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Location, Location, Location: Geographic Spending Issues and Medicare Policy

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If broader reliance on private plans becomes part of major reform, the equity issues raised by geographic variations loom even larger.

The diversity of the United States generates many opportunities for variations in the Medicare program as it serves the population across the country. Some of the influences on the costs and use of health care are obvious: The average age in a region and the supply of physicians and hospitals affect both the demand for and supply of available services. Other sources of diversity arise from more subtle influences. These include cultural differences that affect attitudes about disease and health status, differences in climate that may affect care delivery, and local styles of health care practice. For these reasons and more, spending levels under the Medicare program vary substantially across the United States—from a low of $3,053 per capita in Iowa to highs of $7,336 in Louisiana and $10,373 in the District of Columbia in 2000.

When Medicare consisted almost exclusively of fee-for-service medicine, these differences raised little attention.[1] Concerns about access to care for persons in rural or other underserved areas provoked some special policy adjustments. But since the level of care received in fee-for-service was not directly limited or controlled, these access concerns did not become a national issue. Concern in the 1980s over payment policies for hospitals and physicians prompted a debate about geographic discrepancies in payments. The revised payment formulas sought to reduce some of that geographic variation.

The advent of private plan options under Medicare, particularly once they began to proliferate, further heightened the visibility of geographic differences. Before 1997, per capita payments to these plans were based on county-level average fee-for-service spending. This led to high payments in traditionally costly counties. Consequently, private plans which were able to hold down the costs in those areas could offer a rich benefit package to those who enrolled. These windfalls were not available, however, in areas such as Nebraska or Iowa where capitation payment levels were very low. And although the Balanced Budget Act of 1997 (BBA) sought to partially delink payment from county-level fee-for-service data and reduce variation across the country, broad differences remain.

Thus, concern for inequitable treatment of individuals constitutes a major issue for Medicare's future. Payment issues in the troubled Medicare+Choice program need to be revisited. Moreover, if broader reliance on private plans becomes part of major reform, the equity issues raised by geographic variations loom even larger. And even in traditional fee-for-service programs, some analysts argue that reducing variation (largely by lowering spending in high-cost areas) could produce Medicare savings (Wennberg, Fisher, and Skinner 2002). This brief first explores some of the reasons for geographic variation in per capita Medicare (and other health care) spending. Some of these differences reflect costs of providing care and likely need to remain. Other differences, such as practice pattern variation, raise more subjective questions about whether greater uniformity in spending across the country should

TABLE 1. Variations in Wages Explain Only Part of the Geographic Differences in Medicare FFS Spending.

City, State (County)	Hospital wage index (HWI)[a]	Aged Medicare FFS spending index[b]	Monthly FFS spending per capita[b]
Oakland, CA (Alameda)	1.50	1.32	$529
Honolulu, HI (Honolulu)	1.19	0.75	$299
Miami, FL (Dade)	1.01	1.80	$720
South Bend, IN (St. Joseph)	1.00	0.87	$349
Bismark, ND (Morton)	0.79	0.74	$326
Monticello, AR (Drew)	0.74	1.06	$423
United States	**1.00**	**1.00**	**$401**

a. *The Congressional Federal Register*, August 1, 2000. HWI is for fiscal year 2001.
b. Urban Institute analysis of CMS data. The FFS spending index is calculated as the county's percent of the average U.S. per capita monthly Medicare FFS spending in 1999 for beneficiaries 65 years old or older. Monthly FFS spending calculations account for Part A and Part B spending, excluding reimbursement for direct (GME) and indirect medical education (IME) and disproportionate share hospital expenditures (DSH).

be a goal. After examining sources of variation, we consider some basic policy issues related to geographic variations.

Sources of Variations in Spending

The total costs of health care vary under Medicare depending both upon prices paid for such services and the quantity and mix of services used. Some illustrative examples are provided here; for more formal analyses see, for example, Cutler and Sheiner (1999), Skinner and Fisher (1997), and Wennberg and Cooper (1999).

Prices for Specific Health Care Services

Health care spending reflects the cost of providing medical services. For instance, geographic differences in supply costs, such as hospital wages, explain some of the differences in spending. In general, these price differences represent a less controversial source of variation, and Medicare's prospective payment policies generally attempt to make allowances for them. But prices explain only part of the geographic variation in Medicare spending, as illustrated in table 1; counties with high fee-for-service spending do not necessarily have high hospital wage indexes and vice versa. For example, despite Honolulu's high wages, its Medicare spending is 25 percent below the average level. Conversely, rural Arkansas and Miami follow the opposite pattern—higher than average spending, but average or below average hospital wages.[2]

Urban and rural areas face different issues affecting input prices. For example, in urban areas, wages are likely to be higher, while in rural areas, transportation costs due to longer travel times can be burdensome, particularly when providing home health care. In addition, rural medical facilities and providers may be unable to benefit from economies of scale. Not all of these rural issues are captured directly in Medicare's structure for establishing prices, but they can indirectly affect overall spending levels. Consequently, Medicare often makes specific adjustments to payments in rural areas.

Use of Medical Care

An area's per capita health care spending is in large part attributable to the amount of medical care used. For example, an area with a lower than average rate of hospitalizations is likely to have low per capita spending on health care. The important question, then, is why do rates of hospitalization, as shown in table 2, vary so much and are these legitimate differences? Health services researchers have long attempted to answer this question, suggesting numerous correlative factors, but ultimately conceding that a significant portion of the geographic variation in utilization is unexplained.[3]

Some variables, such as health status, are known to be significant predictors of spending. Researchers often rely on demographic variables such as age, race, and income to predict an area's health status. For instance, states with a higher than average percentage of elderly and disabled people are likely to have higher per capita hospitalization rates. But demographic variables are imperfect predictors of actual rates of illness or spending. Even when researchers attempt to adjust for heath status by estimating specific disease rates, unexplained variation in service use remains.[4]

Access to physicians, hospitals, and clinics is another factor that affects the amount and type of services used. Areas with high rates of physicians per capita—particularly specialists—have higher rates of overall medical service use (Greenfield et al. 1992). Different sites of care also influence how services are delivered across the country. For example, as shown in table 2, Utah has a comparatively low inpatient hospitalization rate, but a higher than average outpatient hospitalization rate, suggesting at least some preferences for where care is delivered.

To the extent that physicians heavily influence use of care, regional variation in physician practice patterns affects service use and Medicare spending. For example, the choice of treatment for prostate cancer (surgery vs. radiation) varies widely across the United States (Mettlin et al. 1997). Regional differences in the rates of hysterectomies have been documented as well (Wennberg 1990).

TABLE 2. Spending and the Demand for Different Types of Care Vary Considerably by State.

State	Medicare spending per beneficiary[a]	FFS beneficiary liability[b]	Hospital IP discharges per 1,000 beneficiaries[b]	Hospital OP services per 1,000 beneficiaries[b]	SNF users per 1,000 beneficiaries[b]	Home health visits per 1,000 beneficiaries[b]
Louisiana	$7,336	$940	461	694	67	137
Florida	$6,937	$980	362	619	68	107
New York	$6,924	$975	371	626	47	90
California	$6,156	$899	404	586	76	97
West Virginia	$4,934	$801	436	753	56	89
South Dakota	$4,740	$761	352	608	74	68
Utah	$4,561	$675	241	725	64	83
Hawaii	$3,843	$593	277	511	22	44
New Hampshire	$3,771	$730	290	715	58	106
United States	**$5,490**	**$853**	**371**	**654**	**63**	**96**

a. CMS Office of the Actuary. Spending amounts are for 2000 and include beneficiaries in managed care and FFS. Managed care data are calculated by the state of the plan. FFS data are calculated by the state of the provider.
b. U.S. Department of Heath and Human Services. *The Health Care Financing Review: Medicare and Medicaid Statistical Supplement, 2000*. Baltimore, Md.: CMS, Office of Strategic Planning. Amounts are for 1998 and exclude managed care enrollment.
IP = inpatient; OP = outpatient.
SNF = skilled nursing facility.

Significant geographic differences in prescription drug use have also been noted, especially with respect to estrogen-therapy drugs and antidepressants (DHHS 2000; Teitelbaum et al. 2001). Such differences may reflect a lack of consensus in the medical community regarding the appropriate level of drug treatment for many types of diseases and/or regional patient preferences. Further, the adoption of new hospital technologies varies among states and across hospitals of varying size (Romeo, Wagner, and Lee 1984; Russell 1977).

Health insurance coverage also affects the amount of services used because high out-of-pocket costs can deter people from seeking health care. While most elderly people are insured through Medicare, significant regional variation exists in the affordability and availability of supplemental insurance to fill the gaps in Medicare coverage (table 3). In addition, many Medicare beneficiaries living in rural areas lack access to managed care options. In contrast, beneficiaries living in Miami have 12 managed care plans from which to choose. Finally, participation rates for programs designed to aid low-income Medicare beneficiaries vary dramatically among states. In South Carolina, more than 90 percent of low-income Medicare beneficiaries age 65 and over receive cost-sharing assistance through Medicaid, compared to 28 percent in Texas (Nemore 1999).

Policy Issues

While geographic issues have been around since the beginning of the program, Medicare+Choice payment differences receive the largest share of attention. The inequities that potentially arise from differences in what private plans are paid to serve beneficiaries are important not only for how well Medicare+Choice works, but also for any of the proposed structural reforms that would use private plans as a centerpiece.

In addition, payment levels in fee-for-service can also be problematic if, for example, historically low cost areas lead to payment levels so low as to discourage participation by doctors and other providers. Anecdotal examples of physicians refusing to take Medicare patients seem to be on the rise, particularly in the West. Further, if fee-for-service Medicare continues to support very high levels of spending in some geographic areas, total Medicare costs may be higher than necessary.

Medicare+Choice Payment Levels

The Balanced Budget Act of 1997 sought to reduce the disparity in premiums paid to private plans that serve Medicare beneficiaries, but this set in motion changes that further highlighted geographic concerns. Consider how Medicare+Choice works. Medicare's rules require that if a plan is paid more than the cost of providing Medicare-covered services (and a normal profit), the plan must either return money to the federal government or offer additional benefits to plan participants. Almost all choose to do the latter; in fact, many plans believe that they must offer additional benefits in order to attract enrollees.

In areas with traditionally high costs, plans are able to provide Medicare-covered services at a low enough cost to have extra dollars to subsidize prescription drugs and other benefits. In low-cost areas, however, amounts paid to plans generally do not give plans enough flexibility to subsidize substantial extra benefits. And since the main attractiveness of private plans to beneficiaries has been the opportunity to obtain non-Medicare-covered services at no or low cost, these geographic differences were quickly noticed.

The Balanced Budget Act sought to increase payments in low-cost areas by establishing a higher floor of payments, and in areas with moderate costs by providing a blend of local and national rates. Counties with the

TABLE 3. Supplemental Medicare Coverage Is Expensive and/or Unavailable in Some Areas.

County, State (Included city)	Avg. annual Medigap premium (all plans)[a]	Annual Medigap premium range for drug benefit (Plan J)[b]	Availability of Medicare+Choice plan and annual premium ranges[c]
Solano, CA (Sacramento)	$1,600	$2,073–$6,676	5 plans available with premiums of $360 to $1,200
Allegany, NY (Buffalo)	$1,509	$2,289–$2,289	10 plans available with premiums of $240 to $1,680
Nassau, NY (Levittown)	$1,509	$3,309–$3,309	10 plans available with premiums of $0 to $1,332
Miami-Dade, FL (Miami)	$1,507	$3,852–$5,268	12 plans available all with $0 premium
Vermilion, IL (Springfield)	$1,289	$2,538–$4,960	1 plan available with $540 premium
Marion, OR (Portland)	$1,163	$2,077–$4,795	4 plans available with premiums of $468 to $972
Marengo, AL (Montgomery)	$1,162	$2,805–$4,795	No plans available
Laramie, WY (Casper)	$1,136	$2,010–$5,706	No plans available
Fayette, PA (Pittsburgh)	$891	$2,313–$2,877	7 plans available with premiums of $0 to $576

a. U.S. General Accounting Office. Medigap Insurance: Plans Are Widely Available but Have Limited Benefits and May Have High Costs GAO-01-9412 (July 2001). Annual premiums are for 1999.
b. Weiss Ratings, "Prescription Drug Costs Boost Medigap Premiums Dramatically," March 26, 2001, http://www.weissratings.com/NewsRelease/Ins_Medigap/20010326Medigap.htm. Premiums listed are for 2001.
c. *Medicare Compare* database accessed through CMS web site. Annual premiums listed are for 2001 and do not include beneficiaries' part-B premium liability.

highest payment levels would receive increases of at least 2 percent each year. Because these changes were required to be budget neutral and came at a time when traditional fee-for-service Medicare was growing very slowly, the phase-in of this new payment structure allowed adoption of the floor rates, but all other plans received only a 2 percent increase in the first several years. In fact, the blended rates have only come into effect in one of the last four years (Gold and Achman 2001).

Consequently, extra benefits have been substantially reduced and private plans have exited some markets, leaving hundreds of thousands of beneficiaries scrambling each year to enroll elsewhere or to get Medigap coverage. Further, plans with drug coverage have declined from 84 percent of all plans in 1999 to 67 percent in 2001, and when coverage has been retained, stringent caps have been applied or substantial premiums added (Gold and Achman 2001).

Moreover, discrepancies between Medicare's managed care plan payments and fee-for-service spending have grown in both low- and high-cost areas.

Sorting out the Relevant Issues

Issues of geographic variation and the problems they may cause are intricately interwoven with issues concerning overall payment levels and risk adjustment mechanisms for Medicare+Choice and any potential successor. First, consider the overall level of payment. Medicare+Choice has not achieved savings for the federal government. The combination of serving a healthier population and an inadequate structure for establishing payments has led Medicare to overpay private plans for the cost of providing Medicare-covered services. The GAO found in 2000 that Medicare+Choice plans used 22 percent of their revenues to provide additional benefits beyond what is required by Medicare (GAO 2000).

Ironically, the claims from plans of insufficient payments *are* consistent with findings that they are overpaid for Medicare-covered services but may be losing money covering additional services. The question is what services should the government pay for? Private plans would prefer the government help pay for the extra benefits they offer in high-cost as well as low-cost areas, and in this regard, beneficiaries also have a stake in this issue. This is not a variation issue, but rather a concern about the comprehensiveness of the benefit package. Plans can make a strong case that managing care is difficult if necessary services are not covered. But why should the government do this for private plan enrollees and not for those in traditional fee-for-service plans who are, on average, considerably sicker and more in need of such help? This is the basic conundrum of payment levels that are too high.

A major reason why payments to private plans are too high is that pri-

vate plans attract a healthier mix of the population. Although a new risk adjuster to account for these differences is being introduced, it remains controversial, suggesting that risk adjustment will continue to be a problem. Without good adjustments for health status, plans face no incentives to enroll sicker Medicare beneficiaries. Moreover, this eliminates a potentially valuable source of geographic adjustments.

Proposals for Geographic Adjustments

If appropriate input price and risk adjustors are used and if the average payment level is reasonable, the "pure" geographic issue is essentially one of determining whether payments should also be allowed to vary for other reasons, such as style of medical practice. The rationale behind tying Medicare+Choice payments to fee-for-service costs is to recognize that at least some differences are legitimate and to make it easier for private plans to enter a market and match the style of practice in a given area. On the other hand, the justification for encouraging private plans under Medicare was to save money by *changing* the way that care is delivered, hence reducing costs in traditionally high-cost areas. Coordination of care and better oversight of service use, in theory, ought to cause costs of providing care to gravitate to a national norm. Plans are supposed to be leaders in moving patients into consumption of only appropriate care. If all the vagaries of local markets are maintained, what is the rationale for having private plans in operation, particularly if they do not save money for the federal government? These conflicting philosophical views need to be examined before more federal dollars are devoted to this troubled program, either across-the-board or by locality.

How should such plans be paid? At one of the two extremes, plans could be paid rates based exclusively on local area expenses. This is essentially how pre-1997 Medicare worked for HMOs and what MedPAC has recently recommended (MedPAC 2001). Payments were based on a five-year average of county Medicare fee-for-service spending adjusted for demographic characteristics of enrollees (as a crude risk adjustment). This historical "lock-in" means that high spending areas such as Miami, New York City, and the District of Columbia would be well compensated, while low-cost areas, including rural counties, would be hurt, especially if low costs reflect inadequate access to services.

However, the Balanced Budget Act of 1997 severed the tie between county-level fee-for-service spending and payment increases to plans.[5] A national flat floor rate was established, allowing plans in historically low payment counties to receive double-digit payment increases to meet the floor rate. While the floor was also designed to encourage plans to enter underserved markets (primarily rural areas) it has been rather unsuccessful, despite a subsequent hike. Perhaps this persistent geographical difference in plan availability across the country influenced MedPAC's recommendation to institute financial neutrality between Medicare's spending on beneficiaries in managed care plans and spending on those in traditional fee-for-service plans. As MedPAC concedes, a better understanding of the reasons for large differences in fee-for-service health care spending is needed before making decisions on geographic payment adjustments to plans.

At the other extreme, all plans could be paid a national weighted average (usually allowing for adjustments for differences in input prices and in health risks). That is, differences in prices would be allowed, but not differences in numbers of goods and services used across areas (after controlling for variation in health status). In high-cost areas, plans would receive payments substantially less than what they get today, likely causing many to pull out.[6] Low-cost areas would likely do well under this scenario—*if* other conditions are sufficient to make it feasible for plans to enter the market. The irony of a national weighted-average approach is that it would hurt the areas with the highest current penetration of participants. Thus, such an approach might only serve to reduce the population served by private plans. The extent to which plans in these high-payment areas are burdened may be moderated by gradually blending in the new payment methodology with the old payment rates over time.

Often proposed in tandem with a national average approach is the requirement that traditional fee-for-service also be subject to fixed contribution amounts from the government. Then there would need to be some organization that assured that this amount plus the beneficiary's premium fully covered costs. Presumably, fee-for-service participants would have to pay the difference between the amount contributed by the federal government and the actual costs of providing a benefit package. If such proposals, however, do not vary premium levels by area, it is not clear how constraints on spending would be enforced.[7]

As noted earlier, the Balanced Budget Act took a middle ground; however, budget constraints have limited its full implementation. A second middle-ground approach may be to base payments on an assessment of "legitimate" differences across areas. In addition to input prices and health status, other adjustors might be added. Analysis of how managed care plans differ in their use of services might provide better estimates of appropriate payment, rather than using fee-for-service measures. That is, if managed care plans rely less on hospitals and more on other types of settings for care than does fee-for-service, the payment levels should be

based on a different combination of services than what is found in fee-for-service. While such adjustments make considerable sense, managed care plans have been reluctant to share data on the patterns of service use of their enrollees with the government, making it difficult to create adjustments between the two extreme approaches.

What about using competitive bidding strategies? This presumably would allow variation across market areas, but capture more effectively the rates necessary in each area to keep competitors in the market. Demonstrations of this approach have been opposed by plans and beneficiaries alike, largely because of the fear that price competition would drive out the extra benefits now available (Nichols and Reischauer 2000). This option also would only work in areas where there is viable competition among private plans, leading to the necessity for a two-payment approach.

Another issue that may affect geographic differences in private plan payment arises over proposals to cover prescription drugs in Medicare. Since one of the problems facing Medicare+Choice plans is the high cost of drug coverage, adding funds to their payments for drugs (and covering them for fee-for-service beneficiaries as well) could help make the benefit package sufficiently comprehensive to allow for better care coordination and more equitable benefits across the country. Beneficiaries residing in areas without viable M+C options could have improved access to drug coverage—a popular M+C benefit—through fee-for-service Medicare.

Would increases in plan payments to cover drug benefits also help reduce the geographic variation in their payment levels? Perhaps, but providing the same payment increases to each plan may raise Medicare costs unnecessarily in some areas. While it might seem that prescription drug spending should be less variable than spending on other Medicare services, there is a great deal of regional variation in prescription drug use for the elderly (DHHS 2000). Requiring all plans to cover drugs (accompanied by increases in plan payments) may lessen geographic variation in benefit packages between plans, but result in overpayments in areas with lower rates of drug utilization.

Beyond Medicare+Choice, what adjustments could be implemented to reduce fee-for-service variations? Here the tools are more limited since beneficiaries are allowed to seek services with few restrictions on access. The prospective payment systems for hospitals, skilled nursing, and home health services should lead to some standardization of care—a specific goal for which further attention may be appropriate. In some areas, better education of physicians and high visibility and dissemination of guidelines for care may influence health care provision. Nonetheless, geographic variations have proven to be remarkably resilient over time.

Conclusions

There are no easy solutions to the quandary of the geographic disparities in Medicare spending. First of all, a broader effort to establish norms for high quality care ought to be a high priority for improvements in health care and presumably could affect geographic variation, particularly by targeting this as a quality issue. Other approaches considered here for the Medicare+Choice program would each generate inequities, hurting different constituencies. This is one of the most difficult problems to deal with in a political environment since one area's improvement creates disadvantages for other areas. The situation could potentially be eased by improvements in risk selection adjustors and better information from managed care plans themselves.

But tough decisions will still need to be made on how far to push for a national average of Medicare spending. In deciding which approach to take, it is useful to recognize that the intent of introducing private plans for Medicare beneficiaries was to *change* delivery of care and reduce inappropriate use, thereby reducing variation across areas. This, in turn, would presumably affect fee-for-service over time as well. Unless the incentives are aligned to this, a major policy question becomes, why rely on private plans at all? Further, from a national perspective, it makes sense to put more cost containment pressure on areas where high costs cannot be justified both for private plans and fee-for-service—perhaps through introducing cost-containment mechanisms to fee-for-service Medicare. These concerns thus lead us to argue for continuing efforts to reduce payment variation, while recognizing that the comprehensiveness of the benefit and hence the payment levels need to be improved.

Geographic issues will likely play a role in the debate over the Bush administrations's proposed increase in Medicare+Choice plan payments and will continue to be a factor in future debate on broader Medicare reform.

Endnotes

1. One exception is an early study by Karen Davis (1975), which focused on a number of sources of variation that might affect access to care. She found that in the early years of the program, price of services was a major source of the differential. Most of her emphasis, however, was on income and racial differences.

2. Medicare fee-for-service spending rates can vary substantially among contiguous counties as well, even though Medicare assigns each the same hospital wage index. For example, counties in the Washington, D.C., area have per capita Medicare expenditures ranging from a high of $546 to a low of $386. Although we provide only a few key examples here, they are not merely outliers, but reflect the pattern of variation that exists.

3. See, for example, Roemer (1961) and Wennberg and Cooper (1999).

4. See, for example, Cutler and Sheiner (1999) and Skinner and Fisher (1997).

5. A link between national-level FFS spending and plan payment updates continues. See Berenson (2001) for further discussion on how the Medicare+Choice program changed as a result of the enactment of the BBA.

6. Otherwise, plans would have to impose more stringent controls on patients accustomed to using many services.

7. With fewer opportunities for controlling use of services, fee-for-service premiums might be both expensive and volatile. One of the arguments made in favor of this major restructuring of Medicare is that it would eliminate inequities between fee-for-service and private plans within a given area since the government contribution would be the same. However, for such a proposal to work well, risk adjusters would have to be nearly perfect or else the fee-for-service portion of the program would suffer. Thus, payment issues would become even more critical if traditional fee-for-service plans were required to operate under the same rules as private plans.

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