

Regional analysis masks substantial local variation in health care spending

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Reforming Medicare payments based on large geographic regions may be too bluntly targeted to promote the best use of health care resources, a new analysis from the University of Pittsburgh Graduate School of Public Health suggests. The analysis will be published in the Nov. 1 issue of the *New England Journal of Medicine*.

"Much policy attention has been drawn to the large [geographic variation](#) in [health care spending](#) across regions, and for good reason – because regional variation points to inefficient use of resources," said lead author Yuting Zhang, Ph.D., associate professor of health economics at Pitt Public Health. "But it is important to effectively target these policies to reduce overutilization while maintaining access to high-quality care."

Policies that are too widely focused, such as at the larger regional level, could leave many high-spending locales untouched while inadvertently penalizing some low-spending locales. However, policies that are too finely focused, such as at the physician-level, could miss system-level factors that account for high utilization in some areas, Dr. Zhang said.

Previous geographic variation analyses primarily focused on regional areas, such as the hospital referral regions (HRRs) described in the Dartmouth Atlas of [Health Care](#). The United States can be divided into 306 HRRs, which are areas served by large tertiary hospitals where patients are referred for major cardiovascular surgical procedures and for neurosurgery.

The HRRs can be further divided into 3,436 Dartmouth hospital-service areas (HSAs), where residents receive most of their hospital care from the hospitals in the area.

Dr. Zhang and her colleagues used enrollment, pharmacy claims and medical claims data from 2006 through 2009 from the Centers for Medicare and Medicaid Services for a 5 percent random sample of [Medicare beneficiaries](#) enrolled in stand-alone Part D plans. The study sample included about 1 million beneficiaries each year.

"We found substantial misalignment of high-spending HSAs and HRRs, after adjusting for population difference across regions," Dr. Zhang said. "Many low-spending HSAs are located within high-spending HRRs, and many high-spending HSAs are located within low-spending HRRs."

Only about half of the HSAs located within the highest-spending fifth of HRRs are themselves in the highest spending fifth of HSAs. Conversely, only about half of the highest-spending fifth of HSAs were located within the highest-spending fifth of HRRs.

For example, Manhattan was one of the HRRs with the highest drug spending in the nation, while Albuquerque was one of the lowest, after adjusting for population difference in the regions. However, the lowest-spending HSA in Manhattan had lower spending than about a quarter of the HSAs within Albuquerque.

"If a reform policy targeted the Manhattan HRR for lower [Medicare payments](#), it would penalize low-spending local hospitals while missing the higher-spending local hospitals within the Manhattan HRR," Dr. Zhang said.

Using their analysis, Dr. Zhang and her colleagues could not determine the "right" level to target policy reforms, but suggest that focusing

exclusively on the regional level is too blunt.

Provided by University of Pittsburgh Schools of the Health Sciences

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