years old. For example, in determining what hospital payments should be for 2003, we are relying on 1999 hospital data. We simply cannot make well-informed and accurate policy decisions about a \$220 billion seniors' health care program without adequate, up-to-date data.

## **Medicare+Choice: The Best Solution**

In the future, the number of seniors in Medicare will grow as the baby boomers retire and seniors live longer. They will need prescription drugs and better preventive services and will still suffer from multiple chronic diseases. Yet they will enter a system of care that is inflexible in its benefits structure, bogged down in paperwork, and irrational in its payments. The authors suggest that health maintenance organizations (HMOs) and coordinated care networks provide the best structure for solving the care delivery problem. I agree for two reasons.

**Better preventive and chronic care.** First, as Medicare+Choice (M+C) plans are beginning to demonstrate, integrated systems can offer better preventive benefits and can better manage chronic care. Nearly all M+C plans use disease management programs, and the average plan uses four separate such programs.

In fact, 95 percent of M+C plans have a diabetes disease management program, and 75 percent have programs to manage asthma and congestive heart disease. In addition, nearly all plans provide physical exams. Yet this is only the beginning of meeting the need to improve care quality. M+C has moved ahead of FFS because it has the flexibility to adjust to the dynamic changes in health care, while Medicare's traditional FFS program requires Congress to pass a law to adapt to change. It took an act of Congress to recently add important preventive benefits, such as mammograms and pap smears, that managed care had incorporated years before simply because it made sense.

**Simple payment structure.** Second, members of Congress are attracted to the simplicity of providing one payment to an "organizer" of care—who is charged with coordinating all aspects of care for a beneficiary and contracting with all types of providers. This is far preferable to the fragmented FFS approach, with its myriad of complicated and irrational payment formulas, which constantly must be revisited and adjusted by Congress.

## **Reforming All Of Medicare**

Unfortunately, M+C is failing from the very ills that afflict the FFS program: irrational payment structures and overly complex regulations that do not reflect the costs of providing care. No policy analyst could reasonably contend that the legislated 2 percent yearly updates for most M+C plans in urban counties sufficiently cover health care costs, which are growing at 8-10 percent. Similarly, Congress's enactment of the payment floors for M+C imposed similarly arbitrary payments, which overpay plans in some areas. These irrational payments—both above and below the true costs of health care—were driven by political decisions to save money and to attract managed care to rural areas, respectively. They do not reflect the true costs of providing integrated, high-quality care.

**Determining the real costs of health care.** As Wennberg and colleagues suggest, the only way to accurately determine the real costs of health care is to allow plans to be paid in a competitive structure. Plans could submit bids for what they think it will cost to provide beneficiaries integrated care, and government would pay the average of those bids. Beneficiaries would share in the savings when they choose more efficient plans or pay more for more munificent plans. The point is that this approach provides the incentive to allow individuals to choose what is best for them and reward them for making efficient choices that also save the taxpayers money.

**Improving FFS Medicare.** But M+C is not the only part of Medicare that must be reformed. It offers an immediate opportunity to provide for effective care for seniors, but the FFS system must be improved with more coordinated care that encourages the use of best practices and reduces medical errors. Wennberg and colleagues recognize the urgent need to improve the quality of medical decision

making among physicians through continuous education and better sharing of best practices. Also important is their recognition of the need for seniors to take part in their own care and for a system that supports patient participation.

**Overcoming the political hurdles.** I am interested in exploring the "preferred" provider demonstration suggested by the authors and studying existing systems that reflect their ideas. But it is critical that government develop partnerships with multiple providers and systems. We should not understate the political difficulty of permitting Medicare to select certain providers over others when the FFS program has 85 percent of the seniors' market. Medicare's monopsony power is the principal reason that the FFS program has remained fundamentally unchanged since Medicare's inception. The authors have presented persuasive evidence for why the political hurdles that have prevented modernization of Medicare's current structure must be overcome. In the dynamic decades ahead, seniors' health care needs and modern medicine will change dramatically, and Medicare must be able to adapt to these changes.

Rep. Nancy Johnson (R-CT) is chair of the House Ways and Means Subcommittee on Health.

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# The Demographics And Economics Of Chronic Disease

*The future of Medicare depends on how well we learn to manage chronic disease.*

by Robert E. Nesse

Health care spending decreased from 13.4 percent of U.S. gross domestic product (GDP) in 1993 to 13.2 percent in 2000, but recent trends are not encouraging. Moderation of GDP growth combined with increased prescription drug prices, higher-intensity medical services, and population aging are projected to increase total health care spending to 15.5 percent of GDP by 2010.<sup>1</sup> This projection has increased the debate about the future of Medicare and prompted calls for reform of the system. In the presidential campaign of 2000, budget "lock boxes," Medicare fraud, privatization of the system, and changes in reimbursement for Medicare services all received discussion in the media but seemed to generate more heat than light.

Providers are responsible for compliance with 132,000 pages of Medicare rules and regulations, most of which have little to do with improving quality of care or operational efficiencies. Fraud and abuse are present in the system and must be investigated and eliminated, but these crimes are unlikely to account for Medicare's average spending growth of 10 percent in 1988-1997.<sup>2</sup>

Privatization of Medicare without more fundamental reform is also unlikely to be effective. Per capita Medicare expenditures during 1987-1997 grew at a slower annual rate than private-sector health spending, even without adjustment for the burden of illness.<sup>3</sup>

We must address a fundamental question if we hope to decrease the escalation of Medicare costs. Have we spent so much energy developing and responding to regulations in the health care delivery system that we have neglected our obligation to collaboratively manage the caregiving? Everyone is responsible in some way for the increase in costs. The costs are generated because we care for the sick and are working to improve their condition or to prevent illness or further deterioration in functioning. It is time to move beyond finger pointing and political posturing and work to better understand the challenges presented by the demographics and economics of chronic disease.

**Chronic disease data.** The prevalence of chronic disease in our population is correlated well with the age of the population: By age seventy, a majority of the U.S. population copes with the effects of at least one chronic condition. Arthritis is present in 60 percent of the female population, and cardiovascular disease, in 40 percent of the male population.<sup>4</sup> The economic implications of chronic disease and

its effect on health care use are significant. In Olmsted County, Minnesota, 10 percent of the Medicare population consumes 55 percent of the health resources, and the highest-spending 50 percent of that population consumes 92 percent.<sup>5</sup> It makes sense to "go where the money is" and concentrate on those who use resources, and also work to decrease the incidence of conditions that lead to resource consumption.

**Opportunities for improvement.** John Wennberg and colleagues note a 2.5-fold variation between spending for a Medicare beneficiary in Minneapolis as compared with Miami. It is tempting to conclude that Minnesotans, like the children of Lake Wobegon, are all "above average" or that physicians in Miami are doing very well financially. The truth is that the problem is much more complex and poorly understood. Wennberg and colleagues make clear that the variation is not attributable to the burden of illness in one geographic location or measurable differences in quality because of higher expenditures in high-cost areas.

The authors propose a demonstration project in which medical groups apply, study, and disseminate evidence-supported best practices on the theory that reductions in certain areas would achieve significant Medicare savings. Support for proactive management of care was embedded in Medicare+Choice (M+C), which was designed to stimulate the formation of managed care services for Medicare beneficiaries. Unfortunately, the opportunity for innovation quickly became mired in the issues of reimbursement and risk transfer. Real reform will require a better understanding of costs for ill patients before a proactive model can succeed.

The current Medicare fee-for-service structure provides no incentive to reduce use of services and provides no organized support for delivery of services other than in physicians' offices or hospitals. The future of Medicare depends on how well we learn to manage chronic disease and how well we support application of the lessons. A collaborative project to develop this knowledge would be innovative and promising.

**Time to wake up.** Princeton economist Uwe Reinhardt commented in 1998 that we would need to be patient in waiting for change in managed care and expressed his hope that "after 2-3 years of premium increases, business and government will say 'this doesn't work,' and that will wake us up."<sup>6</sup> We now may have an alignment of national interest, information services capability, and acceptance that the current system cannot meet the challenges. It is time to wake up and pursue our opportunities.

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