

**Geographic Variations in Health Care Costs  
An Exploration of Recent Studies**

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## Abstract

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Since the 1970s, researchers have noted wide geographic variations in health care costs across the United States. Researchers at the Dartmouth Atlas for Health Care have spearheaded research in this area, and recently MedPAC and the Institute of Medicine have also taken up the subject. It is widely (though not universally) believed among health policymakers that this variation is the result of inefficiencies in the health care system itself, and not a result of underlying regional differences in health or disease burden. However, not only do the reasons for this variation remain a matter of debate, whether or not the variation is occurring at all, how to measure it, and what policies can be implemented at the federal level to mitigate it are also a matter of contention. Recently released reports have suggested that nearly all variation is caused by the underlying health of the population, reigniting the argument that the variation is not caused by systemic inefficiency, and therefore proposed policies to mitigate variation through systemic changes will accomplish little. Through a review of the existing literature, this paper explores the debate in whether geographic variation exists, how differences in regional health care costs are measured, the purported underlying reasons for the differences, and suggested policy options for ways to improve system efficiency.

## Introduction

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The United States spends substantially more on health care than other developed countries, but differences in health care costs exist at the regional and local level, without any apparent health benefit.<sup>i</sup> Interest in the causes of geographic variation in health care costs has risen as policymakers seek to develop strategies to lower national health care spending. The work of the Dartmouth Atlas of Health Care, a project that explores national, regional, and local health care markets using Medicare data, has largely driven research in this area. In addition, popular literature such as Atul Gawande's New Yorker piece *The Cost Conundrum* has captured the attention of policymakers across the country. The article explored the large cost differences between two seemingly similar Texas towns, with McAllen, Texas having almost twice the Medicare spending in 2006 than El Paso, a town with similar demographics and disease burden.<sup>ii</sup> Gawande's 2009 assertion that the high cost of health care in McAllen was due to across-the-board medical overuse made waves that reached the White House and sparked a great deal of debate. Unfortunately, few gains have been made in determining the reasons why certain regions become El Paso, while others become McAllen.

Regional variation in Medicare spending per beneficiary could be due to many factors, including health status, Medicare payment rates, service volume, and service intensity. In general, health policy researchers believe higher spending in certain regions does not correlate with better quality health care, or improved health within those regions. Regions with greater utilization rates simply have increased costs, and not better health.<sup>iii</sup> Whether the cause of regional variation in spending is due to inefficiencies within the health care system, or is a result of population health or demographic factors such as age, race, or socioeconomic status remains a subject of debate. Many studies, including a May 2013 study commissioned by the Institute of Medicine (IOM) find that both Medicare and Medicaid per capita spending is much higher in certain markets than the average, and this difference remains even when adjusting for regional

differences in prices, patient demographics, and observed severity of illness. No consistent relationship between health care quality and the utilization of services was found.<sup>iv</sup>

Since policymakers believe that variation in health care costs is best explained by systemic differences between geographic regions, they have assessed health care savings that could be achieved in an efficient system. As early as 2002, Dartmouth economist Jonathan Skinner concluded that if spending levels of the lower cost regions were realized in the higher cost regions, savings in Medicare could be as great as 30 percent.<sup>v</sup> Over 10 years later little has changed. A July, 2013 IOM study reported that approximately 30 percent of health spending in 2009, close to \$750 billion, was wasted on unnecessary services, excessive administrative costs, fraud, and other problems.<sup>vi</sup>

Before health savings can be realized, the reasons for the geographic variation first must be determined. Is it a simple case of overutilization, as Gawande suggests? If this is the case, policies could be put in place to ensure stricter provider adherence to clinical guidelines. Assuming that these policies are followed uniformly, spending in high-cost areas should drop. Unfortunately, the data do not paint a simple picture. Variation is very difficult to measure and the reasons certain regions have high care costs are not well understood. Furthermore no system is completely efficient, and some natural variation will occur, thereby complicating variation measurement.

It is the difficulty in teasing out the acceptable variation from the unacceptable that gives rise to the skeptics of the Dartmouth team's assertion that system inefficiencies are the reason behind the regional variation. A recently published article in *Medical Care Research and Review* by Reschovsky et al., posits that 75 to 85 percent of cost variations in the US are attributable to disease burden.<sup>vii</sup> Similarly Louise Sheiner, in a working paper from the Federal Reserve Board of Governors, finds that socioeconomic factors that affect the need for health care, as well as interactions between Medicare, Medicaid, and private health spending, are the reasons for the variation.<sup>viii</sup> These contrasting opinions are important to note due to their divergent methodologies and results.

Through a review of reports from Dartmouth research, the MedPAC, numerous Congressionally mandated reports from the IOM, a report from the National Institutes of Health on Variations in Diagnostic Practices, a report from the National Bureau of Economic Research as well as the Sheiner and Reschovsky articles mentioned above, this paper explores whether or not geographic variation is occurring, the differing strategies used to measure regional variation in health care costs and spending, the proposed reasons for the variation and the policy strategies that can be undertaken to reduce inefficiencies in the healthcare system.

## Discussion

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### **How should the geographic variation in HC costs be measured?**

Researchers such as Sheiner and Reschovsky et al., who challenge Dr. Elliot Fisher, Jonathan Skinner and their colleagues at Dartmouth on their assertion that underlying systemic inefficiencies cause regional variation, often find fault with the means Dartmouth researchers use to measure costs between regions.<sup>ix x</sup> For years, Dartmouth research has broken down geographic regions using two separate measures: hospital referral regions (HRRs) and hospital service areas (HSAs). HRRs were created by Dartmouth to represent regional markets for complex medical care. Dartmouth defined 306 HRRs by determining where patients were referred for major cardiovascular surgical procedures and for neurosurgery and have a minimum population size of 120,000. HSAs were defined as a collection of ZIP codes whose residents receive most of their hospitalizations from hospitals in that area. There are 3,436 HSAs. Both HSAs and HRRs are based on Medicare claims data. Through their analyses, the Dartmouth approach controls for expected differences such as those resulting from differences in physician diagnostic coding, by adjusting for age, sex, and race at the area level, and controlling for five acute conditions (which tend not to vary regionally by diagnosis).

Whether the HRR is a “proper” unit by which to measure health care costs is still a matter of debate. A study from MaCurdy et al., commissioned by the IOM, found even more variation in Medicare spending and utilization within HRRs than across HRRs.<sup>xi</sup> Study authors MaCurdy et al., found the average standard deviation of per-capita utilization for beneficiaries within each HRR is \$1,621, while the standard deviation of average Medicare utilization levels across HRRs is \$84. They found similar results for Medicaid spending and utilization data. MaCurdy et al. also found that an HRR’s per capita resource utilization level is likely to be stable over time, and that relatively high-cost regions remain high-cost over time. HRRs and HSAs have the benefit of longevity, as Dartmouth research in this area has used them as a unit of measurement throughout the years, however they are an easy target for challenge, given the variation that still remains within them.

In contrast, MedPAC uses metropolitan statistical areas (MSAs) when determining geographic costs.<sup>xii</sup> MSAs were created by the Office of Management and Budget using counties. The Center for Medicare and Medicaid Services (CMS) adjusts hospital payments according to a hospital wage index calculated for MSAs and non-MSAs. Each MSA includes one core urban area of 50,000 individuals or more, as well as “adjacent counties exhibiting a high degree of social and economic integration.” There are 388 MSAs, as well as areas that do not qualify as MSAs and are classified as “outside” MSAs or non-MSAs. Though their units of measure differ from that of Dartmouth, MedPAC also finds unexplained regional variation consistent within and across MSAs and non-MSAs.

The IOM interim report from Newhouse et al. measures variation at an even smaller level. Newhouse and his team analyzed the difference in spending using a “forward-looking,” one-year disease cohort at the hospital level for low-variation conditions such as hip fracture, stroke, and acute myocardial infarction (conditions consistently used by researchers at Dartmouth and MedPAC). They then compare the measures to end-of life expenditures.<sup>xiii</sup> The IOM found that this strategy better mitigated risk adjustment based on Hierarchical Condition Category (HCC). Recently, use of HCCs in evaluating regional health care cost have been found to be problematic, as they may represent variation in provider diagnostic practices: a greater diagnosis of disease,

rather than a greater presence of it. Because providers diagnose more consistently at the hospital level, variation due to HCC will be better controlled for when measuring at the hospital level.

Reschovsky et al. highlights certain criticisms with the Dartmouth, IOM, and MedPAC approaches in their analyses of health care costs.<sup>xiv</sup> The authors' main criticism is that the use of diagnoses data from claims, even for standard diagnoses of conditions that do not vary across regions (e.g. acute myocardial infarction or hip fracture), will reflect local physician practice patterns in coding or diagnostic testing, and will not reveal reflect the true underlying differences in illness. Further, the study takes issue with Dartmouth's end-of-life spending approach, arguing that it ignores variations in mortality risk, underlying cause of death, and care quality among patients at risk of death. Reschovsky et al. attempt to mitigate the biases by using physician data from the Community Tracking Study Physician Survey (CTS) instead of patient data, a unique approach that yields different results.

Louise Shiener, a senior economist at the Board of Governors of the Federal Reserve, introduces an alternative method of measuring the geographic variations in health care costs. Rather than use individual level claims data, the approach taken by Dartmouth, the IOM, and MedPAC, Shiener avoids the use of individual patient data, or individual provider data and conducts her analysis at the state level. Shiener argues that a state-level approach better controls for the variation in health and other socioeconomic variables that effect health demand.<sup>xv</sup> Her state-level analysis garners quite different results from those of Dartmouth, MedPAC, and IOM researchers. She argues that a "state-level approach will yield different results if there is stronger correlation among health variables at the state level than at the individual level and if there are omitted health variables in the individual-level regressions."<sup>xvi</sup>

Although the Dartmouth group's strategies in measuring health care costs have the benefit of longevity, consensus is still lacking in how regions should be compared. While this debate continues, researchers will likely reach differing conclusions based on the varying strategies employed. The level at which to measure variation will also remain a matter of debate, with important consequences. The variety of levels at which the variation is measured is not only an important consideration for determining the underlying reasons for healthcare variation; it is an important factor when designing and implementing policy in order to reduce variation.

### **Does Geographic Variation Exist?**

Every study reviewed found regional variations in health care spending, although a few attribute the variation to causes other than underlying health system inefficiencies. MedPAC's 2011 report found that regional spending and service use in Medicare does not fall along MSA and non-MSA line (urban vs. rural). MedPAC, after adjusting by region and for special payments made by CMS to hospitals and providers, found that average service use is close to the national average for both MSAs and nonmetropolitan areas, though unadjusted spending might suggest spending is 3 percent above the national average for MSAs and 9 percent below the mean for nonmetropolitan areas.<sup>xvii</sup>

Similar to the finding that variation exists both within and between HRRs, MedPAC's 2011 report found that geographic variation occurred at levels outside of the MSAs and

nonmetropolitan areas. MedPAC found variation at all levels: within states and within MSAs. In Pennsylvania, per beneficiary service use is 32 percent higher in the highest area of the state than the lowest. Similarly, at the MSA level, in 2005-06 in Phoenix, cardiologists' resource use for similar episodes of care varied from 47 percent below the mean at the 10<sup>th</sup> percentile to 90 percent above the mean at the 90<sup>th</sup> percentile.

Though most studies explore regional variation in Medicare, similar variation is present in the commercial insurance market, as found in the IOM interim report to Congress.<sup>xviii</sup> MedPAC concluded that unadjusted Medicare spending per beneficiary is 50-55 percent higher in regions in the highest quintile of spending relative to those in the lowest quintile, while the IOM's analysis of the commercial market found a 36-42 percent difference between the 90<sup>th</sup> and 10<sup>th</sup> percentiles of HRR-level spending. IOM also found that the variations are correlated weakly between Medicare and privately insured populations: those areas with high Medicare spending are not necessarily the areas with high spending among the privately insured population.

The IOM final report from Newhouse et al., found that variation in spending and utilization occurred regardless as to what units of analysis were used. The IOM examined the geographic variation at the HSA, hospital, practice, and individual provider levels. They found that hospitals within the same HRR vary substantially, and that even variation among specialists working in the same group practice is the same as the variation among specialists across an entire state. These numerous multi-level analyses demonstrate that geographic variations in health care costs are both endemic and persistent at all levels of measurement. The IOM also found that HRR level quality is not consistently related to spending or utilization in Medicare or the private sector.

### **What are the causes of the differences in health care costs?**

In 2002, Wennberg, Fisher and Skinner created an "illness index" and evaluated underlying disease burden by region across conditions that are treated almost universally the same: heart attack, stroke, hip fracture, gastrointestinal hemorrhage are all accurate reflections of their true incidence in the population. The study ascertained that differences in underlying health explain just 27 percent of the weighted variation across regions. Since that time, costs have continued to rise, geographic variations remain, and debate remains on the underlying causes of the pervasive variation.<sup>xix</sup>

The 2013 IOM interim report to Congress discusses the sources of variation in bilateral terms: there are "acceptable" and "unacceptable" sources of geographic variation of health care spending.<sup>xx</sup> "Acceptable" variation generally includes health and demographic characteristics that may lead to variations in the level of care, while "unacceptable" sources are systems inefficiencies such as overutilization, overuse of low-value services, and unnecessary duplication of services.<sup>xxi</sup> The report goes on to state that it is not clear that existing methodologies can disentangle "acceptable" and "unacceptable" variations in spending. The various reasons proposed for unacceptable variation are below, though there is every reason to believe that variations in health care costs may be due to one or all of these things.

### Post-Acute Care

Most of the variation in health care costs can be attributed to post-acute care. The IOM final report to Congress found that variation in total Medicare spending was driven largely by variation in the utilization of post-acute care services.<sup>xxii</sup> Of the seven types of services studied by the IOM and its subcontractors – acute, post-acute, prescription drugs, diagnostics, procedures, emergency department visits, and other – eliminating post-acute care from the model resulted in a 73 percent reduction in the variance in total adjusted Medicare spending. They further concluded that variation in the commercial market is due to differences in price markups by providers, rather than utilization. The IOM determined that 70 percent of the variation in commercial spending could be attributed to price markups, owing mainly to the varying market power of providers and insurers across regions.<sup>xxiii</sup>

In MedPAC's 2011 report, the Commission was able to determine the variation in cost due to service use versus the variation in cost due to spending by adjusting for regional prices, additional payments to hospitals above the standard rates, additional payments to physicians above the standard rates, and additional payments to rural hospitals above the standard rates. MedPAC found that Medicare service use varies less than that of Medicare spending. Forty-six percent of beneficiaries live within an area where service use is within 5 percent of the national average while only 25 percent of beneficiaries live in an area within 5 percent of the national average in raw spending. MedPAC conducted a similar calculation for prices and special payments, and concluded that about 17 percent of the total variation in spending is explained by prices and special payments.<sup>xxiv</sup>

The report also analyzed regional variation in services by sector: short-term hospital inpatient, inpatient psychiatric, hospital outpatient, carrier (physician, ambulatory surgical center, and lab combined), durable medical equipment, hospice, home health, skilled nursing facility, long-term care hospital, and inpatient rehabilitation facility. MedPAC then grouped these 10 sectors into composites that encompass acute inpatient (short-term inpatient and psychiatric sectors), ambulatory (which includes physician, ambulatory surgical center, lab, and hospital outpatient), and aggregate post-acute sector (which includes home health, skilled nursing facilities, long-term care hospitals and inpatient rehabilitation facilities). Similar to other studies, MedPAC found the most variation in the post-acute sector, with the top 10<sup>th</sup> percentile per member per month cost of \$198 compared to the bottom of \$99 PMPM at the bottom 10<sup>th</sup> percentile. MedPAC also found that service use is positively correlated between the sectors, suggesting that services tend to be higher (or lower) in the same geographic regions and are complementary, rather than supplementary.<sup>xxv</sup>

Consistent with the IOM and MedPAC, the aforementioned IOM commissioned report from MaCurdy et al. found that a HRR's average per capita utilization rate is tightly correlated with the utilization of high-cost beneficiaries for both Medicare and Medicaid.<sup>xxvi</sup> Further, as in the previous reports, MaCurdy et al. found that costs in post-acute care services were a major contributor to variation. However, post-acute care services consist of a large number of services, making specific areas at which to target savings difficult to pinpoint. Post-acute care is clearly the costliest sector of Medicare, as all of the above reports focused on the Medicare population. Because of the differences in health of the privately insured population, it is unclear that the post-acute spending pattern also applies to the non-Medicare population.

## Provider Behavior

In addition to the belief that costs are driven by post-acute care, there is growing evidence that provider behavior drives geographic variation in health care costs. A 2010 report from Song et al. explored the diagnostic patterns of providers in high and low intensity regions by analyzing the claims data from Medicare beneficiaries as they moved between higher and lower intensity regions between 1999 and 2006.<sup>xxvii</sup> The researchers found that a move to a region with higher intensity of practice compared with a move to a region with a lower intensity of practice was associated with a greater increase in diagnostic testing, and a greater number of recorded chronic conditions. Despite this, there was no apparent benefit to the increased practice intensity: individuals in regions with higher intensity of practice do not live longer than those in regions with lower intensity of practice. The authors of this study focused on the impact of these results on risk adjustment, and HCC scores, which CMS relies on for reimbursement. On average, beneficiaries who moved to the regions with the highest intensity of practice had risk scores that were on average, 19 percent higher than those of that had moved to a region with a low intensity of practice. The different diagnostic patterns of claims will introduce bias not only in risk-adjustment, but also in comparative-effectiveness studies, public reporting, and payment reforms.

A working paper from the National Bureau of Economic Research (NBER) examines physicians beliefs and patient preferences through the implementation of strategic surveys of both Medicare beneficiaries and physicians that are then linked to utilization data in the respondents respective HRR.<sup>xxviii</sup> Primary care providers and cardiologists were given four vignettes that included examples of patients with varying levels of cardiac conditions. The physicians were then asked what level of treatment they would recommend. Based upon their results, the researchers classified the physicians who consistently recommended intensive care beyond guidelines as “cowboys,” and physicians who consistently recommended palliative care for the severely ill as “comforters.” The resulting variation in physician responses is greater than would be expected given random variation. Based on the responses to the vignettes, 27 percent of cardiologists were classified as cowboys, while 19 percent of primary care providers are classified as cowboys.

The survey results were then matched to the corresponding HRR. The proportion of cowboys and comforters predicted 36 percent of the observed regional variation in risk-adjusted end-of-life spending and increasing the percentage of cowboys by 10 percentage points increased end-of-life expenditures by 7.5 percent. Increasing the fraction of comforters reduces end-of-life expenditures by 4.1 percent. If all physicians met guidelines for follow up care, and all physicians were comforters, end-of-life expenditures would decline by 36 percent and total expenditures would decline by 17 percent.

While the numbers from the NBER report are striking, the reasons behind physician beliefs are less clear. The traditional factors of supplier-induced demand play a relatively small role of explaining variations in utilization patterns. The number of cardiologists, the income of the beneficiaries, and demographic characteristics of the physician (such as age or gender) are poor indicators of whether or not the physician is a comforter or cowboy. Organizational factors are strongly correlated with physician belief. Physicians in a solo or two-person practice are more



likely to be aggressive than those in a single or multi-specialty group, part of an HMO, or a hospital based practice. A cardiologists' accommodation of a referring physician is a large and significant predictor of being a cowboy, as treatment is both a financial and organizational decision.

### Population Health and Demographic Factors

A minority of studies find that regional health care cost variations are due not to systemic inefficiencies, but to underlying population health; which may be adversely affected by inefficiencies in other systems. Unlike the previously discussed studies, the Reschovsky et al. 2013 study suggests that most geographic cost variation in Medicare is due to population health differences.<sup>xxix</sup> The report calls into question the end-of-life index used by Dartmouth researchers as well as its casemix control methods. Using their method of CTS sites method, Reschovsky et al. found consistent patterns of higher acute and chronic illness burden in high-cost areas. The analysis argues that Dartmouth's casemix control and end-of-life index are inappropriate for controlling for the underlying geographic variations in health. The study found that all of the high cost areas to be correlated consistently with areas with high proportion of older beneficiaries, institutionalized beneficiaries and crude mortality rates.

The Sheiner study concludes that the variation in Medicare spending across states is due to health and health behaviors, rather than provider practice styles. Sheiner also finds that relationships between health spending, physician composition and quality are sensitive to the inclusion of variables such as insurance status, race, or obesity, and she suggests that the underlying health, social supports, access to services, cultural differences, and other social factors explain the geographic variation in spending more accurately than system inefficiencies. She suggests that states where social determinants of health such as poor education and high poverty adversely affect the health of the population also have higher health expenditures.<sup>xxx</sup>

### **What policy decisions can be made based on the evidence?**

Often, the goal of the studies reviewed was to offer an explanation as to why the geographic variation appears in our system, rather than to explore the policy questions surrounding its reduction. It is difficult to tackle policies which can be employed to mitigate regional health variations in costs, which the reasons for its existence and the ways in which to measure it are a matter of continual debate. However \$750 billion in inefficiencies and wasteful spending do create a great deal of attention. In 2009, Congress specifically asked the IOM to explore policy options for reducing the regional variations in health spending.

Congress asked Health and Human Services Secretary Kathleen Sebelius to commission an IOM report to investigate the geographic variation in health care spending and quality in order to analyze what changes could be made to Medicare payment policies which would encourage high value care. Congress was contemplating the implementation of a geographically based value index, which would modify provider payments based on the performance of a geographic region based on regional costs and expenditures; specifically Congress was interested in basing this index on HRRs. Throughout 2013, the IOM released a series of reports centered on this theme.

In the IOM interim report, Newhouse et al., investigated whether a HRR was the appropriate geographic unit upon which to base provider payment. The analysis found that, approximately 57 percent of the variation in adjusted HSA medical spending is within HRRs, while 43 percent is between HRRs.<sup>xxxii</sup> As explored before, the study analyzed variation at ever decreasing levels, eventually looking at variation at the individual provider level. Regional variation remained throughout all levels. Newhouse et al. maintained that because variation occurs even at the smallest units, that a geographic value index would raise a “fairness issue,” rewarding low-value providers simply for practicing in an area that are high-value on average.

In the IOM final report to Congress, Newhouse et al ultimately found that a geographically based value index would do little to promote more efficient behavior among individual providers, as health care decision-making occurs at an individual or organizational level, rather than a regional level. A value target at the regional level would do little to influence individual decision-making between a provider and patient. This follows naturally from the conclusion that there is even more variation within HRRs than between them, and indeed variation within HSAs, within hospitals, and other provider organizations. Even individual providers are inconsistent in spending practices across conditions.

IOM’s concrete recommendations to Congress and CMS get at the heart of improving system efficiency through affecting provider behavior. Largely, the IOM’s recommendations are based on new models of payment to providers. The IOM recommends creating a high-value health care system through increased clinical and financial integration. The IOM points out the inefficiencies inherent in the fee-for-service delivery system, and the perverse incentive it creates among providers to deliver more care. The IOM suggests improving efficiency in the system by recommending that CMS continue to test payment reform models that incentivize clinical and financial integration which (1) encourages care coordination, (2) includes real-time sharing of data tracking of service use and health outcomes, (3) encourages receipt and distribution of provider payments, and (4) places some financial risk for health outcomes onto providers.

The IOM also recommended the continuation of work begun recently at CMS through testing of new payment models, including the Value-Based Purchasing model, Patient Centered Medical Home model, bundled payments, accountable care organizations, and the dually-eligible care integration demonstrations. All of these models provide promise to improve both system efficiency and health, and have the possibility to reduce costs. The IOM also encourages Congress to allow CMS the flexibility to accelerate the transition to new payment models from traditional Medicare FFS.

Payment reform which affects individual provider behavior to provide better, more efficient care is the clearest method to reduce the geographic variation in the system that is due to wasteful spending. A system that incentivizes providers to offer better coordination also allows individuals to remain out of post-acute care facilities for extended periods and keep chronic conditions under control. A system that promotes efficiency and possibly shifts risks and costs to providers incentivizes practice within clinical guidelines, and a reduction in health care overutilization. Though geographic variation occurs at all levels of study-from the individual to the HRR-it is on the relationship between the individual provider, patient and payer where the policies to reduce costs remain focused.

## Conclusions

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Variation among regions is both persistent and real, and exists at nearly every level of observation. Post-acute care is consistently found to be the area with the greatest amount of variation, and this may or may not be driven by provider behavior or physician beliefs. Furthermore there is no easy or conclusive answer for the reasons behind geographic variations in health care costs, making specifically targeted policies for mitigating high cost regions using a geographic value index particularly contentious. For years, Dartmouth researchers have been suggesting that the best way solve the “cost conundrum” is to improve efficiency and quality of the health care system. Reform that incentivizes behavior change at the individual provider level may be the most effective means of controlling costs. Further research is needed to determine the true reasons for geographic variation, but in the meantime, a move toward system efficiency is vitally important. CMS is already testing new payment and delivery models with the goal of improving costs and overall health. The outcome of these models will better inform future steps that can be taken to improve efficiency, costs and health.

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