

## How are geographic differences in health care spending evaluated?

Much of the discussion around geographic variation in health care expenditures is based on data compiled in the *Dartmouth Atlas of Health Care*. Researchers have compared institutional spending on Medicare services at the end of life and compared spending across cities and states. For instance, the Atlas' "Hospital Care Intensity Index" (HCI) compares Medicare utilization and spending in the last two years of life based on where services are delivered (not where patients are from). Hospitals are grouped into 306 Hospital Referral Regions (HRR) which, on average, serve populations of approximately 1 million people.

The *Dartmouth Atlas* ([http://cecsweb.dartmouth.edu/atlas08/datatools/hci\\_s1.php](http://cecsweb.dartmouth.edu/atlas08/datatools/hci_s1.php)) also aggregates HRRs by state, with New Jersey having the highest HCI and Utah the lowest. However, within states, there is significant variation in HCI; in Florida, Miami spends the most in the last two years of life, Tallahassee the least. Within each HRR, there is also variation, with teaching hospitals often spending more than average even in "low intensity" regions.

## What explains the variations?

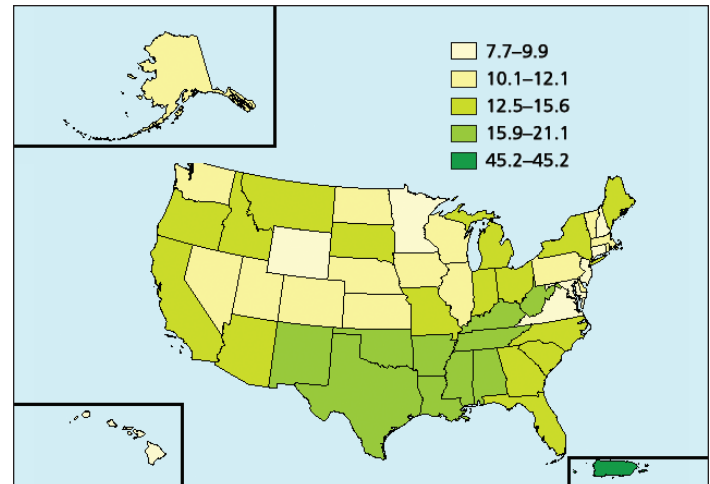
**Medicare rates/prices reflect local price inputs.** Physician payment rates are adjusted for geographic cost differences (including wages of health staff, rent, etc.) while hospital reimbursement adjustments are based on each hospital's own wage data. These adjustments add to variation.

**Non-DRG Medicare payments are included in Atlas data.** Indirect Medical Education (IME) payments made to teaching hospitals to offset their higher patient care costs (e.g., maintaining services for trauma victims, burn patients, and seriously ill individuals who are transferred from community hospitals) are included, as are Disproportionate Share Hospital (DSH) payments made by Medicare to offset the care of poor and underserved patients. As a result, areas with more teaching and safety net hospitals are more likely to be "high intensity."

**The Atlas does not factor in how sick patients are.** Some hospitals, such as teaching hospitals, care for patients with more complex or acute illnesses, which logically require more resources. Because *Atlas* data examines records only of patients who die, it is impossible to tell whether higher intensity care may have resulted in improved outcomes. Moreover, the chronic diseases that the *Atlas* combines are not identical, and, in fact, progress to death at varying rates and varying costs. Teaching hospitals also accept more transfers of the sickest patients in communities from other institutions. ([http://www.aamc.org/data/aib/aibissues/aibvol9\\_no1.pdf](http://www.aamc.org/data/aib/aibissues/aibvol9_no1.pdf))

**All three of the above issues contribute to higher Medicare spending at teaching hospitals reflected in the *Dartmouth Atlas*, and to higher spending in HRRs with a greater concentration of teaching hospitals.**

## Percent of People Below Poverty Level in the Past 12 Months (For Whom Poverty Status Is Determined)



Source: U.S. Census Bureau, 2005-2007 American Community Survey

### Conclusions from the *Atlas* showing large regional difference in medical spending indicate 30 percent health care "waste," suggested by Orszag and others; however:

- Medicare beneficiary spending is a poor proxy for overall spending in a state or region
- Variation has two principle components: costs/prices and utilization rates; MedPAC has found that the majority of spending variation is eliminated when costs are accounted for
- Health status, influenced by poverty and other factors, accounts for much of the variation in utilization rates
- When patients are properly risk adjusted and are studied from time of admission forward (instead of starting at death and working backward), higher utilization rates often lead to improved outcomes, and are not considered "waste" by those patients.

### Conclusions and recommendations

- Geographic differences in Medicare spending are not a good measure of "efficiency," or of health care spending overall
- Is there over-utilization? Yes. Is there under-utilization? Yes. Do we know exactly why? No.
- Once price inputs are adjusted, some variation in utilization still exists; additional studies of geographic differences are needed because poverty, race, and physician behavior all play a role
- Current "value" or "efficiency" adjustment proposals would represent the largest change in the Medicare payment system in 25 years with unknown effects on patients—and propose a blunt policy solution for a problem whose cause is not fully understood. These changes may harm the sickest, most vulnerable Medicare patients
- There is significant risk of unintended consequences when the results of aggregate behavior (e.g., states, regions, counties) are applied to individual patients
- Major Medicare payment changes are too important to relegate to one IOM study, a brief review by HHS and whole-cloth acceptance or rejection by members of Congress.

## Other factors also contribute to spending differences

**The 2008 *Atlas* does not adjust for socioeconomic status.** The per capita income in Los Angeles (LA) County is \$24,705. More than 38 percent of LA County citizens live below the poverty line; 57 percent are black or Hispanic, and 15 percent are uninsured. Of the 2,265,900 individuals living in the neighborhoods of LA's central core—Central and South Los Angeles—56 percent are at or below the poverty line, 80 percent are black or Hispanic, and 25 percent are uninsured. In contrast, Minnesota, which is considered an “efficient” health care spending area, has a total population of just over 5 million with a per capita income of \$37,373, and 9 percent are black or Hispanic. Dr. Tom Rosenthal of UCLA has analyzed the importance of considering the role that poverty plays in variation. His research demonstrates that **if the central core poverty area of Los Angeles is excluded, Medicare per patient spending in the rest of Los Angeles is more like that in Minnesota. This is the magnitude of the poverty effect.**

**Medicare spending is often a poor proxy for overall health care spending.** For instance, Medicare spending in North Dakota and Minnesota is relatively low, but both states are in the top 10 when total health spending is included. Private payer rates may be quite different; for instance, in La Crosse, WIS., Medicare spending (and rates) are significantly lower than in other parts of the country. However, according to the CBO, La Crosse has the highest physician price index in the nation (and the 10th highest hospital price index) among FEHBP PPOs. (<http://www.gao.gov/new.items/d05856.pdf>)

## What should be done about geographic variation?

There is now widespread agreement that the rate of increase of overall health care spending needs to be reduced, both to pay for expanded coverage and to secure long-term economic stability for our nation. Yet even cost growth rates can be difficult to interpret. For instance, many areas with low annual cost growth over the last 15 years have had higher than average growth over the last five years.

**The AAMC and our members support further study of the variations issue by IOM and others given the variety of factors—not included in the *Dartmouth Atlas*—that affect geographic variations in health spending.** The Dartmouth work has great merit; clearly, there are tests and treatments that appear to add little or no value, at least when reviewing deaths only. Part of this may be due to “entrepreneurial medicine” (as seems to be the case in McAllen, Texas) and these drivers need to be better parsed out and evaluated. Moreover, without full, thoughtful study and congressional input on recommendations, local factors in health care may be ignored causing unintended consequences for patients and the providers who care for communities. The AAMC is working with several of its members to explore more fully the causes of variation, and protocols that might reduce this variation.

**If Congress chooses to use the *Dartmouth Atlas* data to simply reduce payments to areas with higher spending, it risks not rewarding “efficient” providers and harming the urban poor, because the data has failed to account for them.** The CRS found that the “value index” proposed by H.R. 2844 and S. 1249, (“Medicare Payment Improvement Act of 2009”), “could be viewed as failing to accurately reward high-quality, highly efficient providers (and failing to penalize poor-quality, less efficient ones) and could arguably introduce inefficiencies and questionable payment outcomes.”

**Geographic variation in Medicare spending is real. However, more needs to be done to understand why that variation occurs and how its causes might need to be addressed. Any resulting policy changes should reflect local communities through the voice of Congress.**