

An Analysis of Geographic Variation in Medicare Spending

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There have been numerous studies and articles analyzing the variation in health care spending across geographic regions throughout the United States. While many investigative efforts have unequivocally shown that such variation exists, the causation and effects of this variation have remained at the forefront of health care research. Current political efforts are focusing on understanding research endeavors that highlight the causes of geographic disparities in health care spending. Amendments to the health care bill that was passed in March will fund more analysis of geographic variation and potential policy changes that encourage hospitals to run more efficiently. It is important to understand the ongoing research of geographic variation as policies and regulations may soon begin to affect many in the health care field.

Two Schools of Thought

Certain researchers claim that much of the variation in health care spending can be explained by inconsistent actions taken by physicians. Some physicians may order tests, referrals, and procedures that do not necessarily provide a considerable benefit to the patient. These practices have the potential to be changed, inspiring talk for policy that would encourage physicians to curb “wasteful” spending. On the other hand, another group of researchers argue that most of the discrepancy is due to varying demographic conditions such as socioeconomic factors and health issues. Consequently, according to this school of thought, geographic variation in health care spending not only exists, but it is also unavoidable if we are to ensure fair and equal health care.

Atul Gawande

In June 2009, the issue of variation in health care spending was drawn to the attention of a larger audience in a *New Yorker* article by Atul Gawande, “The Cost Conundrum”, in which he discusses the high Medicare expenditures in the poor, border town of McAllen, Texas. Surprisingly, Gawande discovered that while the per capita costs of health care in McAllen (and many other regions of the country) are much higher than average, they do not have better reported outcomes. Building on these results, the author challenges the necessity of these inflated health care costs, arguing that physicians may be ordering medical procedures and tests in excess. Such practices, Gawande writes, drive up the costs, and profits, associated with health care. In the wake of these findings he suggests that physicians in high spending regions are motivated by perverse incentives since current reimbursement models tend to reward the “overuse” of medical resources. This article received national attention as President Obama made it required reading for the White House health reform team.

The Dartmouth Atlas Project

The Dartmouth Atlas Project has been studying regional variation in health care spending, with a focus on Medicare, for more than two decades. Their data shows that Medicare spending per capita varies almost threefold between the lowest and highest spending regions in the nation. (Figure 1)

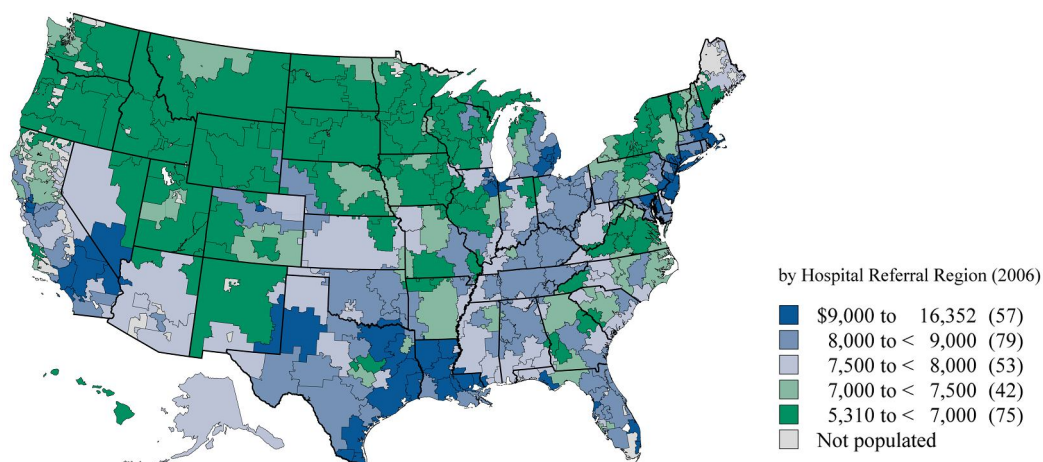


Figure 1: Regional Variation in Medicare spending across the nation, from the Dartmouth Atlas Project. www.dartmouthatlas.org

In their report, *Health Care Spending, Quality, and Outcomes: More Isn't Always Better* from February 2009, the Dartmouth Atlas Project claims that a majority of the variation in health care spending around the country can be explained by differences in the volume of health care services, which they dub "supply-sensitive care". At the heart of this argument lies the claim that higher spending regions tend to have more health care resources per capita, such as beds and physicians. With a greater supply of health care resources comes the propensity and opportunity to take advantage of the financial incentives that come with utilizing those resources. Researchers with the Dartmouth Atlas believe that as a result, regions with a larger supply of health care resources have more frequent hospitalizations and more doctors' visits per capita as compared to lower spending regions. They also assert that excess health care does not result in higher quality care, and can actually lead to worse outcomes for patients. To support this argument they cite an increased likelihood of human error due to the larger number of hospitalizations and physicians involved in treating each patient.

Critics of the Dartmouth Atlas Project

Many issues have been raised with the variables and methodology used by the Dartmouth Atlas. In November of 2009, the American Hospital Association, AHA, published the report, *Geographic Variation in Health Care Spending: A Closer Look*. In this report, analysts with the AHA acknowledge that variation exists but question the methodology and conclusions of the Dartmouth Atlas. They argue that variations in the utilization and spending throughout the country can be influenced by factors such as burden of disease, race, ethnicity, income, insurance status, market dynamics, and local regulation. This report stresses that more research on the driving factors of geographic variation must be done before policy changes and reimbursement cuts are made that could potentially hurt physicians and their patients.

One issue with the Dartmouth Atlas data is the one dimensional approach taken to account for health status by considering only the health care expenditures in the last two years (or six months) of life for Medicare beneficiaries. The AHA points out that this analysis does not take into account the different illness intensities and subsequently varying measures that were taken to treat patients before death. Barnato et al conducted a cohort study, "Development and Validation of Hospital 'End-of-Life' Treatment Intensity Measures" *Medical Care* 2009, which supports the AHA's opinion. It analyzed the different measures of hospital end-of-life treatment measures in hospitals in Pennsylvania and concluded that there were marked variations in the end-of-life treatment intensities across the state. Authors fear that the Dartmouth Atlas Project's end-of-life analysis of Medicare spending, may not consider end-of-life treatment intensity properly. Patients that survive due to intensive measures are not considered, and hospitals that use higher intensity end-of-life treatment may unjustly appear wasteful. Along these lines, they argue that a patient's intensity of treatment is something that can, and should be allowed to vary based on the decisions of the patient and their physician.

Another study, "States with More Health Care Spending Have Better-Quality Health Care: Lessons About Medicare" in *Health Affairs*, 2008, conducted by Richard A. Cooper, argues that the Dartmouth Atlas does not paint an accurate picture of health care spending since they only consider Medicare expenditures. Cooper claims that in order to determine if quality correlates to spending, one must consider total health care expenditures. He postulates that areas with a larger social burden may have disproportionately high Medicare payments which could sway the results presented by the Dartmouth Atlas.

Implications for Hospitals

The Medicare Payment Advisory (MedPAC) Commission and the Congressional Budget Office (CBO) have both started investigating causes of geographic variation. Amendments to the recently passed Patient Protection and Affordable Care Act include funding for the Institute of National Academy of Science to research geographic variation, and make suggestions for new adjustment factors for the Medicare Payment System. Although outcomes of that process are yet to be determined, one thing is certain, the government recognizes that variation exists and is taking steps to adjust the Medicare system to account for those variations. The years of Medicare attempting to regulate spending by cutting reimbursement to physicians one year and then cutting payments to hospitals the next are likely coming to an end. Instead, the initial pilot programs for bundled payments and accountable care organizations suggest that the government will leave it up to local geographies to monitor "wasteful" and "excessive" spending across the care continuum. And, the fact that accountable care organizations are modeled after the successes of organizations such as the Mayo Clinic and Geisinger suggests that the government believes much of variation is driven by, and can be controlled by, physicians. However, because hospitals, not clinics, are the largest health care entity in most communities across this country, hospitals are expected to take the lead on developing the process and infrastructure necessary to receive and distribute bundled payments from Medicare. By default, many hospitals will soon be responsible for the efficiency and appropriateness of the care provided by local physicians.