

**“How Do They Do That? Low-Cost, High-Quality Health Care in America”
Hospital Referral Region (HRR) Participant Data and Selection Methodology**

HRR	State	HCI*	Cost Rank (#1 is lowest spending in U.S. out of 306 HRRs)		Δ Rank (Cost)**	2006 Price- adjusted Medicare Spend per Enrollee	CMS Hospital Compare Composite quality score	Ratio of Primary Care FTE / Specialist FTE (National Average 1.06)†	Pop. Of Nominal City ‡	Pop. Growth 2000- 2007
			1992	2006						
Asheville	NC	0.70	70	24	46	\$ 8,086	94.6	1.56	73, 875	7.2%
Cedar Rapids	IA	0.71	35	12	23	\$7,657	96.0	0.87	126,396	4.7%
Everett	WA	0.57	154	65	89	\$7,331	94.5	1.51	101,800	7.4%
La Crosse	WI	0.51	8	4	4	\$6,473	97.0	2.18	50, 719	-2.1%
Portland	ME	0.73	110	54	56	\$7,819	94.4	1.24	62,825	-2.2%
Richmond	VA	1.00	126	39	87	\$8,275	95.6	0.98	202,002	2.1%
Sacramento	CA	0.71	199	100	99	\$7,598	95.1	1.21	460,242	13.1%
Sayre	PA	0.80	99	27	72	\$7,624	93.8	1.61	5,481	-5.7%
Tallahassee	FL	0.79	201	95	106	\$8,764	91.4	1.27	168,979	12.1%
Temple	TX	0.69	54	76	-22	\$8,594	94.5	1.60	58,330	7%

NOTES:

*The Hospital Care Intensity Index is a summary measure of the intensity of hospital and physician services provided to seriously ill Medicare beneficiaries during their last two years of life. The measure is highly correlated with the overall intensity of care provided to all Medicare beneficiaries and controls for differences in prices and illness across US regions.

(http://cecsweb.dartmouth.edu/atlas08/datatools/hci_s1.php)

**For the 1992 and 2006 Medicare cost rankings, lower rank orders represent HRRs with lower Medicare spending per capita, and higher rank orders represent HRRs with higher Medicare spending per capita.

†Data on the ratio of primary care to specialist full time equivalents (FTE) for each HRR were obtained from *The Dartmouth Atlas* (www.dartmouthatlas.org).

‡Population and population growth information are for the nominal city, not the entire HRR. Data were obtained from the most recent US census data (www.census.gov).

For further information, please see below.

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Background on “How Do They Do That? Low-Cost, High-Quality Health Care in America”:

On July 21, 2009, four health care improvement experts — Drs. Donald Berwick, Elliott Fisher, Atul Gawande, and Mark McClellan — are inviting health care leaders from a select group of high-performing regions of the United States to share their experiences at a gathering in Washington, DC. The goal is to build awareness among the public and policy-makers that successful models for achieving high-quality care at significantly reduced cost already exist in many regions and in many forms throughout America.

Called “How Do They Do That? Low-Cost, High-Quality Health Care in America,” the gathering is sponsored by the Institute for Healthcare Improvement, The Dartmouth Institute for Health Policy and Clinical Practice, Brigham and Women’s Hospital Center for Surgery and Public Health, and the Engelberg Center for Health Care Reform at Brookings. Small teams from ten high-performing Hospital Referral Regions (HRRs) will openly explore the local, regional, and national factors — including culture, financing, infrastructures, and more — that underlie the mechanisms for delivering health care in their communities.

Using publicly available quality and cost data, more than 70 of the nation’s 306 HRRs were identified as higher performing, lower cost regions. To be included on this list, HRRs had to meet distinct performance criteria on both cost and quality. Cost criteria included being in the lowest 25th percentile for Medicare spending per enrollee and/or intensity of care provided (including time spent and physician services delivered in the hospital), or having significantly reduced their rank of total Medicare spending over time. HRRs that met the cost criteria also had to rank in the top 50 percent on the Centers for Medicare & Medicaid Services (CMS) Hospital Compare Survey composite quality score.

The initial list of more than 70 regions that met the criteria was then refined to include ten of the highest performing HRRs. To ensure selection of HRRs that are representative of communities across the United States, geographic, demographic, and institutional diversity were also considered in the final selection process. The methodology by which these ten HRRs were identified and selected is described in more detail below.

Selection Methodology:

Publicly available quality and cost data were drawn from *The Dartmouth Atlas*ⁱ, the CMS Hospital Compare Surveyⁱⁱ, the Hospital Consumer Assessment of Healthcare Provider and Systems (HCAHPS) surveyⁱⁱⁱ, and the United States Census. U.S. Census data were used to inform the demographic profile for each region.

The Dartmouth Atlas reports aggregate data for geographic delineations termed “Hospital Referral Regions” (HRRs), which represent regional health care markets for tertiary medical care. Each HRR contains at least one hospital that performs major cardiovascular procedures and neurosurgery. There are 306 HRRs in the United States.

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The 306 HRRs were sorted and ranked according the following cost-related metrics:

- Age, sex, and race-adjusted Medicare spending per enrollee for 1992 and 2006
- Age, sex, race and price-adjusted Medicare spending per enrollee for 2006
- The Hospital Care Intensity Index for 2001 to 2005^{iv}

Also, for each HRR, data were available on the following quality-related metrics:

- CMS Hospital Compare Composite quality score
- Percent scoring 9 or 10 on the HCAHPS item “How would you rate the hospital overall?”

An initial list of “low cost” HRRs was created by identifying those HRRs that met at least one of the following criteria:

- In the lowest 25th percentile by rank for price-adjusted 2006 Medicare spending per enrollee; or
- The lowest 25th percentile by rank of the HCI Index (2001-2005).

An additional metric was calculated to indicate the change in HRR-specific rank in age, sex, and race-adjusted Medicare spending between 1992 and 2006. Those HRRs that had dropped by more than 60 places in the rank-order list of Medicare spending per enrollee between 1992 and 2006 were included in the initial list of “low cost” regions for consideration.

From this set of relatively “low cost” HRRs, we then limited our consideration to only those HRRs that ranked in the top 50 percent on the CMS Hospital Compare Survey composite quality score. An exception was made to also include an HRR that had both low HCI and exceptional rank-change, was a clear outlier in HCI and rank-change in its region, and therefore, in the opinion of the convening experts, warranted further exploration.

The resulting list of more than 70 high-quality, low-cost HRRs was thoroughly reviewed and ultimately ten HRRs were identified as being among the highest performing regions that also ensured geographic, demographic, and institutional (e.g., academic medical centers, rural and urban communities, provider groups, etc.) diversity.

A leader from one or more of the large health care organizations within each of the ten HRRs — determined primarily by a search of publicly available information and prior expert knowledge — was then contacted. Leaders were asked to assemble a team of four to five staff who could “tell the story” of the HRR with respect to the local, regional, and national factors — including culture, financing, infrastructures, and more — that underlie the mechanisms for delivering high-quality, low-cost health care in their communities. These leaders were encouraged to assemble diverse teams that include competitors, payers, and major provider groups. The teams will gather for the July 21 meeting in Washington, DC, to openly share their experiences.

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ⁱ *The Dartmouth Atlas* uses Medicare claims data from the Centers for Medicare & Medicaid Services (CMS) to document variations in how medical resources are distributed and used in the United States at a national, regional, and local market levels. Access to this data is made available for research purposes. Other data sources include the U.S. Census, the American Hospital Association, the American Medical Association, the National Center for Health Statistics, and Claritas, Inc.

The Medicare population in a region includes people ages 65 to 99, who are not enrolled in a risk bearing HMO. For physician services, the population is restricted to a random sample of Medicare enrollees having Medicare Part B physician claims. For Medicare reimbursement rates, the population is restricted to a random sample belonging to both Medicare A (inpatient) and B (physician services) programs. Rates are adjusted to the age, sex, and race distribution of the national Medicare population. First, the national event rate for each age-sex-race category is computed. These rates are then applied to the Hospital Service Area (HSA) population to produce the expected number of events in the HSA, that is, the number of events that would have occurred in the HSA if its rate was the same as the national event rate. This is one way to standardize for different distributions of risk factors across areas. HSAs are then aggregated to HRRs based on referral patterns for major surgery. See *The Dartmouth Atlas* website for more information. (<http://www.dartmouthatlas.org/faq/data.shtm>)

Spending per enrollee is adjusted to account for regional differences in cost of living, wages, and hospital costs unrelated to the amount or intensity of care received. This alteration is reflected in the price-adjusted Medicare spending per enrollee metric. (see <http://www.dartmouthatlas.org/faq/appdx.pdf>)

ⁱⁱ The CMS Hospital Compare Survey is a self-reported, standardized, set of core measures that reflect quality of care. These measures involve three common clinical conditions: acute myocardial infarction (AMI), heart failure, and pneumonia. (*The Dartmouth Atlas* includes ten total process measures.) For each measure, performance is calculated as the percentage of eligible patients who received the indicated care. Hospital performance is also assessed using a condition-specific opportunity model composite measure, the CMS Hospital Compare Survey composite quality score. This involves aggregating individual measures within conditions using a weighted average of performance across all measures, weighting each individual measure by the number of eligible patients (e.g., the number of times indicated AMI care was received at a hospital, divided by the number of times patients were eligible for all AMI measures). See the CMS Hospital Compare website for more information. (<http://www.hospitalcompare.hhs.gov/Hospital/Search/Welcome.asp?version=default&browser=IE%7C7%7CWinXP&language=English&defaultstatus=0&pagelist=Home>)

ⁱⁱⁱ HCAHPS is a standardized survey instrument and data collection methodology used to measure patients' perspectives of hospital care. The HCAHPS survey is composed of 27 items which encompass aspects of the hospital experience, including communication with doctors, communication with nurses, responsiveness of hospital staff, cleanliness and quietness of hospital environment, pain management, communication about medicines, discharge information, overall rating of hospital, and recommendation of hospital. For more information, see the HCAHPS website. (http://www.cms.hhs.gov/hospitalqualityinits/30_hospitalhcahps.asp)

^{iv} The Hospital Care Intensity Index is a summary measure of the intensity of hospital and physician services provided to seriously ill Medicare beneficiaries during their last two years of life. The measure is highly correlated with the overall intensity of care provided to all Medicare beneficiaries and controls for differences in prices and illness across US regions.
(http://cecsweb.dartmouth.edu/atlas08/datatools/hci_s1.php)