

WHAT THE STATE SCORECARD MEASURES

Dimensions and Indicators

The *State Scorecard* measures health system performance for all 50 states and the District of Columbia using 32 key indicators (Exhibit 1). It organizes indicators by five broad dimensions that capture critical aspects of health system performance:

- **Access** includes rates of insurance coverage for adults and children and indicators of access and affordability of care.
- **Quality** includes indicators that measure three related components: receipt of the “right care,” coordinated care, and patient-centered care.
- **Potentially avoidable use of hospitals and costs of care** includes indicators of hospital care that might have been prevented with appropriate care and follow-up, as well as the annual costs of Medicare and private health insurance premiums.
- **Equity** includes differences in performance associated with patients’ income level, type of insurance, or race or ethnicity.
- **Healthy lives** includes indicators that measure the degree to which a state’s residents enjoy long and healthy lives.

Throughout the text, lists of states appear in order of their ranking on the indicator being discussed.

Whenever possible, indicators were selected to be equivalent to those used in the *National Scorecard on U.S. Health System Performance*. However, comparable state-level data were not available for some important topics covered by the *National Scorecard*. In particular, as a nation, we lack state-level indicators to measure how well patients and their doctors are controlling chronic diseases and how often patients experience adverse effects from their treatment, as well as other safety indicators. We also lack state-level data on duplicative services, receipt of inappropriate care, insurance administrative overhead, and information system capacity. Moreover, many quality metrics are still in the early stages of development and thus are limited in scope. Hence, State Scorecard indicators should be considered a “starter set” to be expanded over time. See Appendices B1 and B2 for data sources and descriptions for each of the indicators included in the *State Scorecard*.

Scorecard Ranking Methodology

The *State Scorecard* first ranks states from best to worst on each of the 32 performance indicators. We averaged rankings for those indicators within each of the five dimensions to determine a state’s dimension rank and then averaged the dimension rankings to arrive at an overall ranking on health system performance. This approach gives each dimension equal weight and, within dimensions, weights indicators equally. We use average state rankings for the *State Scorecard* because we believe that this approach is easily understandable. This method follows that used by Stephen Jencks and colleagues when assessing quality of care for Medicare beneficiaries at the state level across multiple indicators.*

For the equity dimension, we ranked states based on the difference between the most vulnerable subgroup (i.e., low-income, uninsured, or racial/ethnic minority) and the U.S. national average on selected indicators. The gap indicates how the vulnerable subgroup fares compared with the U.S. average—an absolute standard.

* S. F. Jencks, T. Cuerdon, D. R. Burwen et al., “Quality of Medical Care Delivered to Medicare Beneficiaries: A Profile at State and National Levels,” *Journal of the American Medical Association*, Oct. 4, 2000 284(13):1670–76; and S. F. Jencks, E. D. Huff, and T. Cuerdon, “Change in the Quality of Care Delivered to Medicare Beneficiaries, 1998–1999 to 2000–2001,” *Journal of the American Medical Association*, Jan. 15, 2003 289(3):305–12.

List of 32 Indicators in State Scorecard on Health System Performance

Access	Year	All States Median	Range of State Performance (Bottom – Top)	Top State
1. Adults under age 65 insured	2004–2005	81.5	69.6 – 89.0	MN
2. Children insured	2004–2005	91.1	79.8 – 94.9	VT
3. Adults visited a doctor in past two years	2000	83.4	73.9 – 91.5	DC
4. Adults without a time when they needed to see a doctor but could not because of cost	2004	87.2	80.1 – 96.6	HI
Quality				
5. Adults age 50 and older received recommended screening and preventive care	2004	39.7	32.6 – 50.1	MN
6. Adult diabetics received recommended preventive care	2004	42.4	28.7 – 65.4	HI
7. Children ages 19–35 months received all recommended doses of five key vaccines	2005	81.6	66.7 – 93.5	MA
8. Children with both medical and dental preventive care visits	2003	59.2	45.7 – 74.9	MA
9. Children with emotional, behavioral, or developmental problems received mental health care	2003	61.9	43.4 – 77.2	WY
10. Hospitalized patients received recommended care for acute myocardial infarction, congestive heart failure, and pneumonia	2004	83.4	79.0 – 88.4	RI
11. Surgical patients received appropriate timing of antibiotics to prevent infections	2004–2005	69.5	50.0 – 90.0	CT
12. Adults with a usual source of care	2004	81.1	66.3 – 89.4	DE
13. Children with a medical home	2003	47.6	33.8 – 61.0	NH
14. Heart failure patients given written instructions at discharge	2004–2005	49	14 – 67	NJ
15. Medicare patients whose health care provider always listens, explains, shows respect, and spends enough time with them	2003	68.7	63.1 – 74.9	VT
16. Medicare patients giving a best rating for health care received	2003	70.2	61.2 – 74.4	MT
17. High-risk nursing home residents with pressure sores	2004	13.2	19.3 – 7.6	ND
18. Nursing home residents who were physically restrained	2004	6.2	15.9 – 1.9	NE
Potentially Avoidable Use of Hospitals & Costs of Care				
19. Hospital admissions for pediatric asthma per 100,000 children	2002	176.7	314.2 – 54.9	VT
20. Asthmatics with an emergency room or urgent care visit	2001–2004	15.5	29.4 – 9.1	IA
21. Medicare hospital admissions for ambulatory care sensitive conditions per 100,000 beneficiaries	2003	7,278	11,537 – 4,069	HI
22. Medicare 30-day hospital readmission rates	2003	17.6	23.8 – 13.2	ID
23. Long-stay nursing home residents with a hospital admission	2000	16.1	24.9 – 8.3	UT
24. Nursing home residents with a hospital readmission within three months	2000	11.7	17.5 – 6.7	OR
25. Home health patients with a hospital admission	2004	26.9	46.4 – 18.3	UT
26. Total single premium per enrolled employee at private-sector establishments that offer health insurance	2004	\$3,706	\$4,379 – 3,034	UT
27. Total Medicare (Parts A & B) reimbursements per enrollee	2003	\$6,070	\$8,076 – 4,530	HI
Healthy Lives				
28. Mortality amenable to health care, deaths per 100,000 population	2002	96.9	160.0 – 70.2	MN
29. Infant mortality, deaths per 1,000 live births	2002	7.1	11.0 – 4.3	ME
30. Breast cancer deaths per 100,000 female population	2002	25.3	34.1 – 16.2	HI
31. Colorectal cancer deaths per 100,000 population	2002	20.0	24.6 – 15.3	UT
32. Adults under age 65 limited in any activities because of physical, mental, or emotional problems	2004	15.3	22.8 – 10.8	DC

Note: All values are expressed as percentages unless labeled otherwise. See Appendices B1 and B2 for data source and definition of each indicator.

SOURCE: Commonwealth Fund State Scorecard on Health System Performance, 2007

Appendix B.1. State Scorecard Indicator Descriptions and Data Sources

Complete references for data sources are provided in Appendix B.2.

Indicator	Description	Indicator	Description
1	Adults under age 65 insured: Employee Benefits Research Institute (EBRI) analysis of 2005 and 2006 U.S. Census Bureau Current Population Survey (CPS) March Supplement (U.S. Census Bureau, 2005, 2006).	8	Children with both medical and dental preventive care visits: Percent of children ages 0–17 with one or more medical and dental preventive care visits during the past 12 months. Child and Adolescent Health Measurement Initiative (CAHMI) analysis of the 2003 National Survey of Children's Health (CAHMI 2005).
2	Children insured: EBRI analysis of 2005 and 2006 U.S. Census Bureau CPS March Supplement (U.S. Census Bureau, 2005, 2006).	9	Children with emotional, behavioral, or developmental problems received mental health care: Percent of children ages 1–17 with current emotional, developmental, or behavioral problems requiring treatment or counseling who received some type of mental health care during the past 12 months. CAHMI analysis of 2003 National Survey of Children's Health (CAHMI 2005).
3	Adults visited a doctor in past two years: Rutgers Center for State Health Policy (CSHP) analysis of 2000 Behavioral Risk Factor Surveillance System (BRFSS) (NCCDPHP, BRFSS 2000).	10	Hospitalized patients received recommended care for acute myocardial infarction, congestive heart failure, and pneumonia: Proportion of cases where a hospital provided the recommended process of care for patients with acute myocardial infarction (AMI), congestive heart failure (CHF), and pneumonia for 10 indicators. The composite includes 5 clinical services for AMI (aspirin within 24 hours before or after arrival at the hospital and at discharge; beta-blocker within 24 hours after arrival and at discharge; and angiotensin-converting enzyme (ACE) inhibitor for left ventricular systolic dysfunction), 2 for CHF (assessment of left ventricular function and the use of an ACE inhibitor for left ventricular dysfunction), and 3 for pneumonia (initial antibiotic therapy received within four hours of hospital arrival, pneumococcal vaccination, and assessment of oxygenation). Analysis of 2004 CMS Hospital Compare data conducted by A. Jha and A. Epstein at the Harvard School of Public Health (DHHS n.d.).
4	Adults with a time in past year when they needed to see a doctor but could not because of cost: Rutgers CSHP analysis of 2002 and 2004 BRFSS (NCCDPHP, BRFSS 2002, 2004). 2002 data was imputed for one state.	11	Surgical patients received appropriate timing of antibiotics to prevent infections: Proportion of cases where a hospital provided prophylactic antibiotics within 1 hour prior to surgery and discontinued within 24 hours after surgery. Data from 2005 CMS Hospital Compare (DHHS n.d.), reported in AHRQ 2006 National Healthcare Quality Report (AHRQ 2006).
5	Adult age 50 and older received recommended preventive care: Percent of adults age 50 and older who have received: sigmoidoscopy or colonoscopy in the last ten years or a fecal occult blood test in the last two years; a mammogram in the last two years (women only); a pap smear in the last three years (women only); and a flu shot in the past year and a pneumonia vaccine ever (age 65 and older only). Rutgers CSHP analysis of 2002 and 2004 BRFSS (NCCDPHP, BRFSS 2002, 2004). 2002 data were imputed for one state.	12	Adults with a usual source of care: Percent of adults age 18 and older who have one (or more) person they think of as their personal doctor or health care provider. Rutgers CSHP analysis of 2002 and 2004 BRFSS (NCCDPHP, BRFSS 2002, 2004). 2002 data were imputed for one state.
6	Adult diabetics received recommended preventive care: Percent of adults age 18 and older who were told by a doctor that they had diabetes and have received: hemoglobin A1c test, dilated eye exam, and foot exam in the past year. Rutgers CSHP analysis of 2002 and 2004 BRFSS (NCCDPHP, BRFSS 2002, 2004). 2002 data were imputed for six states.	13	Children with a medical home: Percent of children ages 0–17 who have at least one preventive medical care visit in the past year; are able to access needed specialist care and services; and have a personal doctor/nurse who usually/always spends enough time and communicates clearly, provides telephone advice and urgent care when needed, and follows up after specialist care. CAHMI analysis of 2003 National Survey of Children's Health (CAHMI 2005).
7	Children ages 19–35 months received all recommended doses of five key vaccines: Percent of children ages 19 to 35 months who have received at least 4 doses of diphtheria-tetanus-acellular pertussis (DTaP), at least 3 doses of polio, at least 1 dose of measles-mumps-rubella (MMR), at least 3 doses of Haemophilus influenzae B (Hib), and at least 3 doses of hepatitis B antigens. Data from the 2005 National Immunization Survey (NCHS, NIS 2005).		

Appendix B.1. State Scorecard Indicator Descriptions and Data Sources (continued)

Complete references for data sources are provided in Appendix B.2.

Indicator	Description	Indicator	Description
14	Heart failure patients given written instructions at discharge: Percent of heart failure patients with documentation that they or their caregivers were given written instructions or other educational materials at discharge. Data retrieved from CMS Hospital Compare database on January 25, 2006 (DHHS n.d.).	21	Medicare hospital admissions for ambulatory sensitive conditions per 100,000 beneficiaries: Hospital admissions of fee-for-service Medicare beneficiaries age 65 and older for one of 11 ambulatory care sensitive conditions (AHRQ Indicators): short-term diabetes complications, long-term diabetes complications, lower extremity amputation among patients with diabetes, asthma, chronic obstructive pulmonary disease, hypertension, congestive heart failure, angina (without a procedure), dehydration, bacterial pneumonia, and urinary tract infection. Analysis of 2003 Medicare Standard Analytical Files (SAF) 5% Inpatient Data conducted by G. Anderson and R. Herbert at Johns Hopkins Bloomberg School of Public Health (CMS, SAF 2003).
15	Medicare fee-for-service patients whose health provider always listens, explains, shows respect, and spends enough time with them: Data from 2003 National Consumer Assessment Healthcare Providers and Systems (CAHPS) Benchmarking Database (AHRQ, CAHPS n.d.), reported in AHRQ 2005 National Healthcare Quality Report (AHRQ 2005).	22	Medicare 30-day hospital readmission rates: Fee-for-service Medicare beneficiaries age 65 and older with initial admissions due to one of 31 select conditions who are readmitted within 30 days following discharge for the initial admission. Analysis of 2003 Medicare SAF 5% Inpatient Data conducted by G. Anderson and R. Herbert at Johns Hopkins (CMS, SAF 2003).
16	Medicare fee-for-service patients giving a best rating for health care received: Percent of Medicare fee-for-service patients who reported a doctor's visit in the last 12 months and gave a best rating for health care received. Data from 2003 National CAHPS Benchmarking Database (AHRQ, CAHPS n.d.), reported in AHRQ 2005 National Healthcare Quality Report (AHRQ 2005).	23	Long-stay nursing home residents with a hospital admission: Analysis of 2000 Medicare enrollment data and MedPAR file conducted by V. Mor at Brown University, under a grant funded by the National Institute of Aging (#AG20557, State Policies and Hospitalizations from Nursing Homes).
17	High-risk nursing home residents with pressure sores: Data from 2004 CMS Minimum Data Set (CMS, MDS n.d.), reported in AHRQ 2005 National Healthcare Quality Report (AHRQ 2005).	24	Nursing home residents with a hospital readmission within three months: Percent of long-stay residents hospitalized within three months of being discharged from a hospital to a nursing home. Analysis of 2000 Medicare enrollment data and MedPAR file conducted by V. Mor at Brown University, under a grant funded by the National Institute of Aging (#AG20557).
18	Long-stay nursing home residents who were physically restrained: Data from 2004 CMS Minimum Data Set (CMS, MDS n.d.), reported in AHRQ 2005 National Healthcare Quality Report (AHRQ 2005).	25	Home health patients with a hospital admission: Percent of acute care hospitalization for home health episodes. Data from 2004 Outcome and Assessment Information Set (CMS, OASIS n.d.), reported in AHRQ 2005 National Healthcare Quality Report (AHRQ 2005).
19	Hospital admissions for pediatric asthma per 100,000 population: Data from 2002 Healthcare Cost and Utilization Project State Inpatient Databases (AHRQ, HCUP-SID 2002), reported in AHRQ 2005 National Healthcare Quality Report (AHRQ 2005).	26	Total single premium per enrolled employee at private-sector establishments that offer health insurance: Data from 2004 Medical Expenditure Panel Survey – Insurance Component (AHRQ, MEPS-IC 2004).
20	Asthmatics with an emergency room or urgent care visit: Percent of adults age 18 and older who were told by a doctor that they had asthma and had an emergency room or urgent care visit in the past 12 months. Rutgers CSHP analysis of 2001, 2002, 2003 and 2004 BRFSS (NCCDPHP, BRFSS 2001, 2002, 2003, 2004).		

Appendix B.1. State Scorecard Indicator Descriptions and Data Sources (continued)

Complete references for data sources are provided in Appendix B.2.

Indicator	Description	Indicator	Description
27	Total Medicare reimbursements per enrollee: 2003 data from Dartmouth Atlas of Health Care (Dartmouth Atlas Project 2003). Total Medicare fee-for-service reimbursements include payments for both Part A and Part B (exclude capitated payments). Reimbursement rates were indirectly adjusted for sex, race, and age, and were further adjusted for illness, and regional differences in price.	29	Infant mortality, deaths per 1,000 live births: Data from 2002 National Vital Statistics System (NVSS) (NCHS, NVSS n.d.), reported in AHRQ 2005 National Healthcare Quality Report (AHRQ 2005).
28	Mortality amenable to health care: Number of deaths before age 75 per 100,000 population that resulted from causes considered at least partially treatable or preventable with timely and appropriate medical care (see list), as described in Nolte and McKee (Nolte and McKee, BMJ 2003). Analysis conducted by K. Hempstead at Rutgers CSHP using 2002 mortality data from CDC Multiple Cause-of-Death file and U.S. Census Bureau population data (NCHS, MCD n.d.).	30	Breast cancer deaths per 100,000 female population: Age-adjusted to US 2000 standard population. Data from 2002 NVSS (NCHS, NVSS n.d.), reported in AHRQ 2005 National Healthcare Quality Report (AHRQ 2005).
	Cause of deaths	31	Colorectal cancer deaths per 100,000 population: Age-adjusted to US 2000 standard population. Data from 2002 NVSS (NCHS, NVSS n.d.), reported in AHRQ 2005 National Healthcare Quality Report (AHRQ 2005).
	Age	32	Adults under age 65 limited in any activities because of physical, mental, or emotional problems: Rutgers CSHP analysis of 2004 BRFSS (NCCDPHP, BRFSS 2004).
	Intestinal infections		0-14
	Tuberculosis		0-74
	Other infections (diphtheria, Tetanus, septicaemia, poliomyelitis)		0-74
	Whooping cough		0-14
	Measles		1-14
	Malignant neoplasm of colon and rectum		0-74
	Malignant neoplasm of skin		0-74
	Malignant neoplasm of breast		0-74
	Malignant neoplasm of cervix uteri		0-74
	Malignant neoplasm of cervix uteri and body of uterus		0-44
	Malignant neoplasm of testis		0-74
	Hodgkin's disease		0-74
	Leukaemia		0-44
	Diseases of the thyroid		0-74
	Diabetes mellitus		0-49
	Epilepsy		0-74
	Chronic rheumatic heart disease		0-74
	Hypertensive disease		0-74
	Cerebrovascular disease		0-74
	All respiratory diseases (excluding pneumonia and influenza)		1-14
	Influenza		0-74
	Pneumonia		0-74
	Peptic ulcer		0-74
	Appendicitis		0-74
	Abdominal hernia		0-74
	Cholelithiasis and cholecystitis		0-74
	Nephritis and nephrosis		0-74
	Benign prostatic hyperplasia		0-74
	Maternal death		All
	Congenital cardiovascular anomalies		0-74
	Perinatal deaths, all causes, excluding stillbirths		All
	Misadventures to patients during surgical and medical care		All
	Ischaemic heart disease: 50% of mortality rates included		0-74

Appendix B.2. Complete References for Data Sources

AHRQ (Agency for Healthcare Research and Quality). (2006). *National Healthcare Quality Report, 2006*. AHRQ Pub. No. No. 07-0013. Rockville, MD: U.S. Department of Health and Human Services.

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AHRQ, CAHPS (Agency for Healthcare Research and Quality, *Consumer Assessment of Healthcare Providers and Systems*). (n.d.). Rockville, MD: Center for Quality Improvement and Patient Safety, U.S. Department of Health and Human Services.

AHRQ, HCUP-SID (Agency for Healthcare Research and Quality, *Healthcare Cost and Utilization Project-State Inpatient Databases*). (2001, 2002). Rockville, MD: Center for Delivery, Organization, and Markets, U.S. Department of Health and Human Services.

AHRQ, MEPS-IC (Agency for Healthcare Research and Quality, *Medical Expenditure Panel Survey-Insurance Component*). (2004). Washington, D.C.: U.S. Department of Health and Human Services. http://www.meps.ahrq.gov/Data_Pub/IC_TOC.htm.

CAHMI (Child and Adolescent Health Measurement Initiative). (2005). *National Survey of Children's Health*. Portland, OR: Data Resource Center on Child and Adolescent Health, Oregon Health and Science University. www.nschdata.org.

CMS, MDS (Centers for Medicare and Medicaid Services, *Minimum Data Set*). (n.d.). Baltimore, MD: U.S. Department of Health and Human Services.

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NCHS, MCD (National Center for Health Statistics, *Multiple Cause-of-Death Data Files*). (n.d.). Hyattsville, MD: Centers for Disease Control and Prevention.

NCHS, NIS (National Center for Health Statistics, *National Immunization Survey*). (2005, n.d.). Hyattsville, MD: Centers for Disease Control and Prevention.

NCHS, NVSS (National Center for Health Statistics, *National Vital Statistics System*). (n.d.). Hyattsville, MD: Centers for Disease Control and Prevention.

Nolte and McKee. (2003). "Measuring the Health of Nations: Analysis of Mortality Amenable to Health Care." London, UK: *British Medical Journal* Volume 327, November 15, 2003.

U.S. Census Bureau, CPS (*Current Population Survey*) March Supplement. (2005, 2006). Washington, D.C.: U.S. Department of Commerce.