Executive Summary

Rising to the Challenge

RESULTS FROM A SCORECARD ON LOCAL HEALTH SYSTEM PERFORMANCE
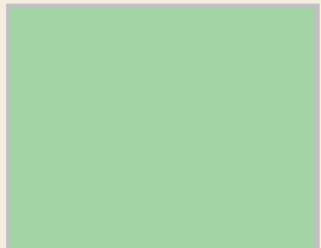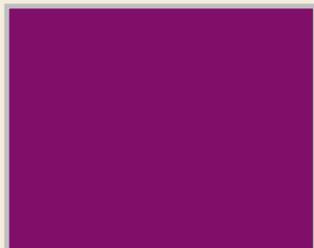
2012

THE COMMONWEALTH FUND COMMISSION ON A HIGH PERFORMANCE HEALTH SYSTEM

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THE COMMONWEALTH FUND

Executive Summary

People in the United States, regardless of where they live, deserve the same opportunities to lead long, healthy, and productive lives. Achieving that goal means that all communities should receive the very best from their local health care systems. Yet this new *Scorecard on Local Health System Performance* finds that where one lives has a major impact on the ability to access health care and the quality of care received. Comparing the 306 local health care areas, known as hospital referral regions, in the United States, the report finds wide variations on key indicators of health system performance. Access to care, quality of care, costs, and health outcomes all vary significantly from one local community to another, both within larger states and across states. There is often a two- to threefold variation on key indicators between leading and lagging communities. The 30 top-performing local areas include communities in the Northeast, Midwest, and a few West Coast communities—with these leading areas often doing well on multiple indicators and dimensions of care. Yet while pockets of excellence exist, there are ample opportunities for health system improvement in all communities, even among the leaders.

The *Local Scorecard* aims to provide communities with comparative data to assess the performance of their health care systems, establish priorities for improvement, and set achievement targets. It tracks 43 indicators spanning four dimensions of health system performance, including: access, quality, costs and potentially avoidable hospital use, and health outcomes. Indicators were defined using the latest data available, generally from 2008–2010, and therefore represent a baseline for assessing the impact of national reforms. For each indicator, the *Local Scorecard* assesses health system performance in local areas and compares their performance against benchmark levels achieved in the nation's highest-performing communities. Overall performance ranking then depends on performance on the indicators aggregated by dimension. (See Appendix A3 for a complete list of local areas, organized by state, with summary performance ranks and relative performance by dimension.)

The findings show that local health system performance is linked across all dimensions—with better access to care associated with higher quality and better outcomes. This interconnectedness underscores the need for health insurance, payment, and delivery system reforms to improve care experiences and outcomes, while at the same time slowing cost growth. Looking to the future, the Patient Protection and Affordable Care Act of 2010 (Affordable Care Act) offers states and local health systems new resources and expanded authority for such a whole-system approach, with the potential to stimulate and support delivery and public health system innovations. Success at the local level will ultimately depend on communities and providers—aided by strong leadership and collaboration—setting goals and taking action to achieve them.

As the nation continues to rebound from the recent economic recession and states contend with often severe budget constraints, the burden of rising health care costs increasingly falls on local businesses and families. There is a pressing need to support local efforts to extract better value from the health system while safeguarding access and affordability. Unsurprisingly, the *Local Scorecard* finds that high-poverty communities typically face problems accessing quality care that are more severe than those faced by high-income communities. Strategically targeting resources to the poorest communities will likely be necessary to reduce barriers to progress and improve health for the most vulnerable populations.

HIGHLIGHTS AND KEY FINDINGS

Where people live matters: it influences their ability to access care as well as the quality of care they receive.

Local areas vary in the provision of health care that is easily accessible, effective, safe, well coordinated, and focused on maximizing population health outcomes

(Exhibit 1). On some key indicators of performance, there was a twofold or greater spread between the local areas grouped in the top 10 percent of the performance distribution versus the bottom 10 percent (Exhibit 2). The gaps between the best- and worst-performing areas were even wider.

- The percentage of uninsured adults ages 18 to 64 ranged from a low of about 5 percent in several areas of Massachusetts to more than half in the two areas in Texas with the highest uninsured rates. In all communities, children were more likely than adults to have insurance coverage, largely because of federal and state policy attention, though there were places where more than 20 percent of children lacked coverage.

- The rate of potentially preventable deaths before age 75 from causes amenable to health care in the area with the highest (worst) rate was more than three times as high as in the area with the

lowest (best) rate (169.0 vs. 51.5 deaths per 100,000 population).

- The proportion of older adults who received recommended preventive care was more than twice as high in the best-performing area than in the worst-performing area (59% vs. 26%). Yet even in areas with the highest rates, too few adults age 50 and older received all recommended preventive care services, such as screening for cancer.

- The incidence of unsafe medication prescribing was also highly variable across local areas. The rate among Medicare beneficiaries was four times higher in Alexandria, La., than in the Bronx and White Plains, N.Y. (44% vs. 11%, respectively).

- Between the top 10 percent and bottom 10 percent of areas, there was nearly a twofold difference in hospital admission rates for

Overall Health System Performance

Overall Performance
- ○ Top Quartile
- Second Quartile
- Third Quartile
- Bottom Quartile
- Not Populated

Source: Commonwealth Fund Scorecard on Local Health System Performance, 2012.
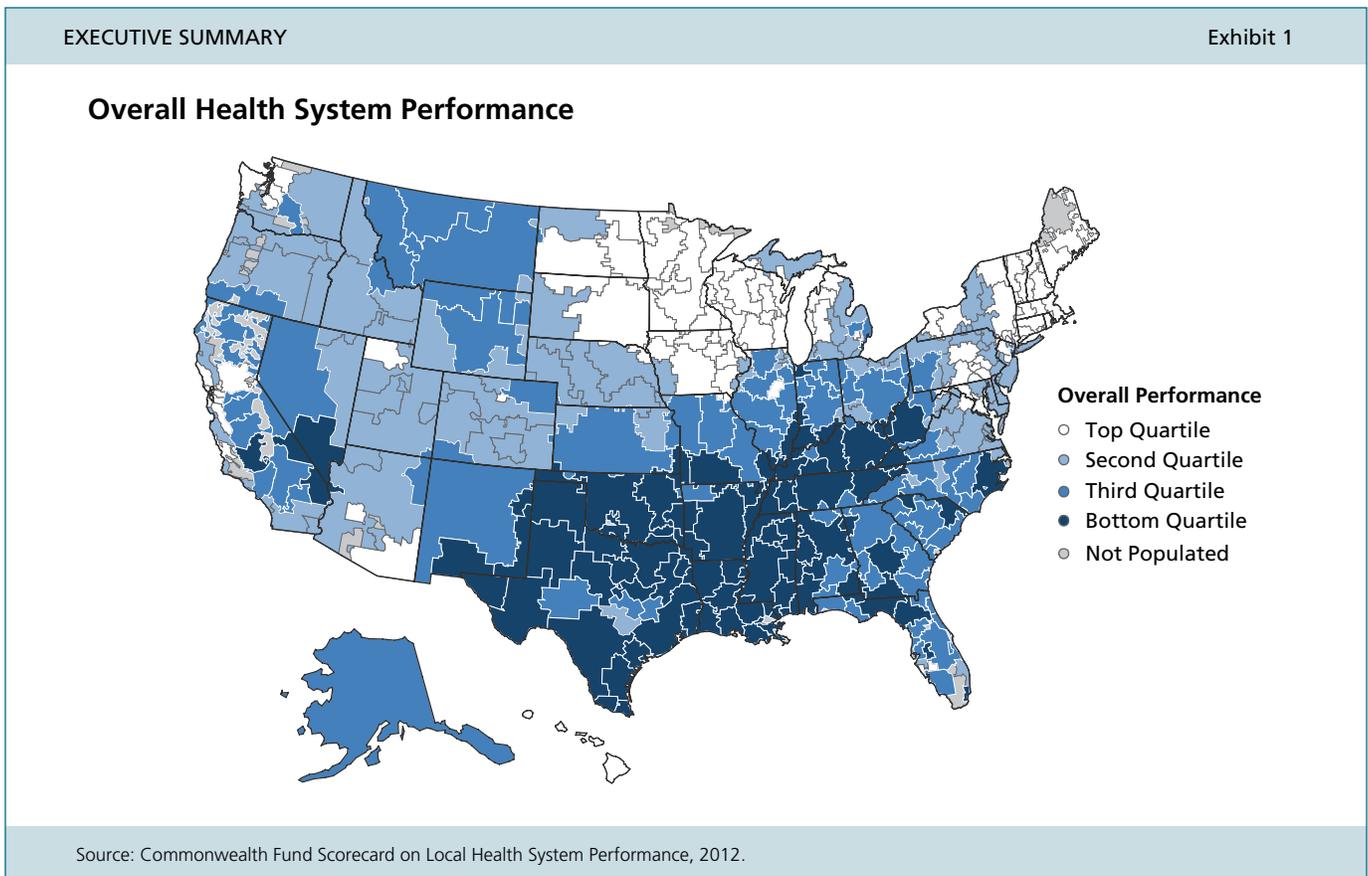
List of 43 Indicators in Scorecard on Local Health System Performance

Dimension and Indicator	Range of Hospital Referral Region Performance					Top Three Local Areas (in alphabetical order)*
	Best HRR	Top 90th Percentile	All-HRR Median	Bottom 10th Percentile	Worst HRR	
ACCESS						
1 Percent of adults ages 18–64 insured	94.6	87.5	80.2	71.8	46.8	Boston, MA; Springfield, MA; Worcester, MA
2 Percent of children ages 0–17 insured	98.8	96.3	93.8	87.2	79.8	Boston, MA; Springfield, MA; Worcester, MA
3 Percent of adults reported no cost-related problem seeing a doctor when they needed to within the past year	95.3	90.7	85.3	80.3	66.9	Appleton, WI; Bloomington, IL; Minot, ND
4 Percent of at-risk adults visited a doctor for routine checkup in the past two years	94.9	90.4	85.2	78.4	67.4	Bloomington, IL; Columbus, GA; Newport News, VA
5 Percent of adults visited a dentist, dental hygienist, or dental clinic within the past year	88.4	77.9	69.7	59.7	41.7	Arlington, VA; Aurora, IL; Bridgeport, CT
PREVENTION & TREATMENT						
6 Percent of adults with a usual source of care	93.0	88.8	82.4	74.2	58.7	Buffalo, NY; Johnstown, PA; Lancaster, PA; Rochester, NY
7 Percent of adults age 50 and older received recommended screening and preventive care	58.8	50.8	44.2	37.5	26.0	Arlington, VA; Manchester, NH; Worcester, MA
8 Percent of adult diabetics received recommended preventive care	69.1	55.7	45.5	36.5	26.9	Duluth, MN; Manchester, NH; Marshfield, WI
9 Percent of Medicare beneficiaries received at least one drug that should be avoided in the elderly (1)	11.4	17.9	25.0	36.2	44.0	Bronx, NY; East Long Island, NY; White Plains, NY
10 Percent of Medicare beneficiaries with dementia, hip/pelvic fracture, or chronic renal failure received prescription in an ambulatory care setting that is contraindicated for that condition (1)	9.5	15.3	19.7	26.2	30.6	Portland, ME; Rochester, MN; Santa Cruz, CA
11 Percent of patients hospitalized for heart failure who received recommended care (2)	99.7	97.5	94.7	89.6	77.2	Hudson, FL; Lynchburg, VA; Victoria, TX
12 Percent of patients hospitalized for pneumonia who received recommended care (2)	99.3	96.9	95.1	92.2	74.1	Clearwater, FL; Hudson, FL; Kettering, OH; San Luis Obispo, CA; Traverse City, MI
13 Percent of surgical patients received appropriate care to prevent complications (2)	99.3	97.4	96.2	93.5	88.0	Hudson, FL; Kettering, OH; Newport News, VA
14 Percent of hospitalized patients given information about what to do during their recovery at home	88.5	86.2	82.6	79.1	73.8	Dubuque, IA; Ogden, UT; Provo, UT
15 Percent of patients reported hospital staff always managed pain well, responded when needed help to get to bathroom or pressed call button, and explained medicines and side effects	70.9	67.1	63.2	59.0	52.8	Petoskey, MI; Rochester, MN; Traverse City, MI; Wichita Falls, TX
16 Risk-adjusted 30-day mortality among Medicare patients hospitalized for heart attack (3)	12.1	14.4	15.6	16.9	20.2	Elyria, OH; Hackensack, NJ; Traverse City, MI
17 Risk-adjusted 30-day mortality among Medicare patients hospitalized for heart failure (3)	8.5	9.9	11.4	12.8	14.8	Blue Island, IL; Munster, IN; Panama City, FL
18 Risk-adjusted 30-day mortality among Medicare patients hospitalized for pneumonia (3)	9.4	10.6	11.8	13.2	15.8	Allentown, PA; Cedar Rapids, IA; Great Falls, MT
19 Percent of home health care patients whose ability to walk or move around improved (4)	60.7	56.7	53.4	48.7	45.9	Gainesville, FL; Ogden, UT; Provo, UT
20 Percent of home health care patients whose wounds improved or healed after an operation (4)	92.4	90.3	88.0	85.3	79.3	Lake Charles, LA; Santa Rosa, CA; Tallahassee, FL
21 Percent of high-risk nursing home residents with pressure sores (5)	4.8	7.9	10.9	14.8	20.8	Mason City, IA; St. Cloud, MN; San Luis Obispo, CA
22 Percent of long-stay nursing home residents who were physically restrained (5)	0.4	1.5	3.3	6.8	13.6	Amarillo, TX; Tacoma, WA; Topeka, KS; Wausau, WI
23 Percent of long-stay nursing home residents who have moderate to severe pain (5)	0.4	2.2	3.6	5.2	11.1	New Brunswick, NJ; Paterson, NJ; Spartanburg , SC; Takoma Park, MD
24 Percent of Medicare decedents with a cancer diagnosis without any hospice or who enrolled in hospice in the last three days of life	30.1	46.6	55.6	64.2	84.4	Bend, OR; Salem, OR; Sun City, AZ

Dimension and Indicator	Range of Hospital Referral Region Performance					Top Three Local Areas (in alphabetical order)*
	Best HRR	Top 90th Percentile	All-HRR Median	Bottom 10th Percentile	Worst HRR	
POTENTIALLY AVOIDABLE HOSPITAL USE & COST						
25 Hospital admissions among Medicare beneficiaries for ambulatory care–sensitive conditions, per 100,000 beneficiaries	1,535	4,045	6,184	7,919	9,611	Bend, OR; Ogden, UT; Salem, OR
26 Readmissions within 30 days of discharge as percent of all admissions among Medicare beneficiaries	12.5	15.1	17.7	20.5	24.8	Bend, OR; Ogden, UT; Rapid City, SD
27 Potentially avoidable emrgency department visits among Medicare beneficiaries, per 1,000 beneficiaries	129	162	197	236	294	Everett, WA; Grand Junction, CO; Santa Cruz, CA
28 Percent of long-stay nursing home residents hospitalized within six-month period	6.3	11.9	20.0	28.3	36.7	Bend, OR; St. Cloud, MN; Sun City, AZ
29 Percent of first-time nursing home residents readmitted within 30 days of hospital discharge to the nursing home	9.4	15.8	20.6	25.7	30.9	Grand Falls, MT; Ogden, UT; Rapid City, SD
30 Percent of home health care patients with a hospital admission	19.3	22.4	26.6	32.2	46.8	Idaho Falls, ID; Ogden, UT; Provo, UT
31 Medicare imaging costs per enrollee	$110	$189	$288	$443	$638	Grand Junction, CO; Lebanon, NH; Minot, ND
32 Total Medicare (Parts A & B) reimbursements per enrollee (6)	$5,089	$6,432	$7,952	$9,687	$15,813	Anchorage, AK; Grand Junction, CO; Honolulu, HI
33 Total reimbursements per commercially insured enrollee ages 18–64 (6)	$2,014	$2,801	$3,314	$4,006	$5,068	Buffalo, NY; Honolulu, HI; Rochester, NY
HEALTHY LIVES						
34 Potentially preventable mortality, deaths per 100,000 population (7)	51.5	71.6	91.3	128.7	169.0	Boulder, CO; Everett, WA; Grand Junction, CO
35 Breast cancer deaths per 100,000 female population	17.0	22.6	28.9	38.8	48.9	McAllen, TX; San Jose, CA; Santa Barbara, CA
36 Colorectal cancer deaths per 100,000 population	6.8	16.9	22.8	32.6	39.0	McAllen, TX; San Jose, CA; Santa Barbara, CA
37 Infant mortality, deaths per 1,000 live births	3.3	4.9	6.8	9.4	14.4	San Francisco, CA; Santa Rosa, CA; Victoria, TX
38 Percent of live births with low birth weight	4.9	6.0	7.5	9.9	13.2	Anchorage, AK, Dubuque, IA; Everett, WA; Santa Cruz, CA
39 Suicide deaths per 100,000 population	4.2	8.2	15.4	23.4	49.1	East long Island, NY; Hackensack, NJ; Newark, NJ; Ridgewood, NJ; White Plains, NY
40 Percent of adults who smoke	6.2	12.6	19.0	24.2	30.9	Provo, UT; San Mateo, CA; Santa Barbara, CA
41 Percent of adults ages 18–64 who are obese (BMI >= 30)	15.3	23.8	29.5	35.7	45.6	Boulder, CO; Bridgeport, CT; San Francisco, CA
42 Percent of adults ages 18–64 who have lost six or more teeth because of tooth decay, infection, or gum disease	2.8	5.9	10.1	16.4	28.0	Austin, TX; Boulder, CO; St. Cloud, MN
43 Percent of adults ages 18–64 report fair/poor health, 14 or more bad mental health days, or activity limitations	17.9	23.5	29.5	35.8	42.0	Appleton, WI; Bloomington, IL; Sioux City, IA

* As a result of ties, more than three local areas may be listed.

(1) Metric forms part of the score reflecting potentially inappropriate prescribing among elderly Medicare beneficiaries.

(2) Metric forms part of the score reflecting receipt of recommended hospital care.

(3) Metric forms part of the score reflecting hospital mortality.

(4) Metric forms part of the score reflecting quality of home health care.

(5) Metric forms part of the score reflecting quality of nursing home care.

(6) Total Medicare per-person spending estimates include payments made for hospital (part A) and outpatient (part B) services. Estimates exclude extra payments to support graduate medical education and treating a disproportionate share of low-income patients; adjustments are made for regional wage differences. Commercial spending estimates, generated from a sophisticated regression model, include reimbursed costs for health care services from all sources of payment, including the health plan, enrollee, and any third-party payers, incurred during 2009. Outpatient prescription drug charges are excluded, as were enrollees with capitated plans and their associated claims. Commercial spending estimates were adjusted for enrollee age and sex, the interaction of age and sex, partial-year enrollment, and regional wage differences.

(7) Data for this indicator come from county-level 2005–07 NVSS-M data files, aggregated to the HRR level, for most HRRs. Estimates for the Anchorage, AK, and Honolulu, HI, HRRs represent state-level data and are compiled from years 2006–07.

Source: Commonwealth Fund Scorecard on Local Health System Performance, 2012.

ambulatory care–sensitive conditions such as pneumonia and diabetes among Medicare beneficiaries (4,045 vs. 7,919 admissions per 100,000 beneficiaries), and a sixfold difference between the area with the highest and lowest admission rates (1,535 vs. 9,611 admissions per 100,000 beneficiaries).

There are strong geographic patterns of performance, though the patterns vary by dimension.

Overall, local areas in the Northeast and Upper Midwest often ranked in the top quartile of health system performance, whereas places with the lowest performance were concentrated in the South, particularly within the Gulf Coast and south-central states (Exhibit 1).

- The highest- and lowest-ranking local health care areas have varied populations (by size), with small and large regions at both ends of the performance distribution (Exhibit 3).

- Areas in the Northeast tended to have strong performance on measures of access and prevention and treatment, but at times lagged other parts of the country on measures of potentially avoidable hospital use and cost.

- The majority of local health care areas in the Upper Midwest and West scored in the top performance quartile on measures of potentially avoidable hospital use and cost.

For many performance indicators, there is dramatic variation among local areas in the same state.

Health system performance in states with large and varied populations can differ from one community to another, even though they share state policies and borders. Intrastate variations demonstrate that local attributes drive health system performance and also show that local provider and community action, as well as state policies, can support improvement in areas of greatest need.

- In 10 states, there was a 10-percentage-point-or-greater difference between the area with the highest rate of insurance coverage for adults ages 18 to 64 and the area with the lowest rate of coverage for this population.

- Whether people with diabetes receive effective tests for managing their disease and preventing complications is also associated with where they live within a state. For example, within Kentucky alone, there was a 27-percentage-point difference between the best and worst areas on this measure of chronic care (61% in Covington vs. 34% in Lexington).

- Patients hospitalized for heart failure may or may not get all evidence-based treatment, depending where they receive care. Intrastate differences in rates of effective heart failure treatment reached more than 10 percentage points in nine states.

- In Florida, Illinois, Indiana, and Michigan, there was nearly a 20-percentage-point difference between the local health care areas with the highest and lowest rates of hospitalization among nursing home residents.

Spending among commercially insured and Medicare populations varies considerably across local areas. But patterns of regional variation are often inconsistent between the two populations.

Both Medicare spending and private insurance spending per enrollee vary widely across local areas. Excluding two outliers for Medicare with very high spending, there is a two-and-a-half-fold difference between the local areas with the lowest and highest per-enrollee spending rates for both Medicare and commercially insured (ages 18–64) populations. The lowest Medicare and private insurance spending areas had per capita costs that were 30 percent to 40 percent below average (all-area median), and spending in the highest-cost areas was more than 50 percent

Local Variation: Overall Health System Performance

Performance Quartile
- ☐ Top Quartile
- ▨ Second Quartile
- ▦ Third Quartile
- ■ Bottom Quartile

Top 10% of Local Areas

Overall Rank	Local Area	Population Count	Access	Prevention & Treatment	Potentially Avoidable Hospital Use & Cost	Healthy Lives
1	St. Paul, MN	1,077,980	Top	Top	Top	Top
2	Dubuque, IA	154,083	Top	Top	Top	Top
3	Rochester, MN	418,800	Top	Top	Top	Top
4	Minneapolis, MN	3,237,168	Top	Top	Top	Top
5	Appleton, WI	333,220	Top	Top	Top	Top
6	Santa Rosa, CA	488,469	Top	Top	Top	Top
7	La Crosse, WI	350,219	Top	Top	Top	Top
7	St. Cloud, MN	260,500	Top	Top	Top	Top
9	Manchester, NH	893,654	Top	Top	Second	Top
9	San Mateo County, CA	820,908	Top	Top	Top	Top
11	Cedar Rapids, IA	299,158	Top	Top	Top	Top
12	Green Bay, WI	510,108	Top	Top	Top	Top
12	Lancaster, PA	666,199	Top	Top	Top	Top
14	Neenah, WI	237,203	Top	Top	Top	Second
15	Arlington, VA	2,306,470	Top	Top	Second	Top
16	Fargo/Moorhead MN, ND	528,764	Top	Top	Top	Second
17	Honolulu, HI	1,360,301	Top	Second	Top	Top
18	Hartford, CT	1,510,268	Top	Top	Second	Top
18	Portland, ME	1,071,122	Top	Top	Top	Top
20	Iowa City, IA	344,473	Top	Top	Top	Top
21	San Luis Obispo, CA	255,521	Second	Top	Top	Top
21	Worcester, MA	824,358	Top	Top	Second	Top
23	Madison, WI	1,097,923	Top	Top	Top	Second
23	Springfield, MA	738,817	Top	Top	Second	Top
25	Lebanon, NH	397,373	Second	Top	Top	Top
25	San Jose, CA	1,737,862	Top	Second	Top	Top
27	Des Moines, IA	1,086,663	Top	Top	Second	Top
27	Providence, RI	1,225,202	Top	Top	Second	Top
27	Rochester, NY	1,304,602	Top	Top	Second	Top
30	Sioux Falls, SD	772,490	Top	Top	Top	Second

Bottom 10% of Local Areas

Overall Rank	Local Area	Population Count	Access	Prevention & Treatment	Potentially Avoidable Hospital Use & Cost	Healthy Lives
276	Metairie, LA	469,603	Third	Bottom	Bottom	Bottom
276	New Orleans, LA	639,673	Third	Bottom	Bottom	Bottom
278	Paducah, KY	371,499	Third	Bottom	Bottom	Bottom
279	Lake Charles, LA	271,045	Third	Bottom	Bottom	Bottom
279	Tyler, TX	572,677	Bottom	Bottom	Bottom	Third
281	Memphis, TN	1,814,827	Bottom	Bottom	Bottom	Bottom
281	Tulsa, OK	1,373,182	Bottom	Bottom	Third	Bottom
283	Gulfport, MS	196,812	Bottom	Third	Bottom	Bottom
283	Houston, TX	6,369,027	Bottom	Bottom	Bottom	Third
283	Jonesboro, AR	234,106	Third	Bottom	Bottom	Bottom
286	Houma, LA	279,132	Bottom	Bottom	Bottom	Bottom
286	Lawton, OK	205,383	Bottom	Bottom	Third	Bottom
288	Charleston, WV	833,536	Bottom	Bottom	Bottom	Third
288	Lubbock, TX	705,146	Third	Bottom	Bottom	Third
290	Jackson, TN	335,391	Third	Bottom	Bottom	Bottom
291	Huntington, WV	361,141	Third	Bottom	Bottom	Bottom
291	Wichita Falls, TX	205,297	Bottom	Bottom	Bottom	Bottom
293	Abilene, TX	294,137	Bottom	Bottom	Third	Bottom
294	Lexington, KY	1,518,597	Third	Bottom	Bottom	Bottom
295	Florence, SC	359,716	Bottom	Bottom	Bottom	Bottom
295	Tupelo, MS	394,380	Bottom	Bottom	Third	Bottom
297	Meridian, MS	201,585	Third	Bottom	Bottom	Bottom
298	Oklahoma City, OK	1,879,596	Bottom	Bottom	Bottom	Bottom
298	Shreveport, LA	700,013	Third	Bottom	Bottom	Bottom
300	Jackson, MS	1,070,263	Third	Bottom	Bottom	Bottom
301	Alexandria, LA	292,937	Bottom	Bottom	Bottom	Bottom
301	Texarkana, AR	261,650	Bottom	Bottom	Bottom	Bottom
303	Beaumont, TX	464,624	Bottom	Bottom	Bottom	Bottom
304	Hattiesburg, MS	316,829	Bottom	Bottom	Bottom	Bottom
304	Oxford, MS	152,428	Bottom	Bottom	Bottom	Bottom
306	Monroe, LA	270,188	Bottom	Bottom	Bottom	Bottom

Source: Commonwealth Fund Scorecard on Local Health System Performance, 2012.

above average. However, Medicare and commercially insured spending patterns were often inconsistent. Although private and Medicare spending in some areas tracked each other—relatively low on both or high on both—there were areas of the country where spending rates were relatively high for Medicare but low for the commercially insured population, and other areas in which private spending per enrollee was relatively high and Medicare spending relatively low. The inconsistency in spending patterns between the Medicare and commercially insured populations points to the need for a better understanding of local market dynamics as well as care patterns in the underlying delivery systems.

This analysis takes advantage of a rich set of insurance claims for people enrolled in employer-sponsored plans in 2009. Despite representing about 36 million covered individuals nationally, these data can fluctuate in smaller regions from year to year as the representative employer mix and annual benefit designs change. Along with variations in Medicare and private spending, this underscores the pressing need for all-payer databases that enable the tracking of total health care costs at the community level, examination of the sources of variation, and development of efforts to improve and track total costs and affordability over time.

Leading local areas often perform consistently well on multiple indicators across dimensions of performance.

The local areas that scored in the top quartile of overall health system performance often performed well on multiple indicators and across dimensions. In fact, many of the top-ranked places performed in the top quartile on each of the four dimensions (Exhibit 3). A confluence of factors likely contributes to better performance in these areas, including efforts to expand health insurance coverage, state and community leadership, supportive policy, and a culture of collaboration and improvement. In

contrast, areas in the bottom quartile of overall health system performance lagged relative to leaders on multiple indicators of performance. Overall performance in these areas was pulled down by high uninsured rates for adults and children, low rates of recommended preventive care and treatment, and poor health outcomes. The 10 percent of communities that performed worse overall (about 30 areas) tended to struggle on each dimension (Exhibit 3).

Still, we find exceptions in all regions of the country. There were no regions where every community demonstrated strong performance across all indicators. Moreover, there were many cases where local areas in the lowest-performing regions achieved high levels of performance on certain indicators, even ranking in the top half of the distribution on a dimension. Learning about these places can offer insights for other communities, particularly those facing similar health system or resource constraints.

Multiple dimensions of health system performance are interrelated.

Across local health care areas, strong relationships between core dimensions of health system performance were evident: better access was associated with higher quality; better access and higher quality with improved health outcomes; and poor access and lower quality with higher rates of potentially avoidable hospital admissions and higher overall costs. These cross-dimensional findings underscore the need for policymakers and community leaders to focus on population health and take a whole-system view to improve performance.

- The leading local areas in the access dimension were also leaders in the prevention and treatment dimension. In local areas with higher rates of insurance among adults, individuals were also, unsurprisingly, more likely to have a usual source of care and receive preventive care.

- Areas where people reported having better access to care tended to have lower rates of death from causes potentially preventable with timely, effective health care. Further, residents of these areas were more likely to report better health-related quality of life.

- Better quality of care, as measured by prevention and treatment indicators, was also associated with lower rates of potentially preventable deaths. People in places that ranked in the top quartile of the prevention and treatment dimension were less likely to die from causes that were potentially preventable with timely and effective health care than those living in places that fell in the bottom quartile on this dimension.

- Close analysis of specific indicators provides insight as to how deficiencies in access and quality contribute not only to poor outcomes, but also to inefficient care, as measured by potentially avoidable hospital use. For example, hospital admission rates among nursing home residents were lower in communities where fewer nursing home residents developed pressure sores (a preventable injury), suggesting there is a common pathway to improve both the quality and efficiency of care.

Health system performance in the nation's largest cities is highly variable.

About 40 percent of the U.S. population lives in the local health care areas representing the country's largest cities. These regions are also home to many of the nation's leading academic hospitals and major health care systems—providing referral centers for a global community as well as residents of the United States. The *Local Scorecard* finds substantial performance variation across cities.

- Having a large and diverse population does not necessarily lead to poor health system performance. Among the nation's largest urban areas, Boston, Minneapolis and St. Paul, the San Francisco Bay area (Alameda County, San Mateo County, and San Francisco), Seattle, and Arlington, Va., all scored in the top quartile for overall health system performance.

- Cities' performance on individual indicators varied, with some exceeding benchmark performance and many other cities lagging.

- In most of the largest cities, 30-day readmission rates, potentially avoidable hospitalization rates for ambulatory care–sensitive conditions, and per capita Medicare spending (taking into account differences in local wages and costs of graduate medical education) were high relative to the median rate for all local areas in the country.

Socioeconomic factors, particularly high poverty rates, are associated with some aspects of health system performance, but not all. There are significant variations within areas with low levels of poverty as well as within areas with high poverty levels.

Local areas with high poverty rates tended to have poorer access, lower rates of preventive care, and higher rates of potentially avoidable hospital admissions and readmissions. High rates of poverty were also associated with poor health outcomes, especially those for which timely access to care and population health interventions can make a positive difference. Yet dividing local areas into relative high- or low-income groups, the *Local Scorecard* finds significant variation in performance within both types of communities. On prevention and treatment as well as other dimensions, high-income communities were not always in the top half of the performance distribution and low-income communities were not always in the bottom half. The way local health care

systems are organized and care is delivered makes a difference.

- Overall, communities with the highest rates of poverty had among the highest uninsured rates and lowest rates of preventive care, pulling down their overall performance rankings. These areas also tended to have higher rates of potentially preventable deaths and higher rates of disability and poor health. Among these at-risk communities, the association between poor access and poor health outcomes was particularly notable and highlights the importance of national and state policies that can ensure equitable access to care as a foundation for health system performance.

- There was considerable variation among high- and low-income areas on two dimensions: prevention and treatment, as well as potentially avoidable hospital use and cost. Some high-income communities performed below what might be expected, given their resources, and some low-income communities performed better than might be expected. Notably, several relatively high-income communities were in the bottom half of the performance distribution on these two dimensions, and several low-income communities were in the top quartile or top half.

There is room for improvement in all local areas.
While top and bottom local areas often performed consistently across dimensions, no local areas ranked consistently at the top or bottom on all indicators of performance. And for some indicators, such as preventive care for adults and patients' assessment of care experiences in hospitals, even the top rates fell below what we know is achievable in the highest-performing care systems. Approximately 66 million people live in the local health care areas that score in the lowest performance quartile overall, and many

would benefit from even modest improvements in their local health system. Raising performance levels in these areas to benchmarks already achieved by some communities would yield substantial returns for the nation's health care system.

If all communities reached the performance levels achieved by the highest-performing 1 percent of local health care areas, we might expect the following gains:

- Over 30 million more adults and children would have health insurance coverage—reducing the number of uninsured by more than half.

- More than 9 million additional adults over age 50 would receive effective, evidence-based preventive care, including cancer screenings and immunizations.

- There would be approximately 1.5 million fewer hospitalizations and readmissions among chronically ill Medicare patients, nursing home residents, and people with a recent hospitalization. This would mean billions of dollars in potential savings annually for the Medicare program.

- About 1.3 million fewer Medicare beneficiaries would receive an unsafe and inappropriate prescription medication.

These are ambitious targets for all local areas. But by aiming high, there is the potential for substantial gains, especially if leaders succeed in raising the bar.

SUMMARY AND IMPLICATIONS

The *Local Scorecard's* evidence of wide variation in health system performance across local areas and within states points to the need for strategic improvement efforts in each community, supported by state and federal policies and resources. Building on The Commonwealth Fund's assessments of health system performance at the national and state levels, the *Local Scorecard* finds wide variation across all four dimensions of performance, based on 43

indicators that were available across the country. These comparative data represent a baseline leading up to national reforms enacted in 2010. Thus, the *Local Scorecard* offers a starting point from which to assess changes over time, as federal reforms unfold and states begin to use new authority and resources provided by the Affordable Care Act. At the same time, state policy leaders can use it as a tool to target interventions to the communities with the greatest need and most to gain.

This report underscores the importance of looking locally—beyond national and state averages—for opportunities to improve care experiences, improve population health, and achieve more-affordable health care systems that deliver high-quality care and lower costs. Findings also point to the need for multidimensional strategic approaches to health system improvement that avoid focusing on just one factor to the exclusion of others. While national and state policies provide resources and help to structure markets that promote improvements in health system performance, real and sustained progress hinges on engagement and collaborative action at the local level.

A framework for local health system improvement. Changes to health care provider payment, new health information technologies, more robust performance measurement and data systems, and health system infrastructure investments enacted in recent national health care legislation are leverage points that can accelerate and support local health system improvement. Moving forward, however, requires multiple stakeholders—Medicare, Medicaid, private insurers, state policymakers, community health leaders and providers, and local businesses—to align incentives with a shared will and vision. Action is needed at national, state, and local levels to ensure that health care is affordable, of high quality, and responsive to population needs.

The federal government has set the stage for improvement in states and communities across the country via the insurance, payment, and delivery systems reforms embodied in the Affordable Care Act. Key reforms include:

- taking steps to reduce the number of uninsured and improve access for millions across the country, reforms that will lay the foundation for local improvement efforts focused on enhancing patients' care experiences, promoting better health for all, and addressing cost concerns;

- granting new authority to both Medicare and state Medicaid programs, enabling these public insurance payers to form new partnerships with local health systems that support reorganization of local delivery models and realignment of incentives to lower costs and improve quality;

- investing in new information systems to inform and support clinicians in delivering safer, higher-quality care; and

- investing in primary care and public health initiatives that will encourage use of preventive care and help avoid hospitalizations by connecting patients with targeted community resources.

The Affordable Care Act further provides state governments with new authority and resources to support state-level policies and initiatives to improve performance. States can reduce unwarranted variations within state borders and improve health system performance for all communities by focusing on insurance expansions, information systems, oversight of quality and safety, and policies to address concerns in areas with the greatest need. For example, the Affordable Care Act will reduce the number of uninsured in all states by supporting Medicaid enrollment expansion and providing new premium assistance to help make sure insurance is affordable for low- and middle-income families. Starting in 2014, new state-run insurance exchanges and insurance standards that prohibit charging more based on

health conditions will make it easier for people to sign up and stay covered.

With federal and state insurance reforms paving the way for improved access to care, providers and other community stakeholders, as well as state officials, will be able to focus on improvement to systems of care and population health, including payment changes that hold care systems accountable for outcomes and costs. The newly established Center for Medicare and Medicaid Innovation will serve as a resource for states, health systems, providers, and private payers interested in testing and implementing new payment and care models, locally, that reward innovation, high quality, and efficient care delivery over the volume of services provided. Such action can support initiatives in communities across the country to enhance primary care and reduce avoidable hospital admissions and readmissions.

With insurance expansions, better information systems, and new resources available, communities have opportunities to achieve better health system performance, so long as they are engaged participants, rather than observers, as state and national policies unfold. The substantial variation across communities documents the potential of local action to make a difference. Local action will require:

- strong leaders, including medical care providers, who can clearly articulate improvement goals and motivate stakeholders to act;

- willingness to innovate and take advantage of opportunities, such as those provided by the Center for Medicare and Medicaid Innovation, to develop new models of care;

- collaboration among stakeholders within and outside the local health care delivery system;

- a sense of obligation to and accountability for broadly defined community needs that take into account, but are distinct from, the needs of local health care providers; and

- strategic use of data and measurement to assess local performance, inform action, and monitor the progress of improvement initiatives.

National health care system reforms, newly available resources, and expanded state authority can help set the stage for communities to assume greater accountability for improving patient experiences, lowering costs, and achieving better health for all of their residents.

The *Local Scorecard* takes an important first step toward understanding community-level variations in health system performance and identifying opportunities for improvement. The "starter set" of performance indicators it introduces represents a new measurement framework for those stakeholders most attuned to local needs, one that could motivate the development of explicit, locally appropriate health system improvement goals.

We acknowledge that some of the data used in this analysis are not as robust in all communities as we might like; clearly there is a pressing need for better data on health care outcomes, sources of costs, and performance variation at the local level. For that reason, we encourage stakeholders to identify improvement opportunities in their local area and initiate their own performance measurement activities, rather than emphasizing the specific rankings reported here. This report is an important step forward, but it raises as many questions as it answers, and highlights the need to assess changes over time and understand the factors contributing to variations in performance.

Federal and state policies have the potential to support improvement in all the nation's communities. But ultimately it is up to health care systems, community leaders, and health policy officials to rise to the challenge of improving performance to meet the current and future health and health care needs of the people they serve.

SCORECARD METHODOLOGY

The *Scorecard on Local Heath System Performance, 2012,* tracks 43 performance metrics in each of 306 mutually exclusive local health care regions across the country. Health system performance is evaluated in four dimensions:

- **Access** includes insurance coverage for adults and children and three indicators of access and affordability of care.

- **Prevention and treatment** includes 19 indicators that measure the quality of ambulatory care, hospital care, long-term care, post–acute care, and end-of-life care.

- **Potentially avoidable hospital use and cost** includes six indicators of hospital care that might have been prevented or reduced with appropriate care, follow-up care, and efficient use of resources, as well as three measures of the spending on medical care by Medicare and private insurance.

- **Healthy lives** includes 10 indicators that assess the degree to which people are able to enjoy long and healthy lives.

Several design principles guided development of the *Local Scorecard:*

Geography: The unit of analysis used in the *Local Scorecard* is the hospital referral region (HRR). HRRs are regions created by the Dartmouth Atlas of Health Care project and represent regional markets for tertiary medical care. Every HRR is anchored by a city that has at least one medical center that serves as a referral hospital for tertiary care. (For more information, see box on page 21.)

Performance Metrics: Indicators were selected to span the health care system, with each representing an important aspect of care that is sensitive to health care system performance. To be included, all indicators had to be available at the local area level. The indicators build on the data used in the *National Scorecards* and *State Scorecards* and include some new indicators that have recently become available. Because indicators had to be measured the same way in all areas and available in national databases, the *Local Scorecard* does not include important sources for local information, such as state all-payer claims databases, or other data available in some but not all parts of the country. For some metrics, higher values represent better performance (e.g., the percentages of adults and children who have insurance); for others, lower values represent better performance (e.g., hospital readmission rates, potentially avoidable emergency department visits, and mortality).

Data Sources: Most indicators draw from publicly available data sources, including government-sponsored surveys, registries, publicly reported quality indicators, vital statistics mortality data, and administrative databases. The most current data available were used in this report, generally from 2008–2010, though this did vary somewhat by indicator. Appendix B provides additional detail on the data sources and time frames.

Data Preparation: Many data sources used in this analysis do not report at the HRR level. It was therefore necessary to crosswalk substate data from the level reported to the HRR. For example, counties do not map directly to HRRs, so we used a crosswalk file developed by the U.S. Postal Service and the Department of Housing and Urban Development to disaggregate county-level data to zip code–level estimates, and then we aggregated the zip code–level data to HRRs using a crosswalk file available from the Dartmouth Atlas project.

Scoring and Ranking Methodology: The scoring method used in the *Local Scorecard* involves several steps. First, we derived a ratio for each indicator comparing the local area rate to a benchmark, the top 1 percent of areas. Where higher rates would indicate a move in a positive direction, we divided the area rate by the benchmark. Where lower rates would indicate a positive direction (e.g., mortality), we divided the benchmark by the area rate. The top ratio (best) was set to 100 percent for scoring purposes.

We then averaged the ratio scores for metrics within each of the four performance dimensions to calculate a dimension summary score for each local area. Local areas were then rank-ordered based on their dimension summary score. Dimension ranks were then averaged to derive an overall performance score. The exhibits group local areas into quartiles for each dimension and overall performance. Additional data is provided online by indicator and dimension.

The *Scorecard on Local Heath System Performance, 2012,* represents a first step toward developing a comprehensive assessment of local health system performance and should be viewed as a starter set of measures. Because this is a first edition, the *Local Scorecard* went through a beta testing period during which it was presented to two local areas (St. Louis, Mo., and Asheville, N.C.), where community stakeholders provided feedback on technical details of the report and accompanying online benchmarking tools. The authors would like to thank these stakeholders for their constructive guidance and feedback on strengthening the report so that it may better help communities engage in local health system performance improvement efforts.

WHAT IS A HOSPITAL REFERRAL REGION?

Hospital referral regions (HRRs) are areas that represent regional markets for tertiary medical care. The construct was developed by the Dartmouth Atlas of Health Care project[i] and has been widely used in health service research and policy analysis, including by the Institute of Medicine (IOM),[ii] Medicare Payment Advisory Commission (MedPAC),[iii] the Government Accountability Office (GAO),[iv] and the Congressional Budget Office (CBO).[v]

HRRs are 306 mutually exclusive regions, constructed by aggregating the residential zip codes from which Medicare beneficiaries traveled for major cardiovascular and neurological surgical procedures. Each local referral region has at least one hospital where these complex surgical procedures are performed. The HRR names reflect the location (city or town) where the referral hospital is physically located. The regions are meant to represent travel and referral patterns and thus do not align to political (county, state) boundaries and sometimes cross state borders.

HRRs have varied populations, ranging from about 126,000 to 9.9 million residents; about a third of HRRs have populations over 1 million residents. Many of the HRRs with the largest populations are relatively small geographic areas. As a result, many of the nation's largest cities cannot easily be seen on the maps printed in this report. We have included a short chapter in this report, along with two exhibits, focusing on the largest metropolitan areas.

For more information on HRRs and examples of their use in health care policy, see:

i   Appendix on the Geography of Health Care in the United States, Abstracted from the 1996 edition of the Dartmouth Atlas of Health Care, available at: http://www.dartmouthatlas.org/downloads/methods/geogappdx.pdf.

ii   http://iom.edu/Activities/HealthServices/GeographicVariation.aspx.

iii MedPAC, "Report to the Congress: Variation and Innovation in Medicare," March 2003; and M. Miller, "Report to the Congress (Testimony): Reforming the Delivery System—Statement of Mark Miller," Sept. 16, 2008.

iv   GAO, "Report to Congressional Requesters—Health Care Price Transparency: Meaningful Price Information Is Difficult for Consumers to Obtain Prior to Receiving Care (report # GAO-11-791)," Sept. 2011.

v   CBO, "Geographic Variation in Health Care Spending," Feb. 2008.

ACCESS LOCAL SCORECARD ONLINE TOOLS

This report summarizes results of the *Local Scorecard* and presents overall hospital referral region (HRR) performance on each of the four dimensions of health system performance. Appendix A3 at the end of this report presents overall quartile performance for all 306 HRRs. *Local Scorecard Data Tables* that display data and specific HRR-level rates for each indicator, including supplementary demographic and market characteristic data, can be accessed from the Commonwealth Fund Web site at www.commonwealthfund.org/Maps-and-Data/State-Data-Center/Local-Scorecard.aspx. The Web site also provides local area performance profiles that enable comparison of HRRs and display summary information on quartile performance.