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## The Geography of Medicare: Explaining Differences in Payment and Costs

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**OVERVIEW** — *This issue brief examines the sources of variation in Medicare payment and costs across different geographic areas and different sites of care. It discusses payment policies that address variation in the cost of providing care, such as input price adjustments and special payments to hospitals. It also considers differences due to beneficiaries' health status and physicians' practice patterns. Finally, it explores policy options to address Medicare geographic variation.*

# The Geography of Medicare: Explaining Differences in Payment and Costs

As a national program, Medicare serves a large and diverse population. Across the United States, the utilization, costs, and quality of health care vary widely. Much of this variation seems to be specific to certain regions of the country, where the differences in what Medicare pays per beneficiary can be more than twofold among states or even among counties within the same state.

Geographic variations in Medicare spending are as old as the program itself, although policymakers have recently begun to question the equity of wide discrepancies in a national program. In 2000, spending per beneficiary in the traditional fee-for-service Medicare program ranged from about \$3,500 in Santa Fe, New Mexico, to \$5,360 in Las Vegas, Nevada, to almost \$9,200 in Miami, Florida.<sup>1</sup>

Because Medicare makes no real distinction between good and poor health care when paying for services, it can be difficult to sort out just exactly what the program receives for increased spending. Policymakers in low-spending regions argue that they are not receiving their fair share. They believe these low-spending regions are penalized for providing more efficient care and because they receive lower reimbursement based on Medicare's payment formulas. Rural areas, in particular, have argued that their low payment rates have made it difficult to attract physicians or keep smaller hospitals afloat. On the other hand, urban areas typically do have to pay higher prices for wages and rents—factors considered in devising payment rates. High-spending regions generally have higher concentrations of teaching hospitals and poor residents, which increase expenditures. And some higher-spending regions have residents in poorer health who cost more to treat. Nonetheless, research shows that much of the difference in spending is related more to physicians' practice styles and consumer expectations than to differences in beneficiaries' health status. Additionally, numerous studies suggest that substantially higher per capita spending results in no positive difference in quality, access, or even patient satisfaction with care.

Several proposals have been put forward to address these variations in spending and payment. Both the House and Senate versions of the Medicare prescription drug bills would change the way Medicare pays hospitals and physicians in rural areas, making their compensation more "equitable." The Senate bill also contains provisions to establish demonstration

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projects that would, among other things, “reduce scientific uncertainty in the delivery of care through the examination of variations in the utilization and allocation of services.”<sup>2</sup> Both public and private efforts seem to be coalescing around a desire to “pay for performance,” where Medicare (and private payers) could reward high-quality physician practices, hospitals, and integrated health delivery systems that meet performance goals. To assess the merits of these proposals, a better understanding of the underlying reasons for these geographic variations seems warranted.

## REGIONAL VARIATIONS IN MEDICARE: AN OVERVIEW

Medicare spending per beneficiary varies tremendously across the nation, with Miami and Santa Fe representing the highest and lowest, respectively, at the metropolitan statistical area (MSA) level. At the state level, wide variations persist, from a low of \$3,800 in Hawaii to as high as \$6,700 in Louisiana and \$7,200 in the District of Columbia. In 2000 the national average was \$5,360 per beneficiary in the traditional fee-for-service program.<sup>3</sup>

The demand for and delivery of different types of care also vary considerably by geographic region. For example, the use of hospital services is more prevalent in the Northeast than in the West. In addition, the use of home health services differs significantly by area. In 1999 Medicare beneficiaries in the South who used home health services received 54 visits, on average, while beneficiaries in the Midwest received 32, on average.<sup>4</sup> The use of skilled nursing facility and outpatient services also varies dramatically between regions.

Because Medicare payments for the same procedure often differ across sites of care, *where* a service is performed can greatly affect how much it costs. For example, payments for endoscopic procedures performed in a physician’s office are significantly higher than payments for the same procedures done in a health care facility.<sup>5</sup> In some areas of the country, it is much more common to use an inpatient hospital setting to treat a particular condition than to use an outpatient setting such as an ambulatory surgical center. These differences are reflected in cost and payment variations across the country.

In its most recent report to Congress, the Medicare Payment Advisory Commission (MedPAC) concluded that about 40 percent of the variation in per beneficiary Medicare spending is attributable to differences in health status, input prices, and special payments to hospitals (for example, indirect medical education payments). The remaining 60 percent of variation results from differences in the quantity and mix of services used, due to practice patterns, propensity to use care, and other factors.<sup>6</sup>

## Medicare Spending per Beneficiary, 2000: Highs & Lows

### Highest

■ Miami, FL .....	\$9,200
■ New York, NY .....	\$8,000
■ New Orleans, LA .....	\$7,600
■ Fort Lauderdale, FL .....	\$7,560
■ Philadelphia, PA .....	\$7,200
■ Los Angeles, CA .....	\$7,150

### Lowest

Santa Fe, NM.....	\$3,500
Salem, OR .....	\$3,500
Sheboygan, WI.....	\$3,700
Green Bay, WI .....	\$3,700
Albuquerque, NM .....	\$3,700

Source: Centers for Medicare and Medicaid Services

Note: Based on metropolitan statistical areas. Numbers are rounded.

## HEALTH STATUS

Numerous studies have documented that use of health services is strongly related to health status. Data from the Medicare Current Beneficiary Survey show that those who report fair or poor health status are much more likely to be hospitalized and use outpatient and physician services than beneficiaries in excellent or good health. The prevalence of serious chronic conditions is greater among high-cost beneficiaries. A recent analysis of Medicare spending found that, of the beneficiaries in the top 5 percent of spending, 35 percent suffered from diabetes, 47 percent from congestive heart failure, and 20 percent from cognitive impairment. In contrast, of beneficiaries in the bottom 40 percent of spending, 14 percent had diabetes, 9 percent congestive heart failure, and 5 percent cognitive impairment.<sup>7</sup>

State-to-state variation in the prevalence of chronic conditions has been documented by the Centers for Disease Control and Prevention (CDC).<sup>8</sup> Socioeconomic factors (for example, age, education, employment status, poverty), lifestyle behaviors (such as lack of physical activity, alcohol intake), and social environment (for example, educational and economic opportunities) have been shown to be correlated with the prevalence of chronic disease. A low level of education, for example, is highly correlated with the prevalence of many health risk factors (such as lack of physical activity and cigarette smoking). Such interrelated variables make it difficult to separate the effects of socioeconomic factors from health status and indeed from geographic variations in general. Nonetheless, CDC mortality rates show clear patterns in the outcomes of specific diseases in certain states. For example, death rates from cardiovascular diseases are disproportionately high in the southern states, while death rates from colorectal cancer are higher in the Rust-Belt states.<sup>9</sup>

Health status differs between urban and rural populations as well.<sup>10</sup> A larger percentage of the rural population (13 percent) than the urban population (9 percent) reports fair to poor health. Risky health behaviors seem to be somewhat more common among adults in rural areas. For example, rural residents are more likely to be overweight or obese and to abstain from regular exercise. Within the Medicare program, rural beneficiaries appear to have somewhat poorer health status, but this is not true in every region in the country.<sup>11</sup>

## PAYMENT POLICIES

A significant portion of geographic variation in Medicare spending reflects deliberate efforts by policymakers to allocate resources equitably. On a nearly annual basis, Congress and the Centers for Medicare and Medicaid Services (CMS) fine-tune Medicare's administered pricing system to meet specific policy goals. At times, the focus is on more evenly distributing payment across the country based on national averages. At

## Discharges per 1,000 Medicare Enrollees, Selected States, 1999

■ California .....	354
■ Florida .....	366
■ Iowa .....	356
■ Louisiana .....	470
■ Massachusetts .....	368
■ Minnesota .....	344
■ Nevada .....	298
■ New York .....	369
■ Texas .....	386
■ Utah .....	253
■ <b>United States</b> .....	<b>370</b>

Source: Centers for Medicare and Medicaid Services, Health Care Financing Review: Medicare and Medicaid Statistical Supplement, 2001.

Amounts exclude managed care enrollment.

others, policymakers seek to achieve alternative objectives, such as training physicians or improving access for poor or rural populations.

### Input Price Adjustments

Medicare pays for services and products delivered by over one million providers in hundreds of markets across the nation. Prior to 1984, Medicare paid providers on a cost basis, reimbursing hospitals and other facilities for their incurred costs and physicians for the charges they billed. Today, under the traditional fee-for-service program, Medicare sets predetermined amounts for the majority of Medicare providers and for most covered services.

The adoption of the inpatient prospective payment system (PPS) in 1984 represented Congress' first attempt to pay equivalent prices and rates across all regions for Medicare services. As a result of the Balanced Budget Act of 1997 (BBA), prospective payment systems are now in place for services furnished by rehabilitation facilities, skilled nursing facilities, home health agencies, hospital outpatient department services, long-term-care hospitals, and psychiatric hospitals. Under each PPS, Medicare sets national base payment rates for each delivery setting, which represents the amount Medicare would pay for an average unit of service in a market with national average input prices.<sup>12</sup> Recognizing that the costs of providing care differ across geographic areas, Medicare's payment systems adjust for local market conditions, using measures such as the area wage index (for hospitals and other facilities) and geographic practice cost indexes (for physicians).

**Wage Index** — Most Medicare prospective systems use a version of the hospital wage index to account for geographic variation in labor costs. The wage index compares the average hourly wage for hospital workers in each MSA or statewide rural area against the national average. Medicare applies a wage index adjustment to a portion of the prospective payment system—raising payments in high-wage markets and lowering them in low-wage markets—to account for differences among markets in the wages providers must pay.

Medicare uses a classification system developed by the Office of Management and Budget (OMB) to define its geographic areas for the labor cost adjustment.<sup>13</sup> Each MSA is considered a single labor market and all areas outside of metropolitan areas in each state are treated as a single labor market. In general, hospitals in nonmetropolitan areas receive lower Medicare payments because they pay lower wages.

A recent analysis by the General Accounting Office (GAO) determined that the geographic areas used to define labor markets are too large in many instances.<sup>14</sup> There can be significant differences in average wages across parts of nonmetropolitan areas of each state. For example, Medicare payments in 2001 for all hospitals in the nonmetropolitan area of Washington were adjusted based on the average wage of \$22.71 per hour.

### Home Health Visits per Person Served, Selected States, 1999

■ California .....	31
■ Florida .....	43
■ Iowa .....	28
■ Louisiana .....	96
■ Massachusetts .....	50
■ Minnesota .....	26
■ Nevada .....	37
■ New York .....	36
■ Texas .....	63
■ Utah .....	57
■ <b>United States</b> .....	<b>42</b>

*Source: Centers for Medicare and Medicaid Services, Health Care Financing Review: Medicare and Medicaid Statistical Supplement, 2001.*

*Amounts exclude managed care enrollment.*

Yet, nonmetropolitan hospitals in the western part of the state had average wages of \$24.23 per hour, and wages in the central and eastern parts of the state averaged \$21.15 per hour, or 13 percent lower than hospitals in the western part of the state.<sup>15</sup>

The wage index has been criticized by providers in low-wage areas as being unfair and inaccurate. They argue that it does not appropriately account for differences among areas in the types of workers employed. It rewards, for example, hospitals that choose to use a greater percentage of registered nurses. Congress has mandated the collection of occupation mix data to address this issue in the future.

Under existing rules, hospitals, particularly ones located near the edge of urban areas, continuously try to reclassify to higher-wage areas. Because of budget neutrality requirements, geographic reclassification reduces payments to hospitals that do not reclassify. Also, the payment formula has been criticized for adjusting cost components that are not locally purchased. Rural health care advocates, in particular, have argued that the current share attributed to labor costs overstates the percentage of costs that rural hospitals devote to wages and other locally purchased inputs. MedPAC, on the other hand, has stated that the wage index overstates the labor share in urban areas and that it is approximately correct in rural areas.<sup>16</sup> Several proposals pending in Congress would reduce the importance of the wage index in determining a hospital's total Medicare reimbursement by lowering the current labor-related share from 71 percent to 62 percent. Some proposals would also create a wage index floor for the areas with the very lowest wage indexes.

**Geographic Practice Cost Indexes** — Under Medicare's physician fee schedule, measures known as geographic practice cost indexes (GPCIs) are used to adjust payment rates to reflect differences in the price of local inputs. GPCIs have also been the subject of recent congressional scrutiny, especially among members representing rural districts.

Medicare's physician fee schedule, implemented in 1992, was designed to slow growth in spending and to reduce wide discrepancies in payments between primary care physicians and specialists and among providers in different geographical areas. Under the fee schedule, each physician service (for example, surgery, office visit) is given a weight that measures its relative cost. The weights, known as relative-value units, have three components:

- Physician work (time, skill, training).
- Practice expense (rent, utilities, equipment, supplies, staff salaries).
- Professional liability insurance expense.

There are three GPCIs—one corresponding to each component of the relative-value scale. To come up with the fee for a particular service code, the three GPCIs are calculated and then applied to rates for each of 89 payment areas.

**Hospital Outpatient Services per 1,000 Medicare Enrollees, Selected States, 1999**

■ California .....	599
■ Florida .....	625
■ Iowa .....	754
■ Louisiana .....	700
■ Massachusetts .....	779
■ Minnesota .....	707
■ Nevada .....	491
■ New York .....	636
■ Texas .....	632
■ Utah .....	738
■ <b>United States</b> .....	<b>675</b>

*Source: Centers for Medicare and Medicaid Services, Health Care Financing Review: Medicare and Medicaid Statistical Supplement, 2001.*

*Amounts exclude managed care enrollment.*

The GPCI for physician work, in particular, has come under fire because critics say the underlying data are outdated and flawed. The GPCI is based on a sample of median hourly earnings of six professional categories (for example, lawyers and engineers). Since some physicians earn most of their income from Medicare, physician earnings are not used in the index because they would be affected by Medicare’s existing geographic adjustments, according to GAO testimony.<sup>17</sup>

Congressional critics have declared that “physicians should not be compensated for their time differently based on where they live.”<sup>18</sup> Moreover, physicians in rural areas argue that they are paid less than physicians in more densely populated areas, even though it can cost as much or even more to provide medical services in rural areas. Several proposals are currently pending in Congress that would alter the GPCIs or establish a floor for all localities.

However, analysts note that, by law, the physician work GPCI reflects only 25 percent of the national variation in the earnings of professionals. “If the work GPCI was based solely on the median earnings in each area, physician payments would likely increase in large metropolitan areas and decrease in rural areas,” according to GAO.<sup>19</sup> Alternatively, if the physician work component were not adjusted for local conditions, payments would increase in rural areas.

**Special Payments to Hospitals** — Medicare also makes special adjustments to hospitals to compensate for costs associated with certain missions beyond caring for individual patients. Because different regions of the country may have more or fewer of these types of hospitals, these special payments are reflected in the geographic variation in Medicare expenditures.

Teaching hospitals receive additional payments from Medicare to account for costs associated with training medical residents. The size of the adjustment depends on the hospital’s teaching intensity, as measured by the number of residents per bed. Hospitals that serve a disproportionate share (DSH) of low-income Medicare and Medicaid patients also receive additional Medicare payments. These DSH payments are intended to partially offset revenue losses from furnishing uncompensated care. The DSH adjustment is based on nine different formulas and depends on urban or rural location, number of acute care beds, and other hospital characteristics.<sup>20</sup>

To preserve access in rural communities, significant health policy activity has centered on Medicare payment of rural providers. Over the years, Congress has enacted several policies that provide special payments to certain types of rural hospitals, including the following:

- Geographically reclassified hospitals.
- Rural referral centers.
- Sole community hospitals.
- Small rural Medicare-dependent hospitals.

**Skilled Nursing Facility Users per 1,000 Medicare Enrollees, Selected States, 1999**

■ California .....	48
■ Florida .....	49
■ Iowa .....	51
■ Louisiana .....	42
■ Massachusetts .....	65
■ Minnesota .....	54
■ Nevada .....	30
■ New York .....	37
■ Texas .....	43
■ Utah .....	45
■ <b>United States</b> .....	<b>45</b>

*Source: Centers for Medicare and Medicaid Services, Health Care Financing Review: Medicare and Medicaid Statistical Supplement, 2001.*  
*Amounts exclude managed care enrollment.*

- Critical access hospitals.
- Swing beds.<sup>21</sup>

Proposals currently pending in Congress would further increase payments to rural hospitals. Under the inpatient PPS, Medicare sets two standardized payment amounts: one for large urban areas—MSAs with a population of one million or more—and one for all other urban and rural areas. Several legislative initiatives would raise the base payment rate for rural and other urban areas to that of large urban areas. Other bills would help hospitals with a small volume of Medicare discharges and increase Medicare DSH payments for rural hospitals.

### Medicare+Choice

In many ways, the advent and eventual decline of the Medicare+Choice (M+C) program made geographic differences in Medicare spending more visible as a national issue. M+C payment rates have historically been linked to fee-for-service spending at a county-specific level. Because of wide variation in spending patterns, payment rates were also widely divergent. As a result, Medicare beneficiaries who lived in high-payment areas were offered plans with extra benefits (such as prescription drug coverage) at little or no extra cost. But in low-payment areas, enrollees had to pay substantial out-of-pocket costs for benefits beyond the basic benefit package, if they were offered a managed care option at all.

In an effort to reduce inequities across counties, Congress, through the BBA and subsequent legislation, changed the way M+C plans are paid. To increase payments in low-expenditure areas (and attract managed care to rural areas), the BBA established floor payments. Increases to plans in high-expenditure areas were generally limited to 2 percent over the previous year's rate.<sup>22</sup> As a result, extra benefits offered in these areas have been substantially reduced and enrollment in M+C plans has declined.

Despite payment changes designed to reduce the urban/rural disparity, large discrepancies still exist between what Medicare beneficiaries in urban areas and their rural counterparts can receive. In 2001 nearly 96 percent of beneficiaries living in a "center-city" county were being offered at least one coordinated care plan under M+C, compared with only 22 percent of those who live in nonmetropolitan areas. Prescription drug benefits were also more readily available to urban beneficiaries, with 43 percent being offered an annual drug benefit of more than \$1,000, compared with only 3 percent of those residing in a nonmetropolitan, MSA-adjacent county.<sup>23</sup>

The experience with M+C suggests that correcting the imbalance between high-expenditure and low-expenditure regions is complicated and fraught with unintended consequences. A variety of factors (such as reduced fee-for-service spending and a managed care backlash) contributed to M+C's lack of success. Nonetheless, a central goal of M+C payment policies—to

**M+C payment rates have historically been linked to fee-for-service spending at a county-specific level.**

increase managed care participation in underserved areas—has not been achieved. Indeed, the program has faltered where it once thrived. As a result, policymakers are left, once again, to grapple with the best way to tackle geographic inequity.

## SERVICE USE AND INTENSITY

While certain Medicare payment policies and differences in health status among populations contribute to geographic variations in Medicare spending, most of the empirical research has concluded that these disparities appear to be more related to service use and the intensity of care provided.

For over three decades, John Wennberg and colleagues at Dartmouth Medical School have studied geographic variations in Medicare spending and disparities in clinical practice.<sup>24</sup> Through their research, they have documented remarkable differences in how Americans use health care resources, as well as how the local supply of resources influences their rates of use. In brief, the kind of health care a beneficiary receives can depend very much on where the beneficiary happens to live.

The Dartmouth Atlas Project documents that Medicare spending varies widely according to where seniors live, even after controlling for differences in age, sex, race, pricing differences, and health status. In its work, the project highlights three categories of care:

- Effective care—services of proven benefit that all patients with a specific clinical indication should receive.
- Preference-sensitive care—treatments with multiple options involving tradeoffs of risks and benefits, where patients' preferences should determine the choice of treatment.
- Supply-sensitive services—everyday services such as physician visits, the use of diagnostic tests, and the frequency of specialist consultation and hospital stays.

Practice patterns differ extensively in the use of low-cost, effective care, as well as in the use of expensive, preference-sensitive options. For example, among heart attack patients whose conditions were ideally suited to the administration of beta-blockers (inexpensive drugs used to prevent future attacks), those who actually received the needed drug ranged from 5 percent to 92 percent across many regions in the country. Preference-sensitive treatments, such as cardiac bypass surgery, exhibit about a fourfold range of variation, from three per thousand in Albuquerque, New Mexico, to more than eleven per thousand in Redding, California.<sup>25</sup>

Variations in supply-sensitive services are particularly important because (a) regional differences in spending are largely due to differences in the use of these services; and (b) there has been remarkably little research on whether higher use of such services (and thus greater spending) results in better quality or health outcomes. The regional differences in supply-sensitive

**The Dartmouth Atlas Project documents that Medicare spending varies widely according to where seniors live.**

services have been largely attributed to differences in the local supply of these resources, according to the Dartmouth researchers.

One category of supply-sensitive services of great interest to seniors involves the striking differences in what happens to Americans in the last six months of life. On a per person basis, the average number of visits to specialists range from 2 to 25 visits, and the number of days spent in the hospital ranges from 4.6 to 21.4 days. In some parts of the country, nearly 50 percent of people die in the hospital, rather than at home or in a nursing home or community-based setting such as hospice. In these areas, the likelihood of being admitted to an intensive care unit during the last six months of life is also higher than average. In other parts of the country, the likelihood of a hospitalized death is far smaller.

The frequency of use of everyday care, such as physician visits and diagnostic testing, also varies significantly across regions. A recent MedPAC analysis of the use of physician services found that areas with the highest service tend to be in the East, the South, and parts of a few states in the West.<sup>26</sup> Among the 50 largest MSAs, MedPAC found wide variation in the use of services such as imaging and tests. Service use variation was lowest for “major procedures,” which includes services such as coronary artery bypass grafts, knee replacements, and coronary angioplasties.

### Quantity, Not Quality

A new comprehensive analysis published in the *Annals of Internal Medicine* compares the quality of care and health outcomes of Medicare enrollees treated in the lowest-spending regions with those treated in the highest-spending regions. The authors—led by Elliott Fisher of Dartmouth Medical School—studied nearly one million Medicare enrollees who had been hospitalized in the mid 1990s for a heart attack, hip fracture, or new diagnosis of colorectal cancer, as well as a representative sample of the elderly. The study, which adjusted for differences in price and illness levels, had several key findings:

- Residents of higher-spending regions received about 60 percent more care than residents of lower-spending regions.
- The additional services (and thus higher spending) were due to a more inpatient-based and specialist-oriented pattern of practice (for example, more frequent physician visits, greater use of specialists, greater use of the hospital instead of the outpatient setting as a site of care).
- Higher-spending regions had more hospital beds and physicians.
- Quality of care (for example, provision of preventive services) was slightly worse in higher-spending regions.
- Health outcomes were no better or worse in the regions that provided more care.

The authors conclude that regional variations in Medicare utilization were largely due to the more inpatient-based and specialist-oriented practice

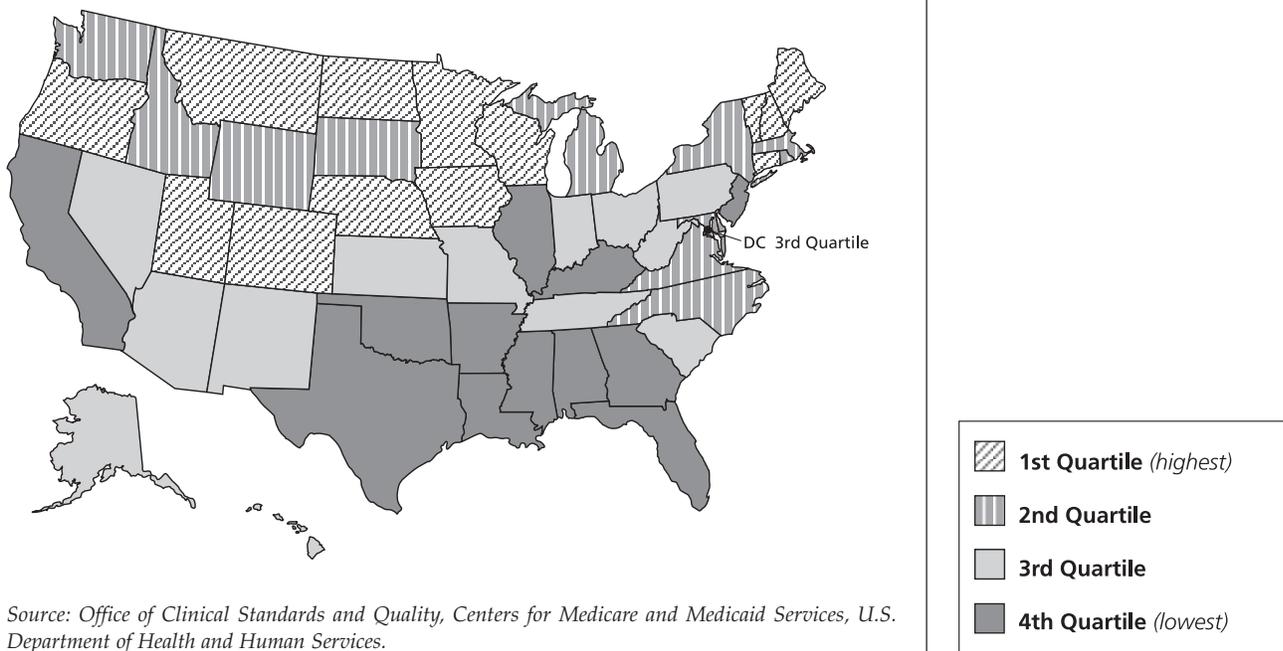
**Higher-spending regions had more hospital beds and physicians.**

pattern associated with greater availability of these resources; that the practice patterns in lower-spending regions of the United States were consistent with excellent results; and that up to 30 percent of Medicare spending could be saved if all regions were to adopt the practice patterns of the lower-spending regions.<sup>27</sup>

Another study that has attracted national attention, by Stephen F. Jencks, M.D., and colleagues at CMS, ranks states according to performance on 22 quality indicators for care of Medicare beneficiaries in 2000–2001.<sup>28</sup> These indicators “measure delivery of services that evidence shows to be effective in preventing or treating breast cancer, diabetes, myocardial infarction, heart failure, pneumonia, and stroke.” While these indicators are not perfect measures of quality, the preventive and treatment methods have been shown to improve outcomes. The Jencks study finds that better performance was concentrated in northern states and less populous states (Figure 1).

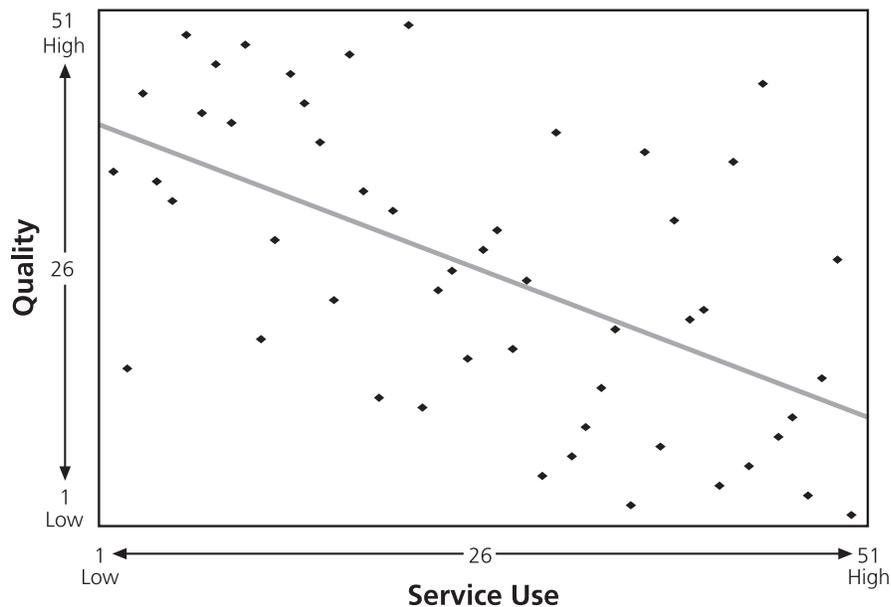
A MedPAC analysis examined the relationship between Jencks’ quality of care rankings and each state’s per beneficiary adjusted service use. Figure 2 sorts the states and the District of Columbia in order, from lowest adjusted service use to highest, as well as states with the lowest quality rankings to the highest. Figure 2 “shows that many states with low adjusted service use have relatively high quality by this measure, and many states with high adjusted service use have relatively low quality rankings.”<sup>29</sup>

**FIGURE 1**  
**State Rankings by Quality Indicators, 2000–2001**



Source: Office of Clinical Standards and Quality, Centers for Medicare and Medicaid Services, U.S. Department of Health and Human Services.

**FIGURE 2**  
States' Adjusted Service Use and Quality of Care, 2000



Source: MedPAC analysis of county-level fee-for-service expenditures and other data from Centers for Medicare and Medicaid Services and Jencks et al., 2003.

### Patient Demand and Technological Change

Fisher and colleagues argue that a greater supply of resources results in higher use of services. Whether a higher volume of services is associated with better health outcomes, however, is still subject to considerable debate. Some researchers have challenged the conclusion that higher utilization is physician-induced and have argued that demand is driven by the patients. Thus, high utilization causes higher supply. For example, the large number of elderly residents with health problems in Florida has attracted doctors and facilities to the area. Sicker patients do cost more, and some analysts have argued that health status is not fully controlled for in the Dartmouth analyses.<sup>30</sup>

The Fisher study's analyses focus on regional variations at a single point in time and do not address the possibility that technological advances—while expensive—may be worth it. Prominent economists, such as Joseph Newhouse, Mark McClellan, and David Cutler, argue that technological change is an important driver of growth in spending over time. Treatment substitution and expansion due to new technology have contributed to cost growth, but there is also evidence of better outcomes over time, especially in the case of specific conditions such as heart attacks,

depression, and cataracts. Thus, in some cases, “the health benefits more than justify the costs.”<sup>31</sup> Cutler and McClellan caution that “policies that eliminate waste and increase the incremental value of treatment may also directly or indirectly retard technological progress.”<sup>32</sup> Whether the differential application of beneficial technology explains geographic spending patterns, however, is questionable.

## POLICY OPTIONS

This wide variation in payment and services has emerged as a potent political issue. Health care providers from low-spending states have organized to protest these apparent inequities in a national program. Their main argument stems from the fact that Medicare beneficiaries pay the same Part B premium, regardless of where they live, but there is substantial geographic disparity in the volume and types of services delivered. At the same time, reform-minded policymakers see this new awareness of geographic variation as an opportunity to reduce excessive Medicare spending and reward providers who practice evidence-based medicine.

Several policy options have emerged. Chief among them are initiatives to increase funding to low-cost states; educate physicians about best practices; require more public reporting; pay for performance; and target high-cost beneficiaries.

### Increased Funding

Most proposals currently pending in Congress to address geographic equity issues would equalize (that is, raise) Medicare payments to rural hospitals and physicians. These proposals have been championed by influential senators such as Senate Finance Committee Chairman Charles Grassley (R-Iowa) and ranking member Max Baucus (D-Mont.), making their inclusion in a broad Medicare reform bill highly likely.

Critics of this approach have warned that it may simply drive up Medicare spending, without considering quality. Increasing payments in all markets rewards inefficient, as well as efficient, health plans and providers.

Another approach, offered by the Iowa Hospital Association (and others), would rank states on both cost per beneficiary and overall quality measures (such as those used in the Jencks study). “Hospitals and physicians in states that have the best combined scores would receive a five-percent ‘add-on’ as a reward for outstanding performance,” according to a proposal outlined in recent testimony at a Senate Finance Committee field hearing.<sup>33</sup>

In its most recent report, MedPAC takes particular exception to proposals to address variation at the state level. First, MedPAC warns that “increasing either the use of care or the prices Medicare pays for care in low-use states would likely increase beneficiaries’ cost sharing.” Second,

**Medicare beneficiaries pay the same Part B premium, regardless of where they live, but there is substantial geographic disparity in the volume and types of services delivered.**

MedPAC cautions that the state “is not the best geographic unit for understanding variation in service use.”<sup>34</sup> It notes that substantial variation exists among counties within the same state. For example, in Iowa, per beneficiary adjusted service use ranges from about 30 percent below to about 25 percent above the state average. A similar result was found among counties in New York. Thus, geographic variation would likely remain, even if variation among states were eliminated. In addition, the most frequently cited measures often confuse payments to providers with services received by beneficiaries and do not account for beneficiaries going across borders to receive care.

### Physician Education

If physician practices are a big part of what drives variation, then why not try to change physician behavior? Former president of the American Medical Association, Nancy Dickey, who is currently president and vice chancellor of the Texas A&M University System Health Science Center, recently wrote that:

Changes in the current common processes in medical education will need to be made in order to graduate physicians and other health care providers who are comfortable with and accustomed to using evidence-based medicine in making intervention decisions....Incentives should be created to encourage current clinical faculty to overtly utilize evidence-based medicine in their teaching....[A]cademic health centers should lead the inquiry regarding development and testing of hypotheses and the design and testing of remedies for unwarranted services.<sup>35</sup>

Most physician educators acknowledge that these changes must ultimately come from within the physician community, not from health policy. Nonetheless, payment incentives today do encourage high volume and intensity. “This is not rocket science,” Robert Berenson, a medical doctor and former CMS official, recently wrote. “[I]ncentives in basic payment policy drives much of the behavior that becomes manifest in regional spending variations....When Medicare pays relatively more generously for surgical [diagnosis-related groups (DRGs)] than medical DRGs in relation to underlying costs, the delivery system responds by producing more surgical services.”<sup>36</sup> Designing payment incentives to encourage efficient, evidence-based care could go a long way toward changing physician behavior.

### Public Reporting

Health care quality initiatives have for years encouraged public reporting of data as a way to steer people toward top-performing facilities. If consumers choose certain providers based on quality information, the theory goes, underachieving providers will have to improve to remain competitive.

Medicare could require public quality and cost data reporting as a condition of participation. CMS has been moving aggressively in this direction.

**Geographic variation would likely remain, even if variation among states were eliminated.**

Through its "Nursing Home Compare" Web site, CMS now provides information about nursing homes (such as number of certified beds, type of ownership, and deficiencies found during the last state inspection) and about their residents (such as percentage with pressure sores or delirium).<sup>37</sup> Across the country, CMS also sponsored newspaper ads that contained comparative quality information on nursing homes. The initiative is designed to help consumers make informed decisions among nursing homes in their local areas. CMS also hopes to create market incentives for nursing homes to improve quality. The first phase of a similar initiative for home health agencies was launched this spring in eight states.<sup>38</sup> CMS has similar beneficiary-oriented comparison tools, such as "Medicare Health Plan Compare" and "Dialysis Facility Compare" available on its Web site ([www.medicare.gov](http://www.medicare.gov)).

Whether performance reports can truly move the market to encourage high-quality, efficient care remains to be seen. Efforts to compare hospitals, nursing homes, and health plans have been met with strong criticism from industry officials, who assert that performance measures do not adequately reflect severity-of-illness differences. Nevertheless, public reporting has forced providers to come to the table to discuss the appropriateness and reliability of performance measures. These measures, in turn, begin to build a foundation for rewarding quality.

### Pay for Performance

Rewarding quality in health care delivery has become the new mantra for public and private purchasers alike. "Selective contracting," "centers of excellence," and "paying for performance" are terms of art for a similar concept. Under this approach, providers would be evaluated and recognized for superior performance. Providers who were "doing it right" could conceivably be rewarded with more patients and extra payments. Purchasers (including Medicare) would pay providers differentially, based on the achievement of specified performance targets, rather than uniformly through a national formula.

Legislation that would establish Medicare demonstration programs to test health delivery factors that encourage the delivery of improved quality in patient care was included in the Senate Medicare prescription drug bill.<sup>39</sup> Sponsored originally as S. 1148, the bill would support demonstration projects that encourage "the appropriate use of best practice guidelines by providers and services by beneficiaries," and "reduced scientific uncertainty in the delivery of care through the examination of variations in the utilization and allocation of services, and outcomes measurement and research."<sup>40</sup> In its most recent report to Congress, released June 15, 2003, MedPAC also recommended that the Secretary "conduct demonstrations to evaluate provider payment differentials and structures that reward and improve quality."<sup>41</sup>

**Public reporting has forced providers to come to the table to discuss the appropriateness and reliability of performance measures.**

Jack Wennberg and his colleagues at Dartmouth have promoted the establishment of comprehensive centers for medical excellence (CCMEs). To qualify, hospitals, provider networks, or organizations representing regional coalitions would agree to establish best-practice, evidence-based models. CCMEs would partner with the federal government to “bring about fundamental improvements in the performance of the U.S. health care industry” and reduce unwarranted variations.<sup>42</sup> Medicare would provide incentives to encourage beneficiaries to seek care from CCMEs.

Other proposals adopt this carrot approach by giving bonuses to health care systems, health plans, or physician groups that achieve standards defined at a national level. The stick method would establish provider eligibility requirements governing who is allowed to receive Medicare payments. For example, hospitals would be required to meet certain performance goals as a condition of participation. Medicare could selectively contract only with physicians who adhere to evidence-based practice guidelines.

Innovative purchasers have been moving toward performance-based pay, led by the efforts of the Leapfrog Group, a consortium of large private and public health care purchasers. These purchasers have begun to collect data that will enable them to reward providers who adopt the best practices. However, they do acknowledge that this process is easier said than done. Performance-based pay raises tricky design issues, such as whether performance targets should be based on national or regional benchmarks or provider-specific improvement. Also, veteran purchasers warn that “one person’s variation is another’s person’s income.”<sup>43</sup>

### Focus on High-Cost Beneficiaries

Disease and chronic-care management have also gained attention as an alternative means to reduce Medicare spending. This approach maintains that Medicare could target individuals with multiple chronic conditions, better coordinate their care, encourage adherence to evidence-based treatment guidelines, and thereby lower costs. Almost 32 percent of Medicare beneficiaries have four or more chronic conditions and drive almost 79 percent of program spending.<sup>44</sup> Thus, the potential gains in efficiency could be quite significant. CMS has undertaken a series of demonstration projects to test different care- and disease-management strategies.<sup>45</sup> In addition, both the House and Senate Medicare prescription drug bills contain provisions to better coordinate care for beneficiaries with chronic conditions.<sup>46</sup>

A recent analysis by Dan Crippen, Steve Lieberman, and colleagues considers the alternative approaches of targeting high-cost regions and targeting spending on high-cost individuals as a way to reduce Medicare spending. Crippen and Lieberman conclude that “a strategy centered on high-cost individuals may hold the promise of greater ‘bang for the buck.’”<sup>47</sup>

While it would not address geographic disparities per se, it may reach the same desired outcomes, in a way that is much less politically volatile.

**Veteran purchasers warn that “one person’s variation is another’s person’s income.”**

Nonetheless, the authors acknowledge that focusing on high-cost individuals presents three major challenges: (a) identifying beneficiaries; (b) developing and implementing effective interventions to improve outcomes and quality of care; and (c) designing and implementing an appropriate payment system.

## CONCLUSION

Policymakers have tried numerous ways to reduce variation in the Medicare program, from the adoption of the inpatient PPS in 1984 up to M+C payment changes in 1997. Despite these efforts, many patterns of spending and utilization have stayed consistent over time. Low-spending areas seem determined to get their "fair share." However, transferring dollars from high-spending to low-spending regions would be politically explosive.

Most recently, public and private efforts seem to focus on changing incentives to reward quality rather than volume and intensity. Demonstration projects may afford the opportunity to test theories in an extremely complicated health care delivery system.

Both the House and Senate Medicare reform proposals currently being considered would divide the country into regions to receive prescription drug benefits. Many lawmakers have raised concerns that benefits and premiums could vary in different regions around the country, raising important questions of equity. Thus, geographic differences in payment, cost, and quality will surely intensify as the debate moves forward. To achieve meaningful Medicare reform that enjoys widespread support, these differences will need to be addressed in a reasoned manner.

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## ENDNOTES

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