EMBARGOED for release until 12:01 a.m. Thursday, July 17, 2008

Why Not the Best?

Results from the National Scorecard on U.S. Health System Performance, 2008

THE COMMONWEALTH FUND COMMISSION ON A HIGH PERFORMANCE HEALTH SYSTEM

JULY 2008

THE COMMONWEALTH FUND

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The Commonwealth Fund, among the first private foundations started by a woman philanthropist—Anna M. Harkness—was established in 1918 with the broad charge to enhance the common good.

The mission of The Commonwealth Fund is to promote a high performing health care system that achieves better access, improved quality, and greater efficiency, particularly for society's most vulnerable, including low-income people, the uninsured, minority Americans, young children, and elderly adults.

The Fund carries out this mandate by supporting independent research on health care issues and making grants to improve health care practice and policy. An international program in health policy is designed to stimulate innovative policies and practices in the United States and other industrialized countries.

Why Not the Best?

RESULTS FROM THE NATIONAL SCORECARD ON U.S. HEALTH SYSTEM PERFORMANCE, 2008

THE COMMONWEALTH FUND COMMISSION ON
A HIGH PERFORMANCE HEALTH SYSTEM

JULY 2008

ABSTRACT: Prepared for the Commonwealth Fund Commission on a High Performance Health System, the *National Scorecard on U.S. Health System Performance, 2008*, updates the 2006 Scorecard, the first comprehensive means of measuring and monitoring health care outcomes, quality, access, efficiency, and equity in the United States. The 2008 Scorecard, which presents trends for each dimension of health system performance and for individual indicators, confirms that the U.S. health system continues to fall far short of what is attainable, especially given the resources invested. Across 37 core indicators of performance, the U.S. achieves an overall score of 65 out of a possible 100 when comparing national averages with U.S. and international performance benchmarks. Overall, performance did not improve from 2006 to 2008. Access to health care significantly declined, while health system efficiency remained low. Quality metrics that have been the focus of national campaigns or public reporting efforts did show gains.

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Preface

As Chairman and Executive Director of the Commonwealth Fund Commission on a High Performance Health System, we are pleased to introduce the findings from the Commission's *National Scorecard on U.S. Health System Performance, 2008*. Now in its second edition, the 2008 report presents current information and trends on the nation's progress toward achieving a system of care that affords better access, higher quality, and greater efficiency for everyone.

In September 2006, the Commission issued the first National Scorecard as a means of setting realistic targets and monitoring change over time across a broad array of indicators of health system performance spanning healthy lives, quality, access, efficiency, and equity. The first assessment revealed substantial room for improvement across all dimensions. Despite many pockets of excellence, overall the U.S. performs far below what is achievable.

This 2008 update of the National Scorecard shows that the nation continues to exhibit suboptimal performance relative to benchmarks. Despite high and rising health care expenditures, the U.S. is actually losing ground in providing access to care. Health care quality remains highly dependent on where you live and whom you see for care, which is inconsistent with the idea that all Americans receive the same high-quality care. At the same time, we can begin to see what is possible when there is appropriate leadership and concerted efforts to set standards of performance and ensure that improvement occurs.

Although the task of moving to a system that is truly high performing is enormous, the stakes are even higher if we fail. The Commission's National Scorecard offers targets for change. The Scorecard underscores the need for new national policies that pursue coverage and improvements in quality and efficiency simultaneously. It is essential to start as soon as possible to realize the potential of accumulating substantial gains over time. The December 2007 report, *Bending the Curve: Options for Achieving Savings and Improving Value in U.S. Health Spending*, indicates it would be possible to save $1.5 trillion in national health expenditures over the next decade and improve the value of health care in the U.S., if aggressive efforts start now.

With the upcoming 2008 presidential election, there is a window of opportunity to transform our health system to one that gives everyone the chance to lead longer, healthier, and more productive lives. In its report, *A High Performance Health System for the United States: An Ambitious Agenda for the Next President,* the Commission recommended five strategies for health reform that must be pursued together to move the nation in the right direction. We hope to see serious discourse and bold action—enriched by these findings from the National Scorecard—begin in earnest next year.

James J. Mongan, M.D.
Chairman

Stephen C. Schoenbaum, M.D.
Executive Director

The Commonwealth Fund Commission on a High Performance Health System

Acknowledgments

Special thanks go to Cathy Schoen, M.S., senior vice president of The Commonwealth Fund, for working with the Commission on a High Performance Health System to conceptualize and oversee the development and updating of the Scorecard, and to Sabrina K. H. How, M.P.A., senior research associate for The Commonwealth Fund, and Douglas McCarthy, M.B.A., senior research adviser for The Commonwealth Fund, for research, writing, and preparation of the Scorecard and related materials.

Five members of the Commonwealth Fund Commission on a High Performance Health System worked along with senior Fund staff to review and select indicators and design the initial Scorecard. These include: Maureen Bisognano, executive vice president and COO, Institute for Healthcare Improvement; Michael Chernew, Ph.D., professor, Harvard Medical School; George Halvorson, chairman and CEO, Kaiser Foundation Health Plan, Inc.; Sheila Leatherman, research professor, University of North Carolina; and Alan Weil, J.D., M.P.P., executive director, National Academy for State Health Policy.

The Commission wishes to thank the researchers who helped develop indicators and conducted data analyses to update the Scorecard and accompanying chartpack. These include: Gerard Anderson, Ph.D., and Robert Herbert, Johns Hopkins Bloomberg School of Public Health; Peter Cunningham, Ph.D., Center for Studying Health System Change; Elliott Fisher, M.D., M.P.H., Jason Sutherland, Ph.D., and David Radley, M.P.H., Dartmouth Medical School; Leslie Grant, Ph.D., University of Minnesota School of Public Health; Sir Brian Jarman, M.D., Imperial College, London, U.K.; Ashish Jha, M.D., M.P.H., and Arnold Epstein, M.D., Harvard School of Public Health; Jeffrey Linder, M.D., M.P.H., Brigham and Women's Hospital; J. Michael McWilliams, M.D., Harvard Medical School; Vincent Mor, Ph.D., Brown University; Deirdre Mylod, Ph.D., and Suzanne Coshow, Ph.D., Press Ganey Associates, Inc.; Ellen Nolte, Ph.D., and C. Martin McKee, M.D., London School of Hygiene and Tropical Medicine; Michael Pineau and the patient safety team at Qualidigm; and Chunliu Zhan, M.D., Ph.D., Agency for Healthcare Research and Quality (AHRQ). Bisundev Mahato, Columbia University Mailman School of Public Health, and Dina Belloff, M.A., Rutgers Center for State Health Policy, provided programming and analytical support.

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Additionally, we thank the following Commonwealth Fund staff: Karen Davis, Ph.D., and Steve Schoenbaum, M.D., for reviewing drafts; Martha Hostetter, Chris Hollander, and Paul Frame for editing; and Jim Walden of Walden Creative for graphic design.

List of Exhibits

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PHOTO: RANDY HADAWAY

Executive Summary

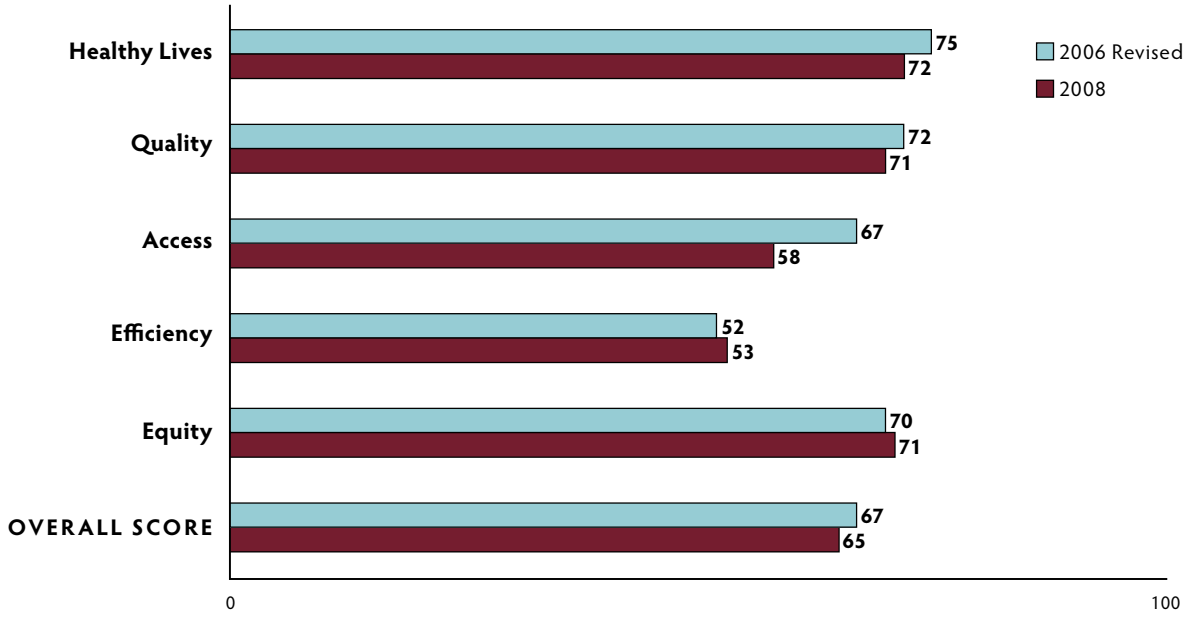
Every family wants the best care for an ill or injured family member. Most are grateful for the care and attention received. Yet, evidence in the *National Scorecard on U.S. Health System Performance, 2008,* shows that care typically falls far short of what is achievable. Quality of care is highly variable, and opportunities are routinely missed to prevent disease, disability, hospitalization, and mortality. Across 37 indicators of performance, the U.S. achieves an overall score of 65 out of a possible 100 when comparing national averages with benchmarks of best performance achieved internationally and within the United States.

Even more troubling, the U.S. health system is on the wrong track. Overall, performance has not improved since the first National Scorecard was issued in 2006. Of greatest concern, access to health care has significantly declined. As of 2007, more than 75 million adults—42 percent of all adults ages 19 to 64—were either uninsured during the year or underinsured, up from 35 percent in 2003. At the same time, the U.S. failed to keep pace with gains in health outcomes achieved by the leading countries. The U.S. now ranks last out of 19 countries on a measure of mortality amenable to medical care, falling from 15th as other countries raised the bar on performance. Up to 101,000 fewer people would die prematurely if the U.S. could achieve leading, benchmark country rates.

The exception to this overall trend occurred for quality metrics that have been the focus of national campaigns or public reporting. For example, a key patient safety measure—hospital standardized mortality ratios (HSMRs)—improved by 19 percent from 2000–2002 to 2004–2006. This sustained improvement followed widespread availability of risk-adjusted measures coupled with several high-profile local and national programs to improve hospital safety and reduce mortality. Hospitals are showing measurable improvement on basic treatment guidelines for which data are collected and reported nationally on federal Web sites. Rates of control of two common chronic conditions, diabetes and high blood

EXHIBIT 1

Scores: Dimensions of a High Performance Health System



Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2008

pressure, have also improved significantly. These measures are publicly reported by health plans, and physician groups are increasingly rewarded for results in improving treatment of these conditions.

The U.S. spends twice per capita what other major industrialized countries spend on health care, and costs continue to rise faster than income. We are headed toward $1 of every $5 of national income going toward health care. We should expect a better return on this investment.

Performance on measures of health system efficiency remains especially low, with the U.S. scoring 53 out of 100 on measures gauging inappropriate, wasteful, or fragmented care; avoidable hospitalizations; variation in quality and costs; administrative costs; and use of information technology. Lowering insurance administrative costs alone could save up to $100 billion a year at the lowest country rates.

National leadership is urgently needed to yield greater value for the resources devoted to health care.

THE NATIONAL SCORECARD

The National Scorecard includes 37 indicators in five dimensions of health system performance: healthy lives, quality, access, efficiency, and equity. U.S. average performance is compared with benchmarks drawn from the top 10 percent of U.S. states, regions, health plans, hospitals, or other providers or top-performing countries, with a maximum possible score of 100. If average U.S. performance came close to the top rates achieved at home or internationally, then average scores would approach 100.

In 2008, the U.S. as a whole scored only 65, compared with a score of 67 in 2006—well below the achievable benchmarks (Exhibit 1).* Average scores on each of the five dimensions ranged from a low of 53 for efficiency to 72 for healthy lives.

On those indicators for which trend data exist, performance compared with benchmarks more often worsened than improved, primarily because of declines in national rates between the 2006 and 2008 Scorecards. Overall, national scores declined for 41 percent of indicators, while one-third (35%) improved, and the rest exhibited no change (or were not updated). Exhibit 2 lists indicators and summarizes scores and benchmark rates.

As observed in the first Scorecard, the bottom group of hospitals, health plans, or geographic regions is often well behind even average rates, with as much as a fivefold spread between top and bottom rates. On key indicators, a 50 percent improvement or more would be required to achieve benchmark levels.

SCORECARD HIGHLIGHTS AND KEY FINDINGS

The U.S. continues to perform far below what is achievable, with wide gaps between average and benchmark performance across dimensions. Despite some encouraging pockets of improvement, the country as a whole has failed to keep pace with levels of performance attained by leading nations, delivery systems, states, and regions.

Following are major highlights from the Scorecard by performance dimension:

HEALTHY LIVES: AVERAGE SCORE 72

- *Preventable mortality*: The U.S. fell to last place among 19 industrialized nations on mortality amenable to health care—deaths that might have been prevented with timely and effective care. Although the U.S. rate improved by 4 percent between 1997–1998 and 2002–2003 (from 115 to 110 deaths per 100,000), rates improved by 16 percent on average in other nations, leaving the U.S. further behind.
- *Activity limitations*: More than one of every six working-age adults (18%) reported being unable to work or carry out everyday activities because of health problems in 2006—up from 15 percent in 2004. This increase points to the need for better prevention and management of chronic diseases to enhance quality of life and capacity to work, especially among younger adults as they age.

QUALITY: AVERAGE SCORE 71

- *Effective care*: Control of diabetes and high blood pressure improved markedly from 1999–2000 to 2003–2004 for adults, according to physical exams conducted on a nationally representative sample. Among adults with diabetes, rates of at least fair control of blood sugar increased from 79 percent to

*The overall score for 2006 changed from 66 to 67 due to revisions in baseline data and substitution of top U.S. states for countries as the benchmark for infant mortality. See methodology box on p. 17 for further details.

National Scorecard on U.S. Health System Performance, 2008: Scores on 37 Key Performance Indicators

	Indicator	U.S. National Rate 2006 Scorecard	U.S. National Rate 2008 Scorecard	Benchmark	Benchmark Rate	2008 Score: Ratio of U.S. to Benchmark
	OVERALL SCORE					**65**
	HEALTHY LIVES					
1	Mortality amenable to health care, deaths per 100,000 population	115	110	Top 3 of 19 countries	69	63
2	Infant mortality, deaths per 1,000 live births	7.0	6.8	Top 10% states	4.7	69
3	Healthy life expectancy at age 60, Years	Various	*	Various	Various	87*
4	Adults under 65 limited in any activities because of physical, mental, or emotional problems, %	14.9	17.5	Top 10% states	11.5	66
5	Children missed 11 or more school days due to illness or injury, %	5.2	*	Top 10% states	3.8	73*
	QUALITY					
6	Adults received recommended screening and preventive care, %	49	50	Target	80	62
7	Children received recommended immunizations and preventive care	Various	Various	Various	Various	86
8	Needed mental health care and received treatment	Various	Various	Various	Various	76
9	Chronic disease under control	Various	Various	Various	Various	76
10	Hospitalized patients received recommended care for heart attack, heart failure, and pneumonia (composite), %	84	90	Top hospitals	100	90
11	Adults under 65 with accessible primary care provider, %	66	65	65+ yrs, High income	85	76
12	Children with a medical home, %	46	*	Top 10% states	60	77*
13	Care coordination at hospital discharge	Various	Various	Various	Various	74
14	Nursing homes: hospital admissions and readmissions	Various	Various	Various	Various	65
15	Home health: hospital admissions, %	28	28	Top 25% agencies	17	62
16	Patient reported medical, medication, or lab test error, %	34	32	Best of 7 countries	19	59
17	Unsafe drug use	Various	Various	Various	Various	55
18	Nursing home residents with pressure sores	Various	Various	Various	Various	66
19	Hospital-standardized mortality ratios, actual to expected deaths	101	82	Top 10% hospitals	74	90
20	Ability to see doctor same/next day when sick or need medical care %	47	46	Best of 6 countries	81	57
21	Very/somewhat easy to get care after hours without going to the emergency room, %	38	25	Best of 6 countries	72	35
22	Doctor-patient communication: always listened, explained, showed respect, spent enough time, %	54	57	90th %ile health plans	75	75
23	Adults with chronic conditions given self-management plan, %	58	*	Best of 6 countries	65	89*
24	Patient-centered hospital care	Various	Various	Various	Various	87
	ACCESS					
25	Adults under 65 insured all year, not underinsured, %	65	58	Target	100	58
26	Adults with no access problem due to costs, %	60	63	Best of 7 countries	95	66
27	Families spending <10% of income or <5% of income, if low income, on out-of-pocket medical costs and premiums, %	81	77	Target	100	77
28	Population under 65 living in states where premiums for employer-sponsored coverage are <15% of median household income, %	58	25	Target	100	25
29	Adults under 65 with no medical bill problems or medical debt, %	66	59	Target	100	59
	EFFICIENCY					
30	Potential overuse or waste	Various	Various	Various	Various	41
31	Went to emergency room for condition that could have been treated by regular doctor, %	26	21	Best of 7 countries	6	29
32	Hospital admissions for ambulatory care–sensitive conditions	Various	Various	Various	Various	56
33	Medicare hospital 30-day readmission rates, %	18	18	10th %ile regions	14	76
34	Medicare annual costs of care and mortality for heart attacks, hip fractures, or colon cancer (annual Medicare outlays; deaths per 100 beneficiaries)	$26,829 30	$28,011 30	10th %ile regions	$24,906 27	89
35	Medicare annual costs for chronic diseases: Diabetes, heart failure, COPD	Various	Various	Various	Various	71
36	Health insurance administration as percent of national health expenditures	7.4	7.5	Top 3 of 11 countries	2.3	31
37	Physicians using electronic medical records, %	17	28	Best of 7 countries	98	29

Various = indicators that comprise two or more related measures; scores average the individual ratios for each component. COPD = chronic obstructive pulmonary disease.
* Indicator not updated; baseline score same as 2006.
See Exhibit 21 on page 35 for Equity scores; see Appendices A and B for more details on data and sources.
Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2008

88 percent from 1999–2000 to 2003–2004. Among adults with hypertension, rates of control of high blood pressure increased from 31 percent to 41 percent over the same time period. Yet, a 30 to 60 percentage point difference remains between top- and bottom-performing health plans. Hospitals' adherence to treatment standards for heart attack, heart failure, and pneumonia also improved from 2004 to 2006, but with a persistent gap between leading and lagging hospital groups. Delivery rates for basic preventive care failed to improve: as of 2005, only half of adults received all recommended preventive care.

- *Coordinated care*: Heart failure patients were more likely to receive hospital discharge instructions in 2006 (68%) than in 2004 (50%), but rates varied widely between top and bottom hospital groups (from 94% to 36%). Hospitalizations increased among nursing home residents from 2000 to 2004, as did rehospitalizations for patients discharged to skilled nursing facilities—signaling a need to improve long-term care and transitions between health care providers.
- *Safe care*: One key indicator of patient safety—hospital standardized mortality ratios—improved significantly since the first Scorecard, with a 19 percent decline. Safety risks, however, remain high as one-third of adults with health problems reported mistakes in their care in 2007. Drug safety is of particular concern. Rates of visits to physicians or emergency departments for adverse drug effects increased by one-third between 2001 and 2004.
- *Patient-centered, timely care*: In 2007, as in 2005, less than half of U.S. adults with health problems were able to get a rapid appointment with a physician when they were sick. They also were the most likely among adults in seven countries surveyed to report difficulty obtaining health care after hours without going to the emergency department, and this rate increased from 61 percent to 73 percent since 2005. Within the U.S., there is wide variation among hospitals in terms of patient reports of how well staff responded to their needs.

ACCESS: AVERAGE SCORE 58

- *Insurance and access:* As of 2007, 75 million working-age adults (42%) were either uninsured or underinsured, a sharp increase from 61 million (35%) in 2003. More than one-third (37%) of all U.S. adults reported going without needed care because of costs in 2007, versus only 5 percent in the benchmark country.
- *Affordable care*: As insurance premiums rose faster than wages, the share of nonelderly adults living in a state where group health insurance premiums averaged less than 15 percent of household income dropped sharply, from 58 percent in 2003 to 25 percent in 2005. By 2007, two of five adults (41%) reported they had medical debt or problems with medical bills, up from 34 percent in 2005.

EFFICIENCY: AVERAGE SCORE 53

- *Inappropriate, wasteful, or fragmented care*: In 2007, as in 2005, U.S. patients were much more likely—three to four times the benchmark rate—than patients in other countries to report having had duplicate tests or that medical records or test results were not available at the time of their appointment.
- *Avoidable hospitalizations*: Average rates of hospital readmissions within 30 days remained high, at 18 percent in both 2003 and 2005. Rates in the highest regions were 50 percent higher than in the lowest regions. Rates of hospitalizations for preventable conditions decreased somewhat from 2002–2003 to 2004–2005, but continued to vary two- to fourfold across hospital regions and states.
- *Variation in quality and costs*: Among Medicare patients treated for heart attacks, hip fractures, or colon cancer, a high proportion of regions with the lowest mortality rates also had lower total costs, indicating that it is possible to save lives and lower costs through more effective, efficient systems. The total costs of caring for patients with chronic disease varied twofold across regions.
- *Administrative costs*: U.S. health insurance administrative costs as a share of total health spending are 30 percent to 70 percent higher than in countries with mixed private/public insurance systems and three times higher than in countries with the lowest rates.
- *Information systems*: U.S. primary care physicians' use of electronic medical records (EMRs) increased from 17 percent to 28 percent from 2001 to 2006. Still, the U.S. lags far behind leading countries, where EMRs are now used by nearly all physicians (98%) to improve care.

EQUITY: AVERAGE SCORE 71

- *Disparities*: Compared with their white, higher-income, or insured counterparts, minorities, low-income, or uninsured adults and children were generally *more likely* to wait when sick, to encounter delays and poorly coordinated care, and to have untreated dental caries, uncontrolled chronic disease, avoidable hospitalizations, and worse outcomes. They were also *less likely* to receive preventive care or have an accessible source of primary care.
- *Reducing gaps*: Among blacks and Hispanics, it would require a 19 percent to 25 percent decrease in the risk of poor health outcomes and inadequate or inefficient care to reach parity with whites. Gaps for uninsured and low-income populations are still wider: it would require a 34 percent to 39 percent improvement on indicators of health care access, quality, and efficiency to achieve equity with insured and higher-income populations.

SYSTEM CAPACITY TO INNOVATE AND IMPROVE: NOT SCORED

The capacity to innovate and improve is fundamental to a high-performing health care system. It includes:

- a care system that supports a skilled and motivated health care workforce, with an emphasis on primary care and population health;
- a culture of quality improvement and continuous learning that promotes and rewards recognition of opportunities to reduce errors and improve outcomes; and
- investment in public health initiatives, research, and information necessary to inform, guide, and drive health care decisions and improvement.

On all three aspects, the U.S. currently under-invests in the capacity of the health system to innovate and improve. U.S. payment systems undervalue primary care and fail to support providers' efforts to manage and coordinate care. Studies indicate that health care teams and well-organized work processes can achieve significant gains in quality and safety with more efficient use of resources. Yet, health professionals are rarely trained to work in teams, and larger organized delivery systems that employ multidisciplinary health professionals are not the norm. There is little investment in spreading best practices, and incentives are rarely designed to reward or support improved quality and greater efficiency. In an era of rapid medical advances, national investment in research regarding clinical and cost-effectiveness—what works well for which patients and when—has failed to keep pace to inform health care decision-making.

SUMMARY AND IMPLICATIONS

POTENTIAL FOR IMPROVEMENT

Overall, the *National Scorecard on U.S. Health System Performance, 2008,* finds that the U.S. is losing ground in providing access to care and has uneven health care quality. The Scorecard also finds broad evidence of inefficient and inequitable care. Average U.S. performance would have to improve by more than 50 percent across multiple indicators to reach benchmark levels of performance.

Closing performance gaps would bring real benefits in terms of health, patient experiences, and savings. For example:

- Up to 101,000 fewer people would die prematurely each year from causes amenable to health care if the U.S. achieved the lower mortality rates of leading countries.
- Thirty-seven million more adults would have an accessible primary care provider, and 70 million more adults would receive all recommended preventive care.
- The Medicare program could potentially save at least $12 billion a year by reducing readmissions or by reducing hospitalizations for preventable conditions.
- Reducing health insurance administrative costs to the average level of countries with mixed private/public insurance systems (Germany, the Netherlands, and Switzerland) would free up $51 billion, or more than half the cost of providing comprehensive coverage to all the uninsured in the U.S. Reaching benchmarks of the best countries would save an estimated $102 billion per year.

Studies further document the cost in lives and lost productivity from the nation's failure to provide secure health insurance to all. Based on areas within the U.S. that achieve superior outcomes at lower costs, it should be possible to close gaps in health care quality and access, and to reduce costs significantly.

Several implications for policy emerge from the Scorecard findings:

WHAT RECEIVES ATTENTION GETS IMPROVED

Notably, all of the quality indicators showing significant improvement have been targets of national and collaborative efforts to improve, informed by data with measurable benchmarks and indicators reached by consensus. Conversely, there was failure to improve in areas such as mental health care, primary care, hospital readmission rates, or adverse drug events for which focused efforts to assess and improve at the community or facility level are lacking. Further, the continued failure to adopt interoperable health information technology makes it difficult to generate the information necessary to document performance and monitor improvement efforts.

BETTER PRIMARY CARE AND CARE COORDINATION HOLD POTENTIAL FOR IMPROVED OUTCOMES AT LOWER COSTS

Hospital readmission rates and rates of potentially preventable hospitalizations for ambulatory care–sensitive conditions remain high and variable across the country, as do total costs for the chronically ill. Studies indicate that it is possible to prevent hospitalization or rehospitalizations with better primary care, discharge planning, and follow-up care—an integrated, systems approach to care.

Multiple indicators highlight the fact that the U.S. has a weak primary care foundation. Investing in primary care with enhanced capacity to provide patients with round-the-clock access, manage chronic conditions, and coordinate care will be key steps in moving to more organized care systems.[1]

However, current payment incentives for hospitals, physicians, and nursing homes do not support coordination of care or efficient use of expensive, specialized care.[2] Information also fails to flow with patients across sites of care due to lack of health information technology and information exchange systems. These inefficiencies require innovative payment policies as well as care delivery approaches to improve outcomes for patients and use resources more efficiently.

AIMING HIGHER

The 2008 National Scorecard documents the human and economic costs of failing to address the problems in our health system. Recent analysis suggests it could be possible to insure everyone and achieve significant savings with improved value over the next decade.[3] Health care expenditures are projected to double to $4 trillion, or 20 percent of national income, over the next decade, and millions more U.S. residents are on a path to becoming uninsured or underinsured, absent new policies. We need to change directions, starting with the recognition that access to care, health care quality, and efficiency are interrelated.

Aiming higher and moving on a more positive path will require strategies targeting the multiple sources of poor health system performance. These strategies include:

- universal and well-designed coverage that ensures affordable access and continuity of care, with low administrative costs;
- incentives aligned to promote higher quality and more efficient care;
- care that is designed and organized around the patient, not providers or insurers;
- widespread implementation of health information technology with information exchange;
- explicit national goals to meet and exceed benchmarks and monitor performance; and
- national policies that promote private–public collaboration and high performance.[4]

Rising costs put families, businesses, and public budgets under stress, pulling down living standards for middle- as well as low-income families. New national policies that take a coherent, whole-system, population view are essential for the nation's future health and economic security.

Introduction

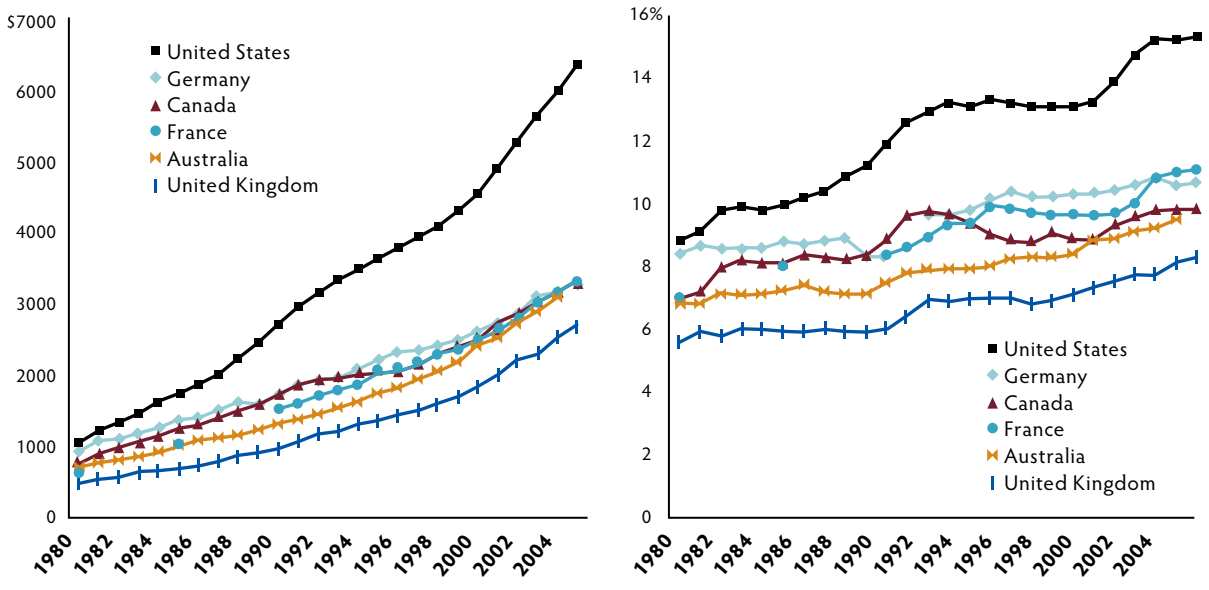
In the first decade of the 21st century, the nation's health care system faces challenges on multiple fronts. The number of uninsured has increased by 8.6 million since 2000, as employer-sponsored coverage continued to erode even during a period of economic expansion. There were 47 million uninsured Americans as of 2006.[5] Affordable insurance is of concern to families, employers, and public programs: as health care costs continue to rise far faster than incomes, financial protection and access to care for middle- as well as low-income families are increasingly at risk.[6]

U.S. health expenditures, already the highest in the world, are projected to double and reach 20 percent of the nation's gross domestic product (GDP) by 2017, with even higher shares of GDP going toward health care over the longer term.[7] The United States spends the most per person on health care—twice what other major industrialized countries spend—and has had rapid rates of cost growth over the past two decades (Exhibit 3).

Evidence continues to mount that the quality of care is uneven and often suboptimal.[8] Quality encompasses not only whether patients receive care that is safe and scientifically proven, but also whether physicians communicate well with patients and coordinate care effectively when patients transition from one place to another. Yet, providers' financial incentives typically encourage doing more rather than supporting high-quality, integrated care across settings, episodes, and conditions with more efficient use of resources. Too often, patients are left to cope with what is, in effect, a fragmented "non-system" of care. Reflecting broad public concerns with access, costs, and care experiences, the percentage of patients expressing dissatisfaction with the health care system doubled from 1998 to 2006.[9]

EXHIBIT 3

International Comparison of Spending on Health, 1980–2005



* PPP=Purchasing Power Parity.
Data: OECD Health Data 2007, Version 10/2007.
Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2008

Unlike virtually all other industrialized countries, the U.S. fails to ensure universal coverage of its population. This failing has serious consequences: poorer health from lack of timely access to care; health conditions that, left unchecked, become costlier to treat; premature death; and reduced economic output from a less productive, sicker workforce.[10] Other nations spend less on health care, achieve better health outcomes, and cover their entire populations. This indicates that the U.S. is not getting high value commensurate with its investment in the health care system.[11]

Developing policies to move the U.S. toward a higher-value health system over time, and evaluating the effects of particular health policies relative to goals, requires a means to monitor health system performance across all of its dimensions. To meet this need for a whole-system view, the Commonwealth Fund Commission on a High Performance Health System created a *National Scorecard on U.S. Health System Performance* in 2006.[12] Spanning healthy lives, quality, access, efficiency, and equity, the Scorecard found that U.S. health system performance fell far short of what should be attainable, based on benchmarks of achieved performance, and uncovered broad evidence of opportunities to improve.

The *National Scorecard on U.S. Health System Performance, 2008,* updates the analysis to assess current performance and changes over time, based on the most recent data available. By contrasting national performance with benchmarks, the Scorecard provides targets for action and a yardstick against which to assess new policies over time. In the sections that follow, we describe how the Scorecard works and present overall findings and results for five core dimensions of health system performance. We conclude with an analysis of cross-cutting themes and implications for national policy and improvement initiatives.

The Scorecard: Measuring and Monitoring Health System Performance

The *National Scorecard on U.S. Health System Performance* provides a unique, comprehensive approach to measuring and monitoring the performance of the nation's health care system. The Commonwealth Fund Commission on a High Performance Health System developed the Scorecard to serve three central goals:

- to provide benchmarks for assessing health system performance;
- to have a mechanism for monitoring change over time; and
- to be able to estimate the effects of proposed policies to improve performance.

The Scorecard includes key indicators of national health system performance organized into five core dimensions:

- *healthy lives*, which includes life expectancy, mortality, and prevalence of disability and limitations due to health;
- *quality*, a broad measure covering the extent to which the care delivered is effective and well-coordinated, safe, timely, and patient-centered;
- *access*, which is concerned with participation in the health care system and the affordability of insurance coverage and medical services;
- *efficiency*, which assesses overuse or inappropriate use of services, preventable hospitalizations and readmissions, regional variation in quality and cost, administrative complexity, and use of information systems; and
- *equity*, which looks at disparities among population groups in terms of health status, care, and coverage.

The 2008 Scorecard uses the same framework, methods, and set of 37 performance indicators included in the first Scorecard published in 2006. The analysis assesses current performance as well as changes over time.

For each indicator, the Scorecard compares national performance against benchmark levels achieved by top-performing groups within the U.S. or other countries. In a few instances, benchmarks reflect targets or policy goals. The report updates the benchmarks whenever top performance improved from baseline values observed in the 2006 report. Each score is a simple ratio of the current U.S. average performance to the benchmark representing best levels of achievement, with a maximum possible score of 100.

To examine trends, we compare the baseline and current national averages as well as the change in the range of performance. Time trends typically capture two years and up to five years for some indicators. Where indicators could not be updated, we retained baseline values to score. The tables in Appendix A present details for all indicators. (See box for further information on methodology.) An extensive *Scorecard Chartpack* is available online at www.commonwealthfund.org.

Future editions of the Scorecard will continue to monitor trends and add or improve indicators as new data become available.

SCORECARD METHODOLOGY

The *National Scorecard on U.S. Health System Performance, 2008,* includes a set of 37 core indicators that builds on metrics developed by public and private quality improvement efforts, as well as several unique indicators created for the Scorecard that are not currently tracked elsewhere.

The 2008 Scorecard uses the same set of indicators used in the 2006 Scorecard, with one exception reflecting a change in the data source: a general measure of mental health care was replaced by a more specific measure of treatment of a major depressive episode. Many of the indicators are composites that summarize performance across multiple measures. Of the underlying 61 data elements, 53 were updated. Almost all updates spanned at least two years; more than one-third assessed change over three to five years. For each indicator, we present national data for the baseline used in the 2006 Scorecard and most recent year.

Scoring consists of a simple ratio that compares national performance to the benchmark, with a maximum score of 100. For each indicator, we identified benchmarks based on rates achieved by the top 10 percent of U.S. states, regions, hospitals, health plans, or other providers or top countries. Where patient data were available only at the national level, we identified benchmarks based on the experiences of high-income, insured individuals. Four access benchmarks aim for logical policy goals, such as 100 percent of the population to be adequately insured. For one quality indicator—adults getting all recommended preventive care—we set a target rate of 80 percent, since rates even among high-income, insured populations were low.

We updated benchmarks whenever they improved. Thus, it is possible for scores to decline if benchmarks improve faster than the national average. For costs, we used the most recent data on the lowest-cost groups as benchmarks. For patient-reported experiences in hospitals, we used the newly available broad sample to benchmark, rather than the pilot set in the first Scorecard. For infant mortality, we switched the benchmark from countries to top U.S. states to ensure comparable indicator methods.

To score, we calculated ratios of average rates to the benchmark. Where higher rates would indicate a move in a positive direction, we divided the national average by the benchmark. Where lower rates would indicate a positive direction (e.g., mortality, medical errors), we divided the benchmark by the national average. Where updated data were not available, we retained baseline scores.

To summarize, we averaged ratios within dimension and averaged dimensions for an overall score. For equity, we compared the percentage of the group at risk (e.g., percent not receiving recommended care, percent uninsured) by insurance, income, and race/ethnicity on a subset of indicators. We also included a few specific indicators of health care equity to highlight areas of concern. The risk ratios compare rates for insured relative to uninsured; high income to low income; and whites to blacks and Hispanics.

We recalculated baseline scores when necessary due to data revisions. As a result, the overall baseline score changed from 66 to 67 for the 2006 Scorecard. See Appendices A and B for scoring tables and details regarding indicator data, years, and sources.

Findings from the 2008 National Scorecard

OVERALL SCORES AND TRENDS: 2008 SCORECARD COMPARED WITH 2006 SCORECARD

Overall, the *National Scorecard on U.S. Health System Performance, 2008,* finds that the U.S. health system continues to perform far below benchmarks of what is achievable, with wide gaps between average and benchmark performance persisting across dimensions. The health system as a whole scores only 65 in 2008—35 percent below the benchmarks of best performance. Average dimension scores ranged from a low of 53 for efficiency to 72 for healthy lives (Exhibit 1).

The overall score for U.S. health system performance failed to improve from the 2006 to the 2008 Scorecard. Access to care significantly declined due to continuing erosion in health insurance coverage and affordability. Across the 37 core indicators, performance scores more often worsened than improved, primarily because of declines in national rates. Among the 37 indicator scores, 41 percent of scores declined, about a third (35%) improved, and the rest exhibited no change (or were not updated). Looking at underlying national averages for all indicators, nearly half showed little or no change, and about as many declined as improved between the 2006 and 2008 Scorecard (see Appendix A Table 1).[13]

Performance remains uneven within U.S. borders—with up to fivefold variation (twofold variation on average) between the top- and bottom-tier states, health care facilities, or health plans (see Appendix A). Moreover, the range of performance within the U.S. more often widened than narrowed from the 2006 to 2008 Scorecard. Equity gaps also persisted between advantaged and disadvantaged groups. On key indicators, the bottom of the performance range would have to improve by 40 percent on average simply to reach current national rates of performance, which are often only mediocre.

Although there are encouraging pockets of improvement, the U.S. still has a long way to go to make its health system the best possible. The country as a whole is often failing to keep pace with levels of performance attained by leading nations, states, and delivery systems, and consistently ranks poorly in comparison with other countries on measures of healthy lives, care experiences, and efficiency.

The following sections summarize findings of the 2008 Scorecard, highlighting individual indicators and changes in performance since the 2006 Scorecard.

HEALTHY LIVES

OVERVIEW

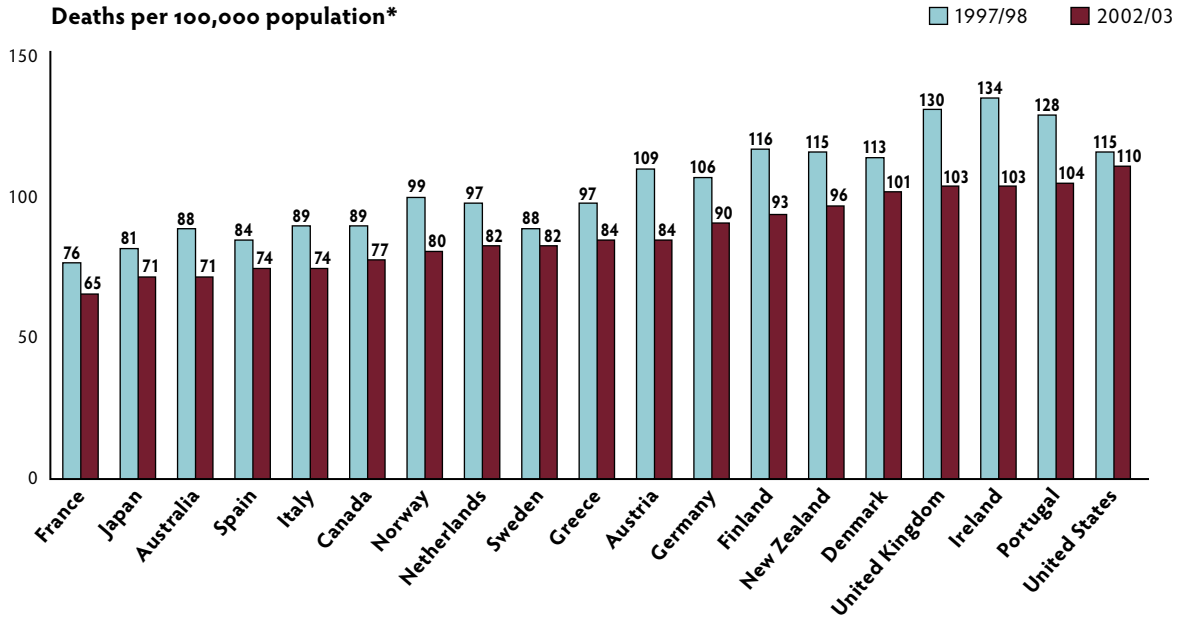
Compared with top-performing countries and states, the U.S. as a whole is falling short in promoting healthy, long, and productive lives for everyone. The Scorecard includes five indicators in this dimension, including potentially preventable deaths, infant mortality, disability, and healthy life expectancy. From 2006 to 2008, average performance declined from 75 to 72, due to poor performance on two core indicators. The score reflects the growing gaps in health outcomes between average and top performance, particularly as the U.S. lags behind gains achieved by leading countries. Appendix A Table 2 presents the national rate, range of performance, and scores for indicators in this dimension.

PREVENTABLE MORTALITY

The U.S. fell into last place among 19 industrialized countries on national rates of mortality considered "amenable to health care."[14] These are deaths before age 75 caused by at least partially preventable or treatable conditions, such as bacterial infections, screenable cancers, diabetes, heart disease, stroke, and complications of common surgical procedures. While the U.S. rate improved 4 percent between 1997–1998 and 2002–2003 (from 115 to 110 deaths per 100,000), rates improved by 16 percent on average in the other countries (Exhibit 4). In fact, countries that began with considerably higher premature mortality rates than the U.S., including the United Kingdom, Ireland, and Portugal, now outperform the U.S. in preventing or delaying such deaths. At the same time, the top three countries (France, Japan, and Australia) have raised the bar of performance. As a result, U.S. death rates are now 59 percent higher than in countries with the lowest rates. Improving U.S. mortality from amenable

HEALTHY LIVES EXHIBIT 4

Mortality Amenable to Health Care



* Countries' age-standardized death rates before age 75; includes ischemic heart disease, diabetes, stroke, and bacterial infections. See Appendix B for list of all conditions considered amenable to health care in the analysis.

Data: E. Nolte and C. M. McKee, London School of Hygiene and Tropical Medicine analysis of World Health Organization (WHO) mortality files (Nolte and McKee 2008).

Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2008

causes to levels achieved by these leading countries would translate into 101,000 fewer deaths per year.

The rate of infants born in the U.S. who die before their first birthday improved slightly from 2002 to 2004 (from 7.0 to 6.8 deaths per 1,000 live births), thus returning to earlier levels. Yet, the U.S. average remains well above rates in the lowest states and countries. Rates of infant mortality in the worst-performing states are more than twice those in benchmark states. Of concern, the gap between the leading and lagging states grew wider in 2004, as states with the highest rates—primarily poor and located in the South—experienced an increase in infant mortality.[15] Moreover, the U.S. ranked last among eight industrialized countries that report infant mortality using the same methodology, with a national rate more than double the leading countries (2.8 to 3.1 deaths per 1,000 live births in Japan, Iceland, and Sweden in 2004).[16]

IMPACTS OF POOR HEALTH

Healthy life expectancy. Reflecting these mortality trends, life expectancy in the U.S. has not kept pace with other advanced countries, even as it reached a new high of almost 78 years in 2006.[17] The U.S. ranks poorly in terms of healthy life expectancy at age 60, as U.S. adults spend more of their lives in poor health than adults in other countries. Perhaps this is not surprising, given the greater burden of chronic health problems among older adults in the U.S., compared with adults abroad, and the adverse health consequences for older adults after long periods without insurance.[18]

Activity limitations. More than one of every six working-age adults (18%) reported being unable to work or carry out everyday activities because of health problems in 2006—up from 15 percent reporting limitations in 2004. Health-related limitations increased in both the top and bottom five states, but the deterioration was greatest in the bottom states. Previously reported rates at which children miss large numbers of school days because of illnesses or injuries vary more than twofold across states. These findings indicate the need for better prevention and treatment of chronic diseases to enhance quality of life and capacity to work, particularly among younger cohorts as they age.

Indeed, there is much room for improvement on the nation's ability to promote health and well-being and much to gain from cultivating a healthy and productive workforce. The U.S. is unlikely to move forward on this central goal unless the health system's shortcomings in terms of health care access, quality, and efficiency are addressed simultaneously.

QUALITY OF CARE

OVERVIEW

The nation is not making consistent progress in improving the quality of health care based on Scorecard indicators that track the extent to which patients receive care that is effective, safe, well-coordinated, timely, and patient-centered. Although national average performance improved for several indicators of effective care, in particular control of chronic disease and care in the hospital, there was no improvement in overall receipt of adult preventive care. Performance was uneven, slipped, or did not keep pace with benchmarks of safe, well-coordinated, and patient-centered care. As a result, the average of these key areas comprising quality failed to improve, yielding an overall score of 71—an average of 29 percent below benchmark performance.[19] Appendix A Tables 3 and 4 present the national rate, range of performance, and scores for each indicator in this dimension.

EFFECTIVE CARE

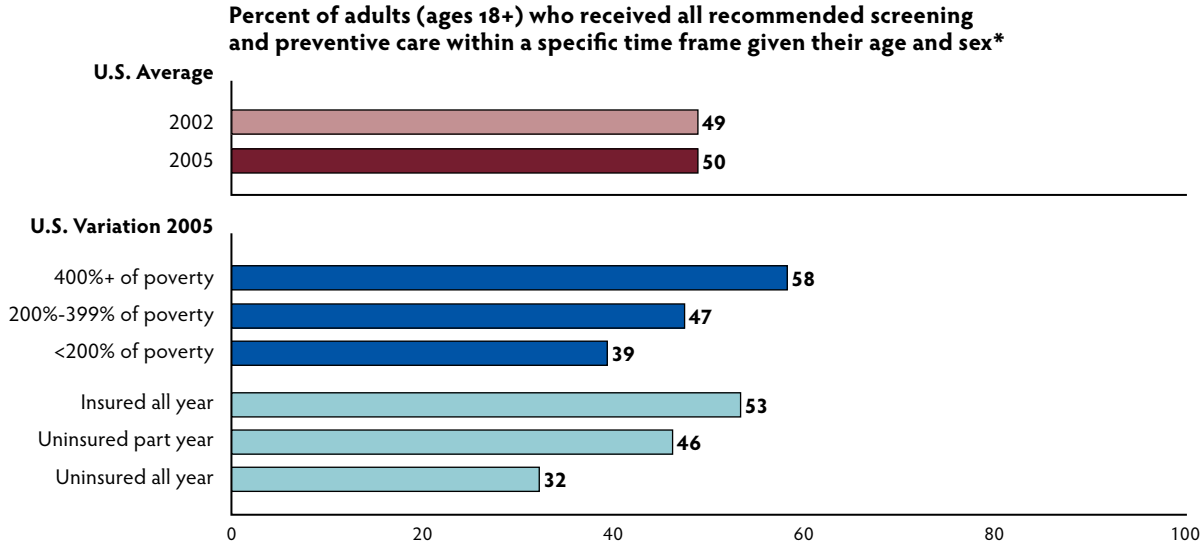
Across five indicators measuring whether Americans receive services that are effective and appropriate for preventing or treating a given condition and controlling chronic illness, the average score increased from 74 to 78. Two indicators showed substantial progress in narrowing the gap between average and benchmark performance, while three exhibited no or little improvement.

Preventive care. Only half of adults received all age-appropriate preventive care such as immunizations, cancer screenings, and blood pressure and cholesterol tests in 2005, with no improvement since 2002 (Exhibit 5). Achieving the Scorecard's benchmark target of 80 percent would mean that 70 million more adults would receive all recommended preventive care. Multifaceted interventions, including organizational changes, are needed to make delivery of preventive services a routine part of patient care.[20]

The proportion of young children who received all recommended doses of five key vaccines increased slightly, from 79 percent in 2003 to 81 percent in 2006, although

QUALITY: EFFECTIVE CARE — EXHIBIT 5

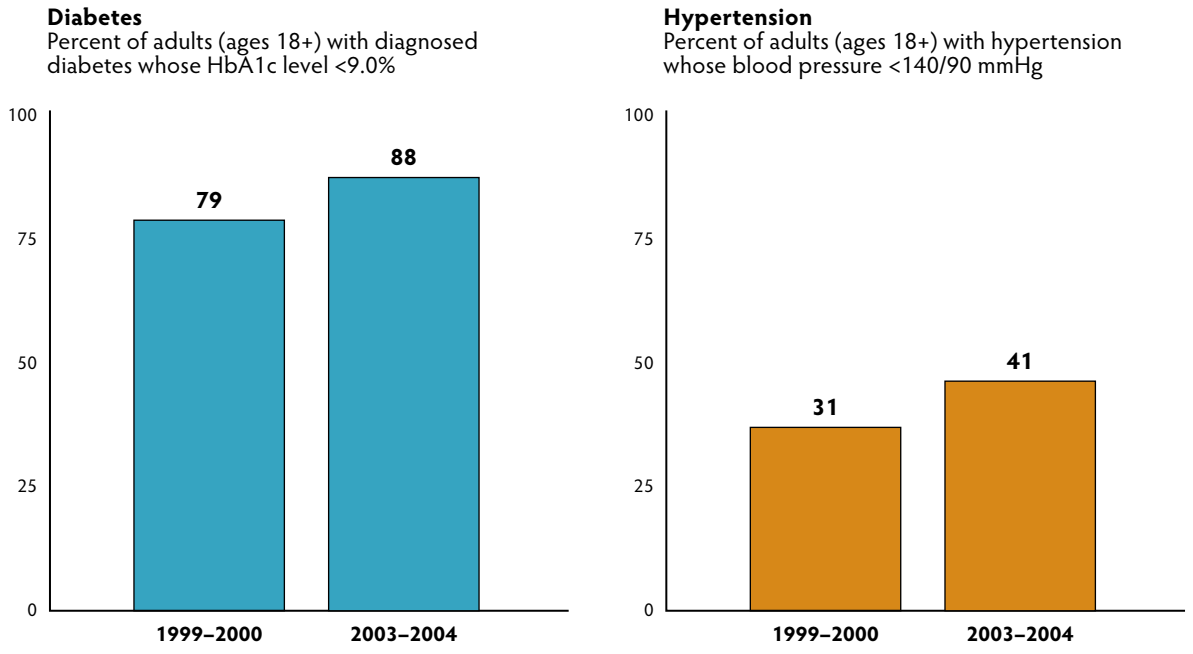
Receipt of Recommended Screening and Preventive Care for Adults



* Recommended care includes seven key screening and preventive services: blood pressure, cholesterol, Pap, mammogram, fecal occult blood test or sigmoidoscopy/colonoscopy, and flu shot. See Appendix B for complete description.
Data: B. Mahato, Columbia University analysis of Medical Expenditure Panel Survey.
Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2008

QUALITY: EFFECTIVE CARE EXHIBIT 6

Chronic Disease Under Control: Diabetes and Hypertension



Data: J. M. McWilliams, Harvard Medical School analysis of National Health and Nutrition Examination Survey.
Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2008

the rate declined among top-performing states. This area of relatively better performance demonstrates the value of population health improvement policies, such as school vaccination requirements, coupled with a commitment to measuring and improving rates at national, state, and community levels.

Mental health care. Among adults who had major depressive episodes, rates of those receiving at least some treatment increased marginally, from 65 to 69 percent from 2004 to 2006, leaving nearly one-third without any care. (A measure of mental health care for children could not be updated.) Further pointing to gaps in mental health care, research finds that mental health treatment is often inadequate, even among those who do receive it.[21] Improving depression care would not only improve quality of life for individuals, it would also increase workplace productivity by an estimated $2.2 billion annually.[22]

Chronic disease management. According to the results of physical exams conducted on a nationally representative sample, rates of control of two common chronic conditions, diabetes and hypertension, have improved (Exhibit 6).

- Among adults with diabetes, rates of at least fair control of blood sugar (hemoglobin A1c less than 9%) increased from 79 percent to 88 percent from 1999–2000 to 2003–2004. Many diabetics need to lower their blood sugar levels further to achieve good control (hemoglobin A1c less than 7%), which just more than half (56%) have achieved.
- Control of high blood pressure increased from 31 percent to 41 percent of adults with hypertension—a risk factor for heart disease and stroke—during the same time period.

Further improvement could help prevent or delay serious disease complications. Achieving the level of control seen in the best-performing health plans could prevent up to 39,000 premature deaths and save up to $2 billion in medical costs annually.[23]

Rates of control of these two common conditions vary widely across health plans, with a 30 to 60 percentage point spread between top- and bottom-performing plans. Moreover, national rates of control vary significantly depending on whether adults have insurance. Uncontrolled diabetes rates (HbA1c 9% or higher) were 37 percent among the uninsured, compared with 19 percent among

insured diabetics during 1999–2004. Among adults with hypertension, 79 percent of uninsured adults had blood pressure levels that were not under control, compared with 59 percent of the insured (see *Scorecard Chartpack*).

Hospital care for common conditions. Hospitals delivered 10 evidence-based treatments 90 percent of the time to patients with heart attack, heart failure, and pneumonia in 2006—up from 84 percent in 2004 (Exhibit 7). Although the entire distribution moved up, the spread between the bottom and top 10th percentiles of hospitals remained wide, particularly for pneumonia and heart failure, for which there were gaps of 20 to 30 percentage points, respectively, between leading and lagging hospitals.

The positive general trend on hospital quality indicators reflects the influence of national consensus on a single set of measures, widespread hospital data reporting following linkage to Medicare payment updates, and public reporting of hospital-specific results on the federal Hospital Compare Web site.[24] This initiative changed the landscape for hospital acceptance and reporting of quality performance and sparked broad efforts to improve. Top hospitals are achieving 100 percent on these basic process measures, indicating that full adherence to guidelines is possible. Researchers estimate that if hospitals in the bottom quartile of performance improved to the level of the top quartile, more than 2,000 deaths could be avoided each year.[25]

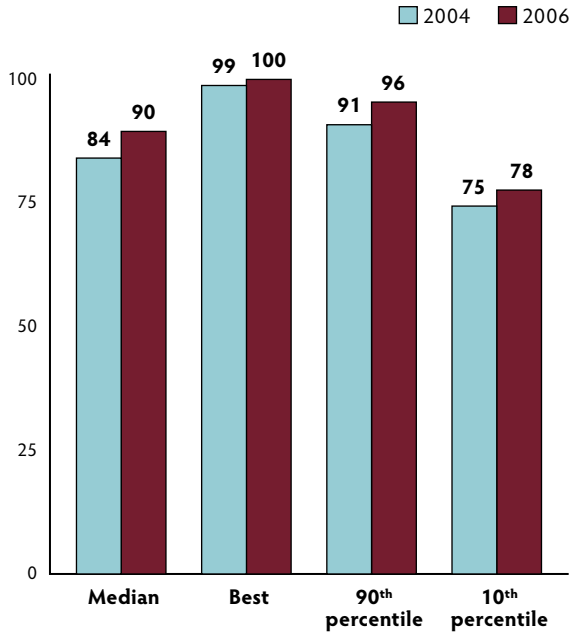
COORDINATED CARE

Poor care coordination continues to be pervasive in the U.S., owing to a fragmented delivery system and lack of incentives for integration. The average score across five indicators of care coordination slipped from 72 to 71, with only one indicator improving. Better coordination of patient care throughout the course of treatment and across sites of care would help ensure appropriate treatment and follow-up, minimize the risk of error, and prevent complications leading to costly emergency department

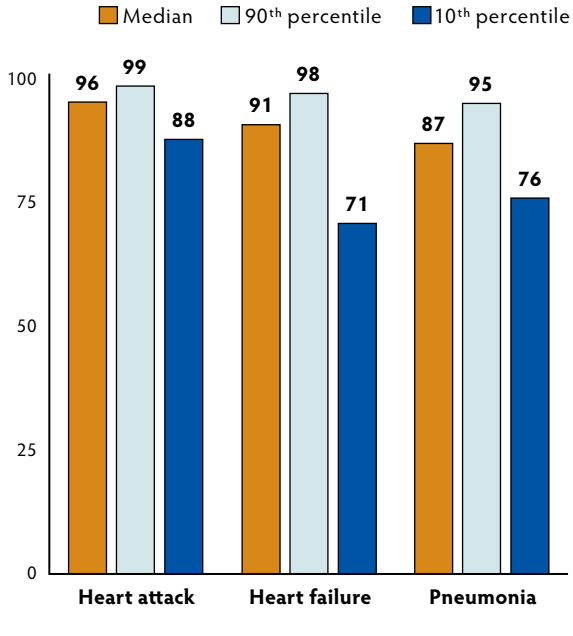
QUALITY: EFFECTIVE CARE — EXHIBIT 7

Hospitals: Quality of Care for Heart Attack, Heart Failure, and Pneumonia

Overall Composite for All Three Conditions
Percent of patients who received recommended care for all three conditions*



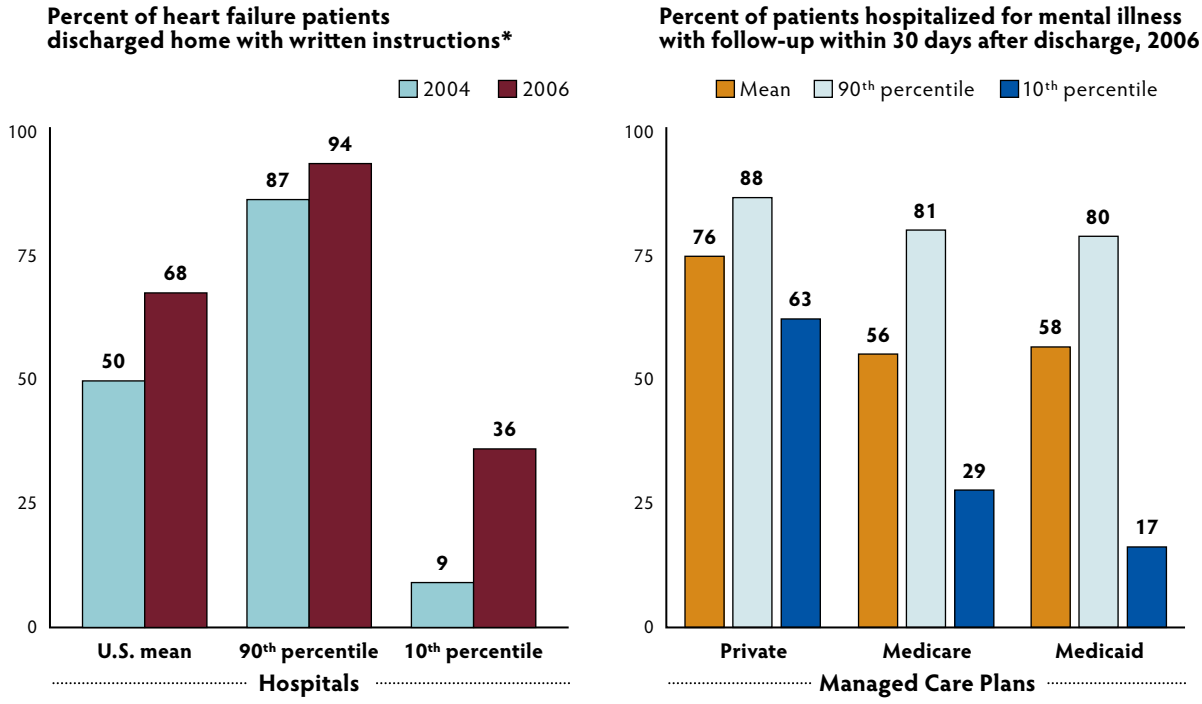
Individual Composites by Condition, 2006
Percent of patients who received recommended care for each condition*



* Composite for heart attack care consists of 5 indicators; heart failure care, 2 indicators; and pneumonia care, 3 indicators. Overall composite consists of all 10 clinical indicators. See Appendix B for description of clinical indicators.
Data: A. Jha and A. Epstein, Harvard School of Public Health analysis of data from CMS Hospital Compare.
Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2008

QUALITY: COORDINATED CARE EXHIBIT 8

Transition Care: Hospital Discharge and Follow-Up Care for Chronically Ill Patients



* Discharge instructions must address all of the following: activity level, diet, discharge medications, follow-up appointment, weight monitoring, and what to do if symptoms worsen.

Data: Heart failure discharge instructions—A. Jha and A. Epstein, Harvard School of Public Health analysis of data from CMS Hospital Compare; follow-up after hospitalization for mental illness—Healthcare Effectiveness Data and Information Set (NCQA 2007).

Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2008

visits and hospital admissions. There are additional benefits to patients, including reduced stress and confusion surrounding their treatment and time saved in navigating a complex health system.

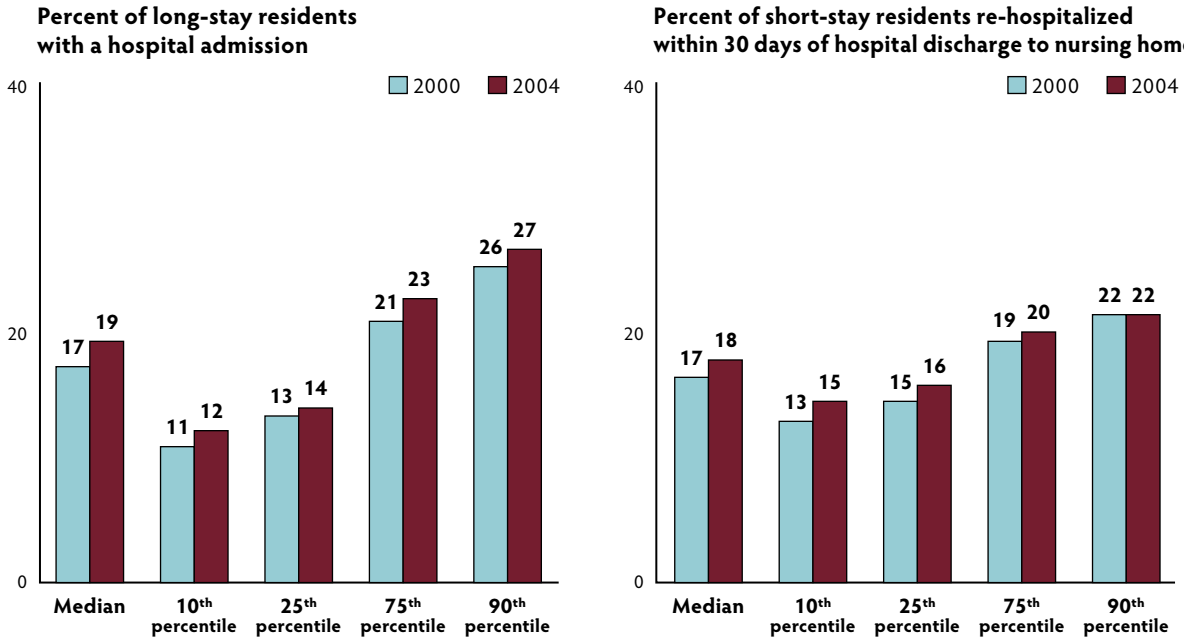
Regular source of primary care. Connection to a source of primary care can facilitate care coordination as well as provide preventive care and chronic care management. Yet in 2005, more than one-third (35%) of nonelderly adults reported they did not have an easily accessible primary care provider that acts as a central source of care and referrals; the rate was the same in 2002.[26] Those who lack a usual source of primary care are more likely to have unmet health care needs, to be hospitalized, and to have higher costs of care and are less likely to keep doctors' appointments, adhere to treatment, and receive preventive care.[27] Having health insurance is a key factor for ensuring access to primary care: individuals who are insured all year have a primary care connection at twice the rate of those who are uninsured.

Coordination of care for hospital patients. Coordination of care at the time of hospital discharge helps prevent subsequent complications and readmissions, especially for patients with complex or chronic conditions.[28] Proper hospital discharge planning ensures that patients understand what to do when they get home and whom to call if they have questions or concerns, and facilitates arrangements for follow-up care. In 2006, two-thirds (68%) of patients hospitalized with heart failure received complete written instructions at discharge, a significant increase from 50 percent in 2004 (Exhibit 8). Yet, one-third, on average, still left without discharge instructions. Although variation narrowed across hospitals, a nearly threefold difference remained from the top to bottom groups. Disturbingly, only one-third of patients in the worst-performing hospitals received full discharge instructions.

Follow-up after a hospitalization for mental illness supports a patient's transition to the community and can help avoid further acute crises.[29] Yet, such follow-up failed to occur in one of every four cases in private

QUALITY: COORDINATED CARE EXHIBIT 9

Nursing Homes: Hospital Admission and Readmission Rates Among Nursing Home Residents



Data: V. Mor, Brown University analysis of Medicare enrollment data and Part A claims data for all Medicare beneficiaries who entered a nursing home and had a Minimum Data Set assessment during 2000 and 2004.
Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2008

health plans and in two of every five cases in Medicare and Medicaid health plans in 2006 (Exhibit 8). Moreover, the rate declined by 8 percent among Medicare health plans from 2004 to 2006, widening the performance deficit with private plans. Rates of follow-up care among patients with mental illness varied fivefold between the best- and worst-performing health plans, and average rates have failed to improve over time.

Hospitalization of nursing home residents and home health patients. Nursing homes and home health agencies can limit hospitalization rates by working with hospitals and physicians to coordinate care and by providing high-quality care to avoid complications that require acute care.[30] Trends are moving in the wrong direction. Almost one of five long-term nursing home residents (19%) were hospitalized in 2004, up from 17 percent in 2000 (Exhibit 9). Likewise, 18 percent of hospitalized patients who were discharged to a nursing facility were readmitted to the hospital within 30 days in 2004, up from 17 percent in 2000. Rates increased in both low- and high-rate states. Among home health care patients, the national hospitalization rate remained at 28 percent from 2004 to 2006–2007, well above benchmark rates. There is more than a twofold difference in performance between the lowest and highest quartile of agencies (19% to 48%).

High rates of unnecessary hospitalizations put frail elders at risk of poor outcomes or complications that often lead to subsequent deteriorations in their conditions. As discussed in recent Medicare Payment Advisory Commission reports, the high rates of potentially avoidable readmissions signal a need to focus on improving the quality of nursing care, discharge planning, and transition care.[31] Yet, current payment incentives often work against these goals. In the case of those eligible for Medicare and Medicaid, conflicting payer incentives leave neither program accountable or with incentives to manage care well for frail elderly or disabled residents.[32]

SAFE CARE

Patient safety risks remain high. National rates across several safety indicators improved, yet they did not keep pace with gains made by benchmark performers. Therefore, the average score among five safety indicators is only 68 out of 100. Nearly one-third (32%) of U.S. patients

surveyed in 2007 said that, in the last two years, a medical mistake or a medication or lab test error was made during their care, with little change from 2005. It would take a 40 percent reduction to reach the low level of errors reported in the benchmark country (Germany).

Drug safety. Drug safety is of particular concern. Among patients living in the community, the rate of adverse drug effects serious enough to require a visit to the doctor or a hospital emergency department increased by one-third from 2001 to 2004. Regional variation widened. Patient injuries may be caused by side effects of the drugs or from human and system failures, such as inadequate patient education, inadequate monitoring of high-risk drugs, and gaps in coordination of care.

In 2004, nearly one of five elderly Americans (17%) was prescribed one of the 33 drugs that experts consider potentially inappropriate for the elderly because of limited effectiveness or risk of harm. There was little change in the national rate since 2002.

Overuse of antibiotics puts all patients at risk from the threat of antibiotic-resistant pathogens. In 2004, more than one-third (35%) of children prescribed an antibiotic for a sore throat did not receive a "strep" test recommended by evidence-based guidelines to determine if they had a bacterial infection warranting antibiotic treatment. This rate improved from 43 percent during the years 1997 to 2003. Variation among health plans reporting to the National Committee for Quality Assurance remains wide, especially among Medicaid plans.

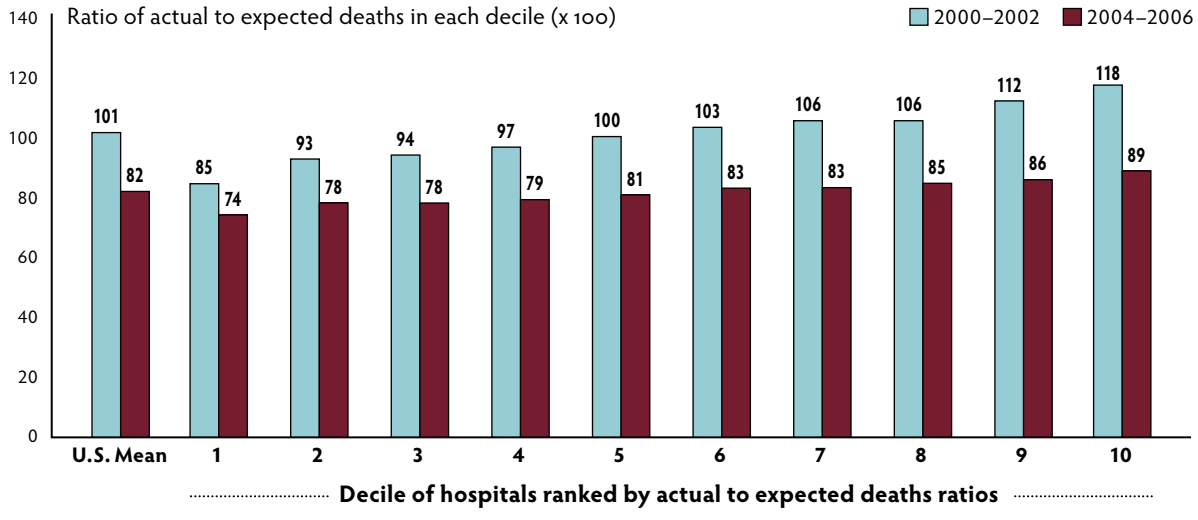
Nursing home pressure sores. One of eight high-risk nursing home residents and one of six short-stay residents develop pressure sores, which suggests they are receiving inadequate care. Pressure sores carry the risk of serious complications, including death. The improvements achieved through collaborative initiatives and in individual facilities suggest that it is possible to substantially reduce the incidence of pressure sores.[33] Yet, average rates showed no or little improvement from 2004 to 2006 and remained highly variable across states. It would take a 34 percent reduction in national pressure sore rates to reach the level achieved in the top 10 percent of states.

Hospital mortality. The hospital standardized mortality ratio (HSMR) is the only safety indicator included in the Scorecard for which there has been broad improvement. Based on Medicare data, this risk-adjusted mortality ratio declined 19 percent, from 101 in 2000–2002 to 82 in 2004–2006 (Exhibit 10). The HSMR is a ratio of actual

QUALITY: SAFE CARE EXHIBIT 10

Hospital-Standardized Mortality Ratios

Standardized ratios compare actual to expected deaths, risk-adjusted for patient mix and community factors: Medicare national average for 2000=100



* See Appendix B for methodology.
Data: B. Jarman analysis of Medicare discharges from 2000 to 2002 and from 2004 to 2006 for conditions leading to 80 percent of all hospital deaths.
Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2008

deaths to expected deaths; expected death rates are generated based on average national mortality in 2000, with adjustments made for patient and community risk factors.[34] Acceleration in the decline of hospital risk-adjusted mortality was noted first in 2002 and was sustained throughout the reporting period. This improvement followed widespread availability of risk-adjusted measures and several high-profile local and national initiatives that aimed to improve hospital patient safety and reduce mortality by focusing on actionable strategies to track and improve hospital quality. High-profile national initiatives include the Joint Commission National Patient Safety Goals, The Institute for Healthcare Improvement's 100,000 Lives and 5 Million Lives Campaigns,[35] The Leapfrog Group's Hospital Quality and Safety Survey, the National Surgical Quality Improvement Program, [36] and the Center for Disease Control and Prevention's National Healthcare Safety Network, and others.

Eight years after the Institute of Medicine issued its national call to action on patient safety, the federal government is finally moving to establish Patient Safety Organizations with the capacity to collect, analyze, and report on safety events at the national level. In a recent survey, physicians said they are willing to share their experiences with medical errors for learning purposes, but they find the current error reporting systems inadequate. Studies conclude that health care institutions need to do more to engage physicians in meaningful reporting leading to demonstrable improvement at the local level.[37]

Collaborative efforts to bring down infection rates in intensive care units have shown that following simple "checklists" or "bundles" of evidence-based practices can reduce rates to zero—setting new benchmarks for performance.[38] This level of perfection is being achieved by the top 10 percent to 25 percent of intensive care units participating in the Centers for Disease Control and Prevention's National Healthcare Safety Network, a federal benchmarking initiative (see *Scorecard Chartpack*). Wider adoption of these initiatives, coupled with Medicare's new policy of refusing to pay for certain preventable errors, may accelerate improvements in hospital patient safety.

PATIENT-CENTERED AND TIMELY CARE

Patient-centered care and timely access to care can increase adherence to treatment plans, help engage patients in care decisions, and improve outcomes of care.[39] The overall score for patient-centered and timely care declined from 72 to 69, as two indicators declined (one could not be updated). The Scorecard results indicate that there are major deficiencies in providing timely care and communicating effectively with patients. National scores on indicators are as much as 65 percent below benchmarks set by leading countries, health plans, or hospitals.

Rapid access to primary care. U.S. adults with health problems are significantly less likely than patients in five of the seven countries surveyed to get a rapid appointment with a physician—the same or the next day—when they are sick. Only 46 percent of patients reported having such rapid access in 2007, nearly the same as in 2005. The failure to improve highlights the slow pace of adoption of advanced access models of care in physician practices and clinics. The U.S. rate would need to improve by more than 75 percent to reach the benchmark rate (81%).

After-hours care. U.S. adults with health problems are also the most likely among adults in seven countries surveyed to report difficulty obtaining health care after hours without going to the emergency department. This rate increased from 61 percent to 73 percent from 2005 to 2007 (Exhibit 11). Studies in the U.S. indicate that improved after-hours care and better access to primary care can reduce the need for relatively costly emergency department visits, particularly among higher-risk, low-income patients.[40]

Physician communication. Open and clear communication between doctors and their patients is a key component of patient-centered care. On average, just over half of U.S. patients in 2004 and 2002 (57% and 54%) said their doctors always listened carefully, explained things clearly, showed them respect, and spent enough time with them. Patient communication experiences vary widely by insurance status and source of coverage. The national rate in 2004 remained well below the 75 percent benchmark rate set by top-performing health plans. Interventions aimed at both physicians and patients may improve the quality of interpersonal medical interactions.[41]

Hospital responsiveness to patients. A wide range in performance persisted among hospitals on three indicators of patient-centered hospital care, with a 15-to-24-percentage-point difference between the top decile of hospitals (rates of 66% to 75%) and the bottom decile (rates of 48% to 60%) on measures of how well staff manage pain, respond when patients press a call button or need help going to the bathroom, or explain medications and

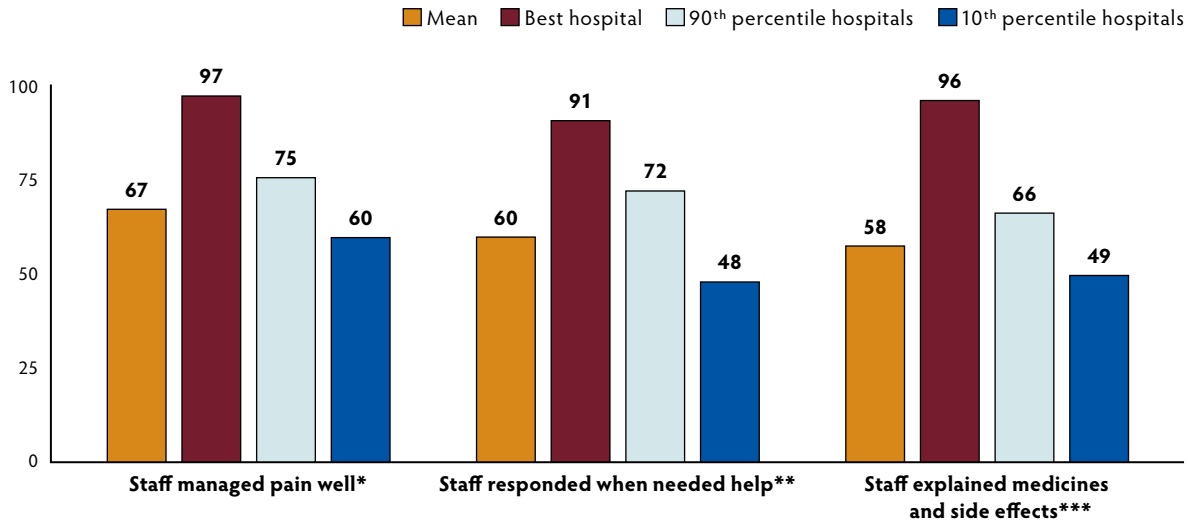
Difficulty Getting Care on Nights, Weekends, Holidays Without Going to the Emergency Room, Among Sicker Adults

Percent of adults who sought care reporting "very" or "somewhat" difficult

Data: 2005 and 2007 Commonwealth Fund International Health Policy Survey.
Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2008

Patient-Centered Hospital Care: Staff Managed Pain, Responded When Needed Help, and Explained Medicines, by Hospitals, 2007

Percent of patients reporting "always"



* Patient's pain was well controlled and hospital staff did everything to help with pain.
** Patient got help as soon as wanted after patient pressed call button and in getting to the bathroom/using bedpan.
*** Hospital staff told patient what medicine was for and described possible side effects in a way that patient could understand.
Data: CAHPS Hospital Survey (Retrieved from CMS Hospital Compare database at www.hospitalcompare.hhs.gov).
Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2008

their possible side effects (Exhibit 12). The best hospitals achieved very high rates of patients giving top ratings on these questions, illustrating that it is possible for hospitals to do much better in meeting patients' needs.

These results from 2,500 hospitals participating in the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) Survey are remarkably similar to findings from a smaller pilot of the survey reported in the first National Scorecard. The public release of these data on the Medicare Web site in March 2008 marks a turning point—the first time that consumers have been able to compare hospital performance on a uniform patient survey. It also shows the positive role government can play in promoting greater accountability by sponsoring the development of a standard survey and influencing providers to participate through Medicare payment incentives.

HEALTH CARE ACCESS

OVERVIEW

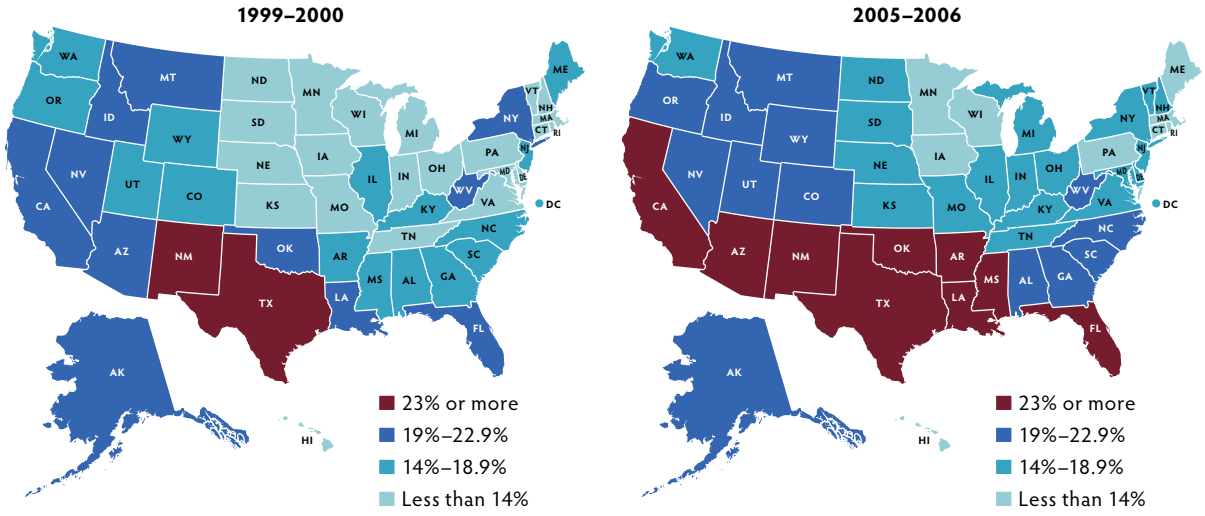
Access to care is fundamental to high-quality care. Inadequate access can result in inefficient care from avoidable complications, reliance on emergency departments for primary care, duplication of services, and failure to follow-up on test results or preventive care. Rising numbers of uninsured as well as escalating health care costs and health insurance premiums create barriers to care and place financial strain on insured as well as uninsured patients.[42] Reflecting these trends, performance on four of five access indicators declined substantially, as increasing numbers of middle- as well as low-income families found themselves at risk of inadequate access to care. The overall score on this dimension dropped from 67 to 58—further from the goal of full participation and affordable access.[43] Appendix A Table 5 presents the national rate, range of performance, and scores for each indicator in this dimension.

PARTICIPATION

To date, most of the erosion in insurance coverage has occurred among working-age adults. Based on annual census data, from 1999–2000 to 2005–2006 the number of states where 23 percent or more of the working-age adult population is uninsured grew from two to nine, while the number of states with less than 14 percent uninsured declined from 22 to eight (Exhibit 13). Children fared better due to public coverage expansions. In 2005–2006,

ACCESS: PARTICIPATION EXHIBIT 13

Percent of Adults Ages 18–64 Uninsured by State

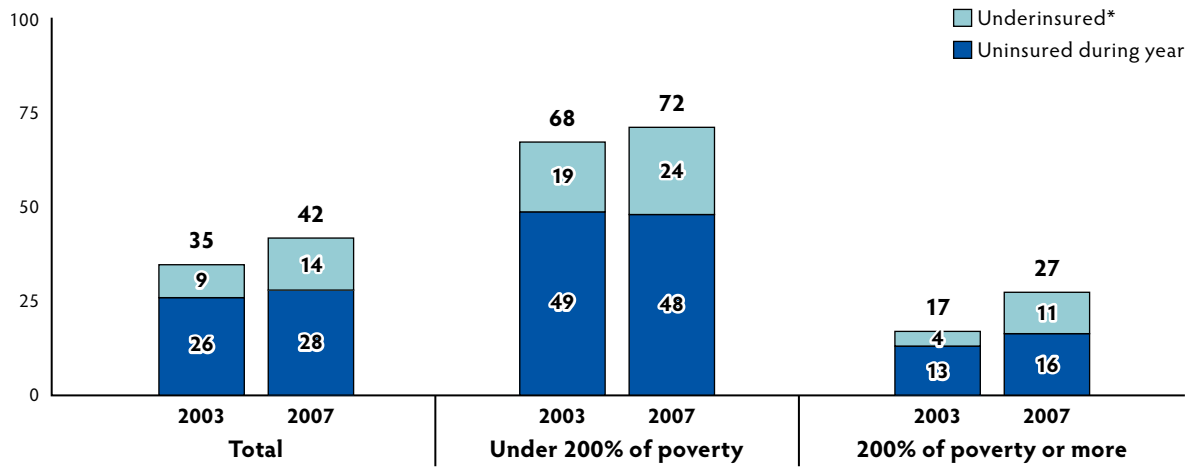


Data: Two-year averages 1999–2000, updated with 2007 Current Population Survey correction, and 2005–2006 from the Census Bureau's March 2000, 2001 and 2006, 2007 CPS.
Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2008

ACCESS: PARTICIPATION EXHIBIT 14

Uninsured and Underinsured Adults, 2007 Compared with 2003

Percent of adults (ages 19–64) who are uninsured or underinsured



* Underinsured defined as insured all year but experienced one of the following: medical expenses equaled 10% or more of income; medical expenses equaled 5% or more of income if low income (<200% of poverty); or deductibles equaled 5% or more of income.
Data: 2003 and 2007 Commonwealth Fund Biennial Health Insurance Survey.
Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2008

only five states had more than 16 percent of children uninsured, down from nine in 1999–2000. And in twelve states, fewer than 7% of children were uninsured.[44]

As the number of adults without insurance has steadily grown, so has the number of "underinsured"—those who are insured all year but have medical bills or deductibles that were high relative to their incomes.[45] In 2007, 25 million adults (14%) were underinsured, an increase of more than 60 percent since 2003 when 16 million were underinsured. This sharp jump was driven by a near tripling in the rate (from 4% to 11%) among those with moderate or higher incomes (200% of the federal poverty level or more). Another 50 million adults were uninsured during the year. As a result, as of 2007, more than 75 million adults—42 percent of all adults ages 19 to 64—were either uninsured during the year or underinsured, up from 35 percent in 2003 (Exhibit 14).

Although low-income adults remain most at risk, the increase in the percent uninsured or underinsured was greatest among those with incomes of 200 percent of poverty or higher.

The erosion in coverage undermines access to care. In 2007, more than one-third of U.S. adults (37%) went without needed care, including prescription drugs, because of costs. In contrast, only 5 percent of adults in the Netherlands, the benchmark country, reported such financial barriers to care. The Netherlands has universal coverage with a broad range of benefits and modest cost-sharing by U.S. standards.

AFFORDABLE CARE

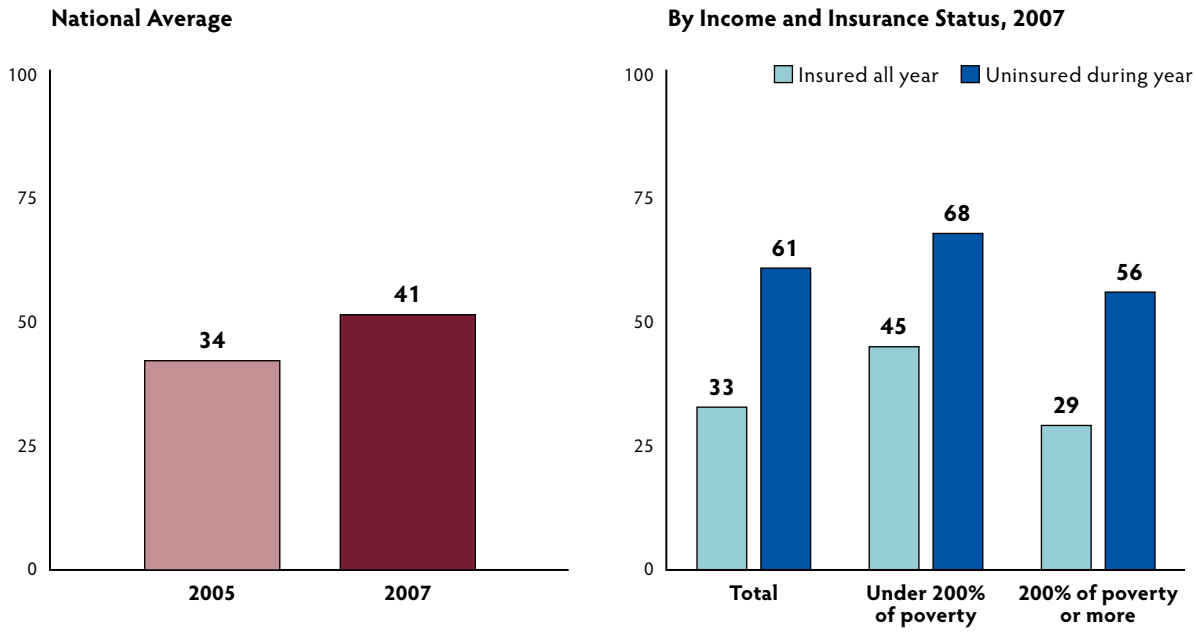
The costs of both health insurance and medical care have become less affordable. The average cost of family coverage obtained at employer group rates exceeded $12,000 a year in 2007.[46] With premiums rising faster than wages, the average cost of insurance premiums relative to income increased in almost all states. As a result, the percent of adults residing in a state where employer premiums averaged less than 15 percent of the median household income declined precipitously, from 58 percent to 25 percent over the most recent two years.

By 2005, nearly one of four adults under age 65 (23%) lived in families with high out-of-pocket health care costs, including premiums and direct spending for services, up from 19 percent in 2001. This increase was driven entirely by rising costs among those with private insurance. Financial burdens were especially steep among people who purchased insurance in the nongroup market:

ACCESS: AFFORDABLE CARE EXHIBIT 15

Medical Bill Problems or Medical Debt

Percent of adults (ages 19–64) with any medical bill problem or outstanding debt*



* Problems paying or unable to pay medical bills, contacted by a collection agency for medical bills, had to change way of life to pay bills, or has medical debt being paid off over time.
Data: 2005 and 2007 Commonwealth Fund Biennial Health Insurance Survey.
Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2008

half faced high out-of-pocket burdens, compared with 40 percent in 2001.

Efforts to moderate premium growth have led to limits on benefits and higher cost-sharing. The resulting exposure to costs added to the share of families who struggle with medical debt and medical bills. By 2007, two of five U.S. adults (41%) reported having problems paying medical bills, being contacted by collection agencies, or paying medical debt over time, up from 34 percent in 2005 (Exhibit 15). Having insurance is no longer a guarantee of financial protection: one of three (33%) adults ages 19 to 64 who were continually insured faced medical bill problems; middle- and lower-income adults were the most at risk.

ACCESS AND ITS RELATIONSHIP TO QUALITY AND EFFICIENCY

Reduced access to care has serious implications for overall health system performance. Without adequate coverage and financial protection, there is diminished opportunity to receive high-quality care.[47] Uninsured people often fail to get timely and appropriate care when needed, leading to worse health outcomes and more costly emergency or acute care later on. When they do get care, the uninsured also experience more medical errors or coordination problems, such as delays in transferring medical records/test results and duplication of tests. A recent study estimates the death toll from being uninsured amounted to 137,000 from 2000 to 2006, including 22,000 deaths in 2006.[48]

Studies also find that high uninsured rates undermine the quality of care for entire communities and states.[49] States and communities in which large shares of the population are uninsured exhibit lower quality and worse patient care experiences across a range of care settings for insured as well as uninsured patients, compared with communities with low rates of uninsured residents. The connection between worse access and lower quality is likely due to spillover

effects and lack of policies and practices that focus on community-wide population health and quality of care. Ensuring universal access to care can provide a foundation to improve quality and achieve more efficient care over time.[50]

EFFICIENCY OF THE HEALTH SYSTEM

OVERVIEW

An efficient care system seeks to maximize health outcomes and quality for the resources spent and to enhance value over time. Lack of access, poorly coordinated or fragmented care, and ineffective care add cost and decrease value. They also waste patients' time. Comparisons with other countries as well as regional variations in cost and quality within the U.S. across an array of efficiency indicators all point to opportunities to achieve savings and/or improve value. Overall, performance on indicators of efficiency remain especially low, with the U.S. average score of just 53 basically unchanged from 52 in the 2006 Scorecard. The failure to improve makes efficiency the dimension with the greatest gap between U.S. performance and achievable benchmarks. Appendix A Table 6 presents the national rate, range of performance, and scores for each indicator in this dimension.

INAPPROPRIATE, WASTEFUL, OR FRAGMENTED CARE

In the U.S., payment incentives can encourage physicians and hospitals to "do more," even though this may mean that patients receive services of marginal or no value.[51] An example of this is the use of imaging tests for lower back pain within 28 days of onset, when the patient has no apparent risk factors or sign of serious pathology. Within managed care plans, average rates for this indicator of potentially inappropriate testing are 50 percent higher than rates achieved by benchmark health plans, with little or no change from 2004 to 2006. Health plans have recently been stepping up efforts to review and reduce the use of advanced imaging services in response to their rapid proliferation.[52]

In a cross-national survey, 22 percent of U.S. adults with health problems reported that test results and medical records were not available at the time of their medical appointment in 2007, compared with the benchmark of 9 percent in the Netherlands (Exhibit 16). U.S. patients were five times more likely to say that doctors unnecessarily repeated tests, as compared with patients in the benchmark country (20% in the U.S. vs. 4% in the Netherlands). There was little change in these indicators from 2005 to 2007. Better performance in the benchmark country likely reflects more integrated care and widespread use of electronic medical records.

EFFICIENCY EXHIBIT 16

Test Results or Medical Records Not Available at Time of Appointment, Among Sicker Adults

Percent reporting test results/records not available at time of appointment in past two years

Data: 2005 and 2007 Commonwealth Fund International Health Policy Survey.
Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2008

POTENTIALLY AVOIDABLE HOSPITAL USE

Having timely access to primary care, during regular office hours or after hours, can avert the need for expensive visits to the emergency department (ED) or admission to the hospital and lessen the risk of medical complications. One of five U.S. adults (21%) reported they went to the ED for a condition that could have been treated by their regular doctor, more than three times the rate in the benchmark country, Germany, where only 6 percent of patients reported such unnecessary ED use.

Ready access to high-quality, well-coordinated primary care can prevent complications and hospitalizations. Rates of potentially preventable hospitalizations for ambulatory care–sensitive (ACS) conditions vary by a multiple of two to four across states and hospital referral regions, with associated variations in costs. The national hospital admission rate for heart failure decreased 4 percent from 2002 to 2004, while the rate for pediatric asthma decreased 13 percent from 2003 to 2004; however, diabetes-related admissions remained unchanged. Among Medicare beneficiaries, a composite rate of hospital admissions for 11 ACS conditions decreased 9 percent from 2003 to 2005, with decreases in both the top and bottom of the distribution. Further reducing Medicare ACS admissions to benchmark levels would save $4 billion annually; savings would be commensurate in the under-65 population.

Nearly one of five Medicare patients (18%) initially hospitalized with one of a set of selected conditions was readmitted to the hospital within 30 days; there was no change in this rate from 2003 to 2005 (Exhibit 17).[53] Medicare 30-day readmission rates vary widely across hospital referral regions: rates in the highest-rate regions are 50 percent higher than in the lowest-rate regions.

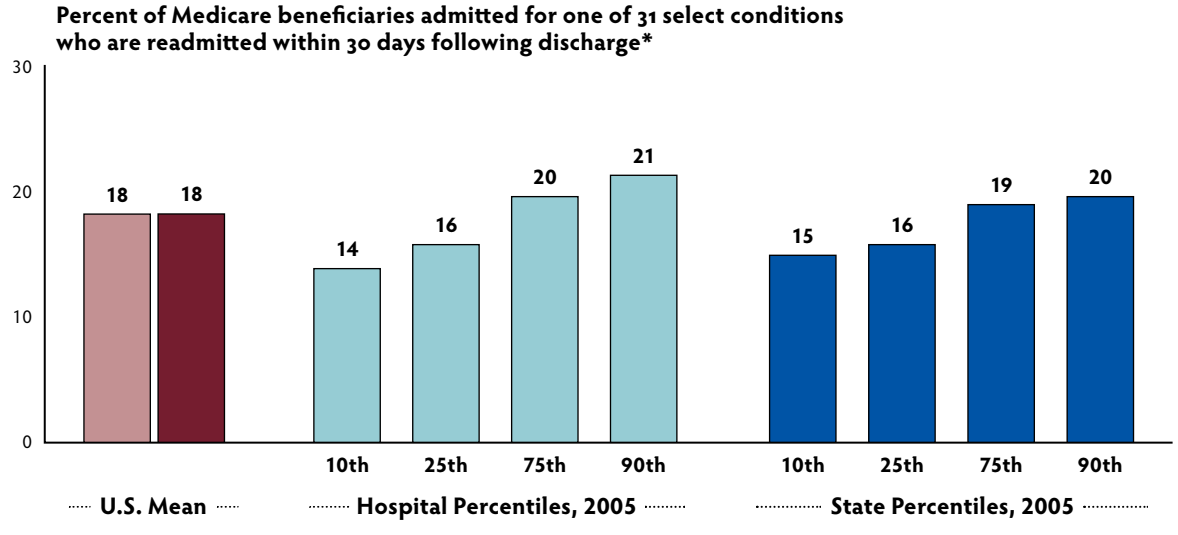
Good care provided during a hospital stay and appropriate discharge planning, follow-up, and post-acute care can help prevent patients from being readmitted to the hospital, thus reducing the total costs of care.[54] A Medicare Payment Advisory Commission analysis indicates that up to three-quarters of readmissions may be preventable with better primary care, transition care, and reduced complications from care received while hospitalized—a potential savings of $12 billion a year for Medicare.[55]

VARIATION IN QUALITY AND COSTS

In the Medicare program, the costs of care are highly concentrated among patients with multiple chronic conditions, and such costs are increasing.[56] In 2005, annual costs of care to Medicare averaged $38,000 for patients who had all three of the following conditions:

EFFICIENCY EXHIBIT 17

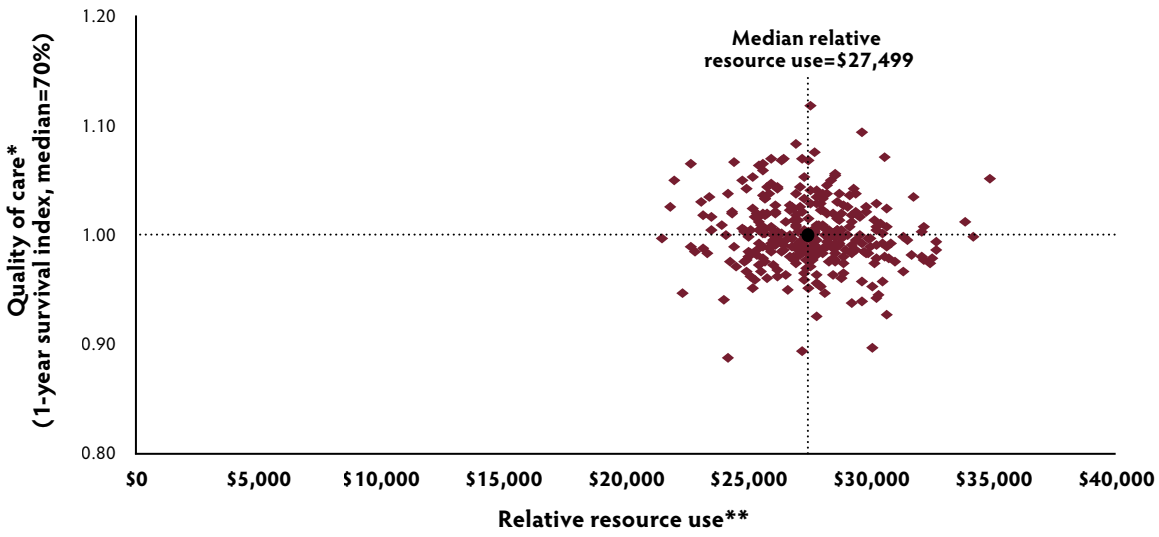
Medicare Hospital 30-Day Readmission Rates



* See appendix B for list of conditions used in the analysis.
Data: G. Anderson and R. Herbert, Johns Hopkins University analysis of Medicare Standard Analytical Files (SAF) 5% Inpatient Data.
Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2008

EFFICIENCY EXHIBIT 18

Quality and Costs of Care for Medicare Patients Hospitalized for Heart Attacks, Hip Fractures, or Colon Cancer, by Hospital Referral Regions, 2004



* Indexed to risk-adjusted 1-year survival rate (median=0.70). **Risk-adjusted spending on hospital and physician services using standardized national prices.
Data: E. Fisher, J. Sutherland, and D. Radley, Dartmouth Medical School analysis of data from a 20% national sample of Medicare beneficiaries.
Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2008

heart failure, diabetes, and chronic lung disease. This represents a 20 percent increase from 2001. Costs of care vary significantly across the country, with a twofold spread between the lowest and highest 10th percentiles of hospital regions for any combination of these three conditions (see Appendix A Table 6). Focusing on these patients offers opportunities to improve care outcomes and use resources more efficiently.

Updated analysis of regional variations for hospitalized Medicare patients shows that some regions of the country achieve better outcomes than other regions, and at lower cost, through more efficient systems.[57] Medicare data for patients hospitalized in 2004 for heart attacks, hip fracture, or colon cancer were used to rank hospital referral regions in terms of their care outcomes and relative resource use (Exhibit 18). Comparing the best- and worst-performing 10th percentiles, one-year mortality rates on this composite indicator of three conditions ranged from 27 percent to 33 percent between the best- and worst-performing regions, while risk-adjusted annual costs ranged from $25,000 to $30,000. Plotting mortality and costs for all regions shows that a high proportion of those regions with the lowest one-year mortality rates also had lower total resource costs over the course of the year. In all, Medicare could save more than 9,000 lives and reduce annual costs by nearly $1 billion a year for these three conditions alone, if all other U.S. regions could achieve the performance levels of the benchmark regions.

INSURANCE ADMINISTRATIVE COSTS

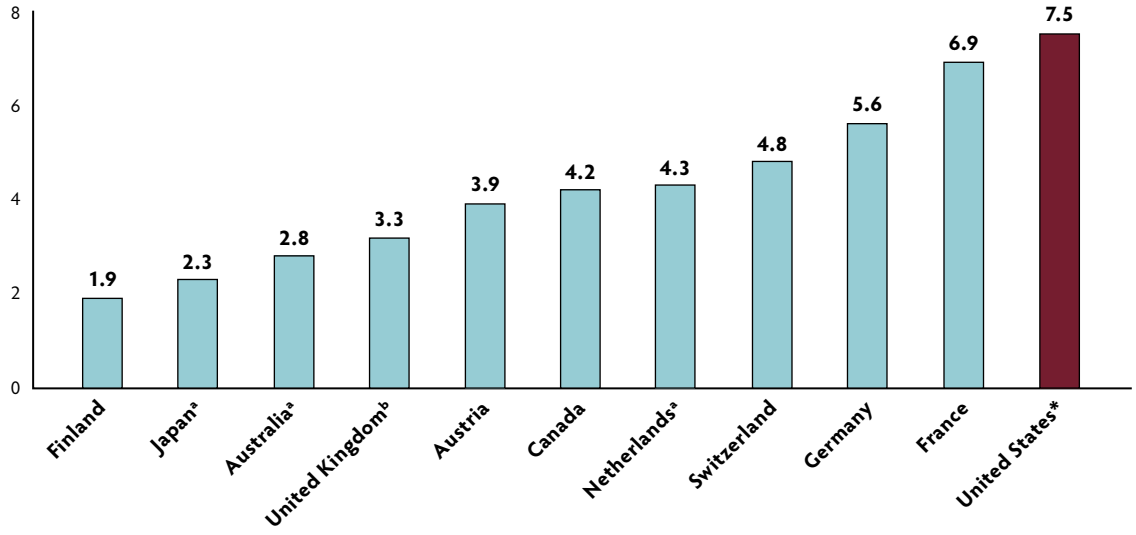
Private health insurance in the U.S. is characterized by complex benefit and cost-sharing designs and high rates of turnover in plan enrollment. Health plans also incur significant marketing and underwriting costs. Administrative costs have been increasing rapidly in the U.S.: from 2000 to 2006, per capita administrative costs increased 68 percent, from $289 to $485 per person, versus a 47 percent increase in national health expenditures per capita.[58]

As a result, insurance administrative costs as a share of total national health expenditures are more than three times higher in the U.S. than in countries with the lowest rates (Finland, Japan, and Australia) and 30 percent to 70 percent higher than in three countries where private insurance plays a substantial role (Germany, Switzerland, and the Netherlands) (Exhibit 19). Reducing U.S. insurance overhead to this mid-range through

EFFICIENCY EXHIBIT 19

Percentage of National Health Expenditures Spent on Insurance Administration, 2005

Net costs of health insurance administration as percent of national health expenditures



[a] 2004 [b] 2001
* Includes claims administration, underwriting, marketing, profits, and other administrative costs; based on premiums minus claims expenses for private insurance.
Data: OECD Health Data 2007, Version 10/2007.
Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2008

EFFICIENCY EXHIBIT 20

Physicians' Use of Electronic Medical Records

Percent of primary care physicians using electronic medical records

Data: 2001 and 2006 Commonwealth Fund International Health Policy Survey of Physicians.
Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2008

greater standardization, streamlined functions, and more continuous coverage would save up to $51 billion annually. This is enough to fund half the cost of providing comprehensive coverage to all the uninsured in the U.S. Lowering rates to the benchmark countries would save more than $100 billion per year.

INFORMATION SYSTEMS TO SUPPORT EFFICIENT CARE

Well-integrated electronic information systems have the capacity to improve the delivery and coordination of care, reduce medical errors, and provide a mechanism for tracking and assessing performance. Although use of electronic medical records (EMRs) by U.S. physicians increased from 17 percent to 28 percent from 2001 to 2006, the U.S. lags well behind leading countries that have made a system-wide commitment to invest in interoperable information technology (Exhibit 20). In the United Kingdom, nine of 10 primary care practices have EMRs, as do 98 percent of practices in the Netherlands. Further, clinical data systems in these countries are more likely than those in the U.S. to have advanced functions to provide decision support and enable information to flow with patients across sites of care. At the current U.S. rate of dispersion, it would require more than 30 years to expand such tools to all physicians.

EQUITY IN THE HEALTH SYSTEM

OVERVIEW

The health care system offers the potential to provide equal opportunities for all to lead healthy and productive lives, a core founding value of the United States. However, studies repeatedly reveal pervasive disparities in health outcomes and care experiences across different racial, ethnic, and socioeconomic groups within the U.S.

Reducing and eliminating such disparities has long been a major national concern and is central to improving care for the country as a whole. Yet, the Scorecard finds persistent and wide gaps on key indicators across dimensions between vulnerable populations and their benchmark reference groups, with no improvement since the 2006 baseline—the average score was 71 in 2008 compared with 70 in the 2006 Scorecard. As illustrated in Exhibit 21, wide inequities persist for each vulnerable group in healthy lives, access, quality, and efficiency.

EQUITY EXHIBIT 21

Equity: Ratio Scores for Insurance, Income, and Race/Ethnicity

	Insured Compared with Uninsured		High Income Compared with Low Income^		White Compared with Black		White Compared with Hispanic	
	2006	2008	2006	2008	2006	2008	2006	2008
EQUITY AVERAGE SCORE	**65**	**66**	**61**	**61**	**76**	**75**	**77**	**81**
(Number of indicators*)		(18)		(25)		(26)		(26)
DIMENSION AVERAGES								
Healthy Lives	NA	NA	54	55	77	77	97	97
Quality								
Effective Care	59	57	69	68	80	76	73	70
Safe Care	97	97	94	94	77	77	94	94
Patient-Centered, Timely Care	56	56	59	59	72	62	54	64
Coordinated and Efficient Care	55	58	63	60	61	73	58	72
Access	57	61	30	32	86	87	82	87

* No updated data available for 4 indicators by insurance, 4 indicators by income, and 4 indicators by race/ethnicity; used baseline score from 2006.
^ Generally income compares either poor/near poor (<200% poverty) to those of incomes of 400% of poverty or higher or compares annual incomes of under $35,000 to incomes above $45,000. For mortality, income uses either census tract poverty rates or education level.
NA=data not available
Data: Appendix A Table 7 presents scores for all indicators in the Equity dimension. See Appendix B for data years and sources.
Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2008

On average, it would require a 19 percent to 25 percent reduction in the risk of poor health outcomes and inadequate or inefficient care for black or Hispanic minorities to reach the same rates as whites. Gaps in performance for uninsured and low-income populations are even wider; it would require a 34 percent to 39 percent improvement on average to achieve parity with insured and high-income populations, respectively. While some gaps are closing, a significant proportion have worsened or stayed the same. Moreover, in some instances, gaps have narrowed only because experiences grew worse for white, insured, or higher-income groups.

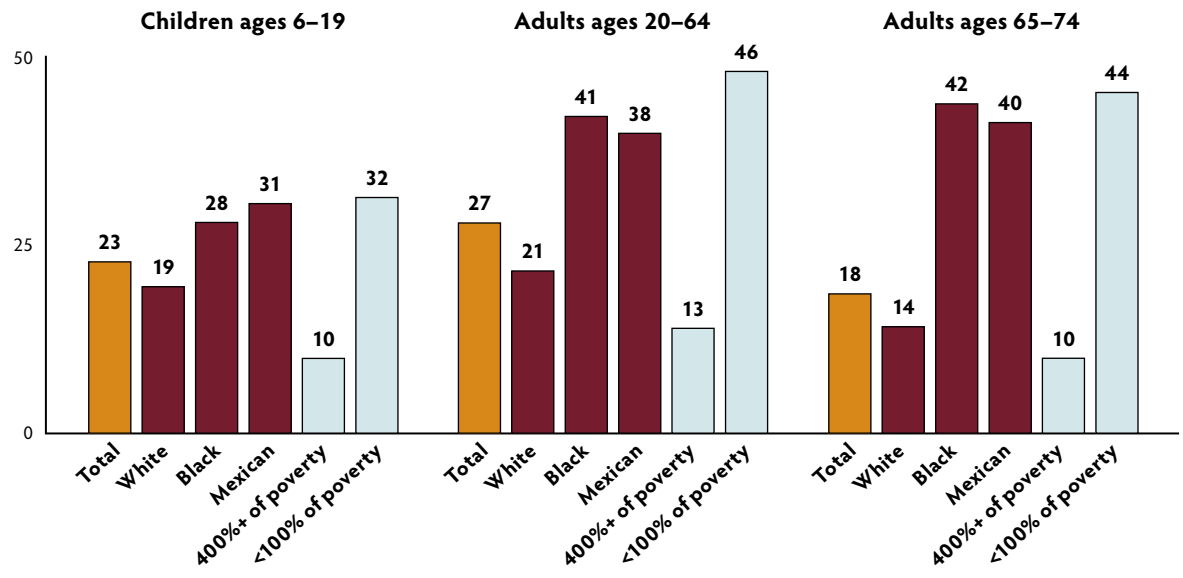
DISPARITIES IN INSURANCE CONTRIBUTE TO DISPARATE CARE EXPERIENCES

Overall, minorities are much less likely than whites to get preventive care or proper treatment when needed; for some indicators, relative disparities are widening. For instance, blacks and Hispanics are less likely to receive treatment for depression than whites, and these rates have worsened at the same time that there has been improvement among whites. Minorities are also at significantly higher risk of having untreated dental caries than whites, and here again minority rates are on the rise, specifically among the elderly (Exhibit 22). Disparities in care experiences in part reflect minorities' lower incomes and insurance gaps. Insured, higher-income populations are generally at lower risk of poor access and care experiences. For example, rates of caries going untreated are more than two times higher among the uninsured than the insured across all ages.

Inequitable access to quality health services, especially among the chronically ill, contributes to disparate short- and long-term health outcomes between whites and minorities. The proportion of diabetic blacks and Hispanics with uncontrolled blood sugar is more than two times that of whites, and this disparity has grown as white rates have fallen. Moreover, blacks and Hispanics suffer disproportionately high rates of death and hospitalizations because of diabetes-related complications. There has been only modest improvement in utilization of appropriate diabetes services and exams. For patients, successfully managing a chronic condition requires an ongoing relationship with a primary care office that can provide easy access and organized care.[59] As such,

EQUITY: EFFECTIVE CARE EXHIBIT 22

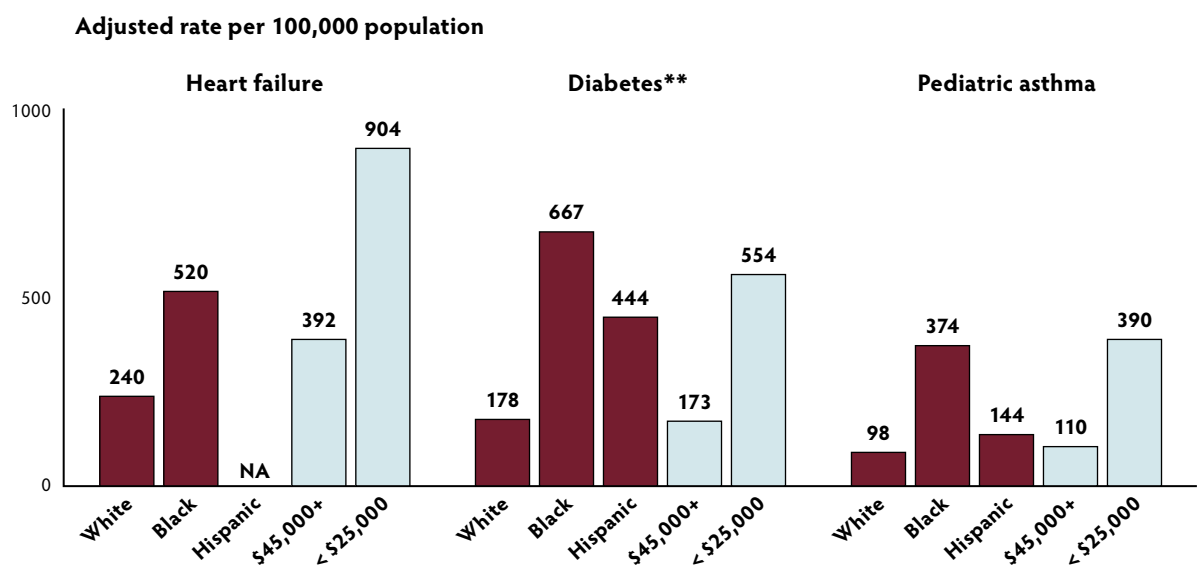
Untreated Dental Caries, by Age, Race/Ethnicity, and Income, 2001–2004



Data: Race/ethnicity—National Health and Nutrition Examination Survey (NCHS 2007); Total and income—J. M. McWilliams, Harvard Medical School analysis of National Health and Nutrition Examination Survey.
Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2008

EQUITY: COORDINATED AND EFFICIENT CARE EXHIBIT 23

Ambulatory Care–Sensitive (Potentially Preventable) Hospital Admissions, by Race/Ethnicity and Patient Income Area, 2004/2005*



* 2004 data for diabetes and pediatric asthma; 2005 data for heart failure. **Combines 4 diabetes admission measures: uncontrolled, short-term complications, long-term complications, and lower extremity amputations.
Patient Income Area=median income of patient zip code. NA=data not available.
Data: Race/ethnicity—Healthcare Cost and Utilization Project, State Inpatient Databases and National Hospital Discharge Survey (AHRQ 2007); Income area—HCUP, Nationwide Inpatient Sample (AHRQ 2007, retrieved from HCUPnet at http://hcupnet.ahrq.gov).
Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2008

disparities in the timeliness and patient-centeredness of care, which are growing between whites and blacks, further exacerbate the risk of adverse outcomes for vulnerable patient populations.

Even greater gaps in care are observed by income and insurance coverage than by race and ethnicity, particularly for indicators of health care access and efficiency. The poor and uninsured are at heightened risk of lacking a regular source of primary care, experiencing medical record or test coordination problems, and facing medical cost burdens. Difficulties with getting timely and coordinated care can lead to poor health outcomes and more costly use of care. Low-income and uninsured patients are more likely than those with higher incomes and insurance to go to an emergency department for care a primary care doctor could have provided. Moreover, rates of hospitalizations for preventable conditions are two to three times higher in low-income communities than in more affluent areas, and gaps are increasing (Exhibit 23).

As for health outcomes, individuals with low levels of education (used as a proxy for low socioeconomic status) continue to be at significantly greater risk of death from chronic diseases, including heart disease, diabetes, and cancer.[60] Further, disparities in mortality rates are widening due to an increase among the least educated and substantial reductions among better educated groups.[61] Although adequate data are not available to track and measure health outcomes by insurance coverage, a growing body of research documents a strong relationship between being uninsured and mortality.[62] Recent studies have shown that, relative to the insured, uninsured cancer patients are more likely to be diagnosed at advanced stages and are less likely to survive once a diagnosis is made.[63]

Inadequate insurance coverage is also a major concern. Both the insured and uninsured are finding it increasingly difficult to pay for their medical care; in fact, more than one-third (35%) of adults who were insured all year went without needed care because of costs, a significant increase since 2005. Moreover, the rate of unpaid medical bills and medical debt has increased among the insured and uninsured alike. Although equity scores by income and insurance demonstrated

some improvements on indicators of access to care, this occurred only because performance declined more rapidly for the high-income and insured groups. It would still require about 40 percent and 70 percent improvement across these indicators for the disparities by insurance and income, respectively, to be eliminated.

Inequity in care is not just a social concern, but an issue of concern for health system performance. Disparities undermine performance across all dimensions of care—access, quality, and efficiency—and lead to missed opportunities to ensure long, healthy, and productive lives.

Appendix A Table 7 presents scores for each of the vulnerable groups (i.e., uninsured, low-income, black, and Hispanic populations) for indicators in the equity dimension. See methodology box on page 17 for calculation of equity ratio scores.

SYSTEM CAPACITY TO INNOVATE AND IMPROVE

NOT SCORED (see *Scorecard Chartpack* for data)

The capacity to innovate and improve to achieve excellence is fundamental to a high-performing health care system. It includes:

- a care system that supports a skilled and motivated health care workforce, with an emphasis on primary care and population health;
- a culture of quality improvement and continuous learning that promotes and rewards recognition of opportunities to reduce errors and improve outcomes; and
- investment in public health initiatives, research, and information necessary to inform, guide, and drive health care decision-making and improvement.

On all three aspects, the U.S. currently under-invests in the system capacity to improve.

HEALTH CARE WORKFORCE

Countries and areas with more primary care physicians (in proportion to population and to medical specialists) achieve more equitable and better overall outcomes at lower cost.[64] Viewed from an international perspective, the U.S. has a relatively weak primary care system.[65] Current payment mechanisms undervalue primary care and fail to support the time and teams necessary to manage and coordinate care.[66] Notably, earnings of primary care physicians lag well behind those of specialists, even as primary care doctors are expected to do more to promote prevention and care of chronic disease.[67] As a result, primary care has become less attractive as a career: the proportion of residents choosing primary care has declined at the same time as the workforce is aging.[68]

Studies suggest that we need to rethink primary care to enhance the capacity to provide accessible, quality, patient-centered, and coordinated care.[69] "Medical home" approaches that invest in clinical practice information systems and embed primary care in integrated systems have the potential to improve outcomes, satisfaction, and enable more efficient use of resources. As illustrated by multiple Scorecard indicators, the U.S. needs a renewed emphasis on primary care for the 21st century—including payment systems that support primary care physicians and midlevel practitioners working together on teams—as a foundation for accessible, high-value care.

An empowered nursing workforce can positively influence patient and nursing home resident satisfaction and quality of care.[70] Job dissatisfaction among nurses contributes to shortages and high staff turnover, which drive up costs and put patients at risk.[71] Data compiled for the Scorecard reveal that nursing staff satisfaction is much more variable in nursing homes than in hospitals.[72] High-performing institutions offer benchmarks for improvement.

A growing body of evidence indicates that higher levels of registered nurse staffing in hospitals and nursing homes is associated with improved quality.[73] Case studies indicate that creative use of nurses with redesigned work processes can free up time to spend on patient care. Nurse staffing levels are of particular concern in nursing homes and vary widely across states. Nursing homes in the five states with the highest registered nurse staffing levels provide double the hours per patient day as the national median, and six times more than those in the five states with the lowest average staffing levels.[74]

ORGANIZATIONAL CULTURE

In its 1999 report, *To Err Is Human*, the Institute of Medicine called on health care organizations to "develop a culture of safety such that an organization's design processes and workforce are focused on a clear goal—dramatic improvement in the reliability and safety of the care process."[75] Teamwork is a key mechanism for achieving high reliability.[76] Creating effective teamwork and a culture of safety are challenging goals for organizations to achieve. A survey completed in 2006 by staff at 382 hospitals reveals

wide variation between high- and low-scoring hospitals on how well they nurture teamwork and continuous improvement.[77] Notably, less than half of hospitals respond effectively to medical or medication errors. Case studies find that organizational leaders can engage their workforce to promote a safety culture through persistent attention and effort.[78]

Instituting a culture of resident-centered care practices in nursing homes has been shown to improve residents' quality of life, increase staff satisfaction, and reduce staff turnover.[79] This approach emphasizes a "home-like" environment in which residents make decisions about daily activities and promotes collaborative decision-making and a consistent care team made up of staff members who know residents and their needs. In a 2007 survey of nursing home directors of nursing, almost half expressed a commitment to culture change, but only a minority indicated that their facility was adopting more than a few of these practices.[80] Federal officials have expressed support for culture change, but have yet to support the goal with changes in payment policies to enable the approach to become widespread.[81]

NATIONAL HEALTH EXPENDITURES FOR RESEARCH AND PUBLIC HEALTH

Building the information infrastructure of the health care system could pay dividends in increased capacity, efficiency, and quality. Necessary elements to transform care systems and support broader population health improvement include interoperable information systems, information on clinical and cost effectiveness, payment incentives aligned with outcomes, and population health activities that can help prevent disease and its complications.

However, between 2000 and 2006, national spending on public health activities fell behind, increasing by only 35 percent, as compared with a 55 percent increase in national health expenditures and a 78 percent increase in insurance administrative costs. Likewise, in an era of medical care advances, national investment in research regarding clinical and cost effectiveness—what works well for which patients and when—has failed to keep pace to inform health care decisions. Only about 5 percent of the federal research budget is devoted to health systems improvement research—less than $1 for every $1,000 in national health care spending. This amount is grossly out of proportion to the scope of the nation's health system. Increased funding for comparative medical effectiveness research and improved patient decision-making would more than pay for itself, saving up to an estimated $368 billion over 10 years from more effective and efficient care.[82]

Summary and Implications

Overall, the *National Scorecard on U.S. Health System Performance, 2008,* finds that the United States is losing ground in providing access to care and has uneven health care quality. The Scorecard also finds broad evidence of inefficient and inequitable care. Average U.S. health system performance would have to improve by more than 50 percent on multiple indicators to reach the benchmarks.

POTENTIAL FOR IMPROVEMENT: IMPACT OF ACHIEVING BENCHMARKS

The Scorecard makes a compelling case for change. Gaps between average performance and benchmarks remain large, underscoring opportunities to save lives, improve health, and reduce spending on ineffective, wasteful care.

Achieving benchmark levels of performance, even among a subset of indicators, would yield considerable gains. For example, if the U.S. reduced its mortality rate from causes amenable to health care to international benchmarks, approximately 101,000 deaths could be prevented annually. The National Committee for Quality Assurance (NCQA) estimates that improving national rates of controlling hypertension and diabetes to those achieved by the top group of health plans could save 16,000 to 39,000 lives each year.[83] Some of the potential improvements may affect the same individuals. Still, these estimates serve as compelling evidence of the human and economic costs of poor performance.

In addition to reducing mortality, health performance improvement has the potential to improve quality of life from preventing disease, disability, and complications. Increasing adult preventive care to reach 80 percent of the population translates to about 70 million more adults reaping the benefits of disease prevention and early detection. Likewise, 37 million additional adults would have a regular provider for primary care and specialty referrals.

Closing gaps between average performance and achieved benchmarks across quality and access indicators also has the potential to reduce costs. If the nation were able to meet the benchmark levels of health system performance on even a select set of indicators, the nation could save at least $50 billion to $100 billion per year. Opportunities for savings come from improving outcomes and coordination as well as reducing insurance overhead costs and geographic variations in costs.

Based on NCQA estimates, controlling diabetes and blood pressure to benchmark levels could yield $1 billion to $2 billion per year in savings through lower medical costs.[84] Improving depression care could increase workplace productivity by an estimated $2.2 billion annually. The Medicare program could potentially save at least $12 billion a year by reducing readmissions and reducing hospitalizations for preventable conditions. Over $1 billion could be saved annually by providing better coordination for frail nursing home residents.

Further savings are possible by lowering the administrative costs of insurance in the U.S. If these costs were the same average share of health spending as in three European countries that rely on mixed private/public insurance, the U.S. could save up to $51 billion each year—or more than half the cost to cover the entire uninsured population. Lowering administrative costs to benchmark levels achieved in the best countries could save up to $102 billion.

The wide variation in costs points to opportunities for net national gains from the provision of more efficient care. If annual per person costs for Medicare in higher-cost states came down to median rates or those achieved in the lowest-quartile states, the nation would save $22 billion to $38 billion per year.[85] Estimated savings from these selected improvements toward more effective, timely, and coordinated care are only a fraction of more than $2 trillion in health spending in 2006. Yet, taken together, they offer targets to reduce costs and improve value.

Moreover, the nation would gain from improved productivity. The Institute of Medicine estimates national economic gains of up to $130 billion per year from insuring the uninsured.[86] A recent update of this analysis estimated potential savings of up to $204 billion in 2006.[87]

The Scorecard highlights the need for a multifaceted approach of mutually supporting policies addressing access, quality, and efficiency simultaneously. Starting sooner rather than later has the potential to accumulate into substantial gains over time. A recent study prepared for the Commission on a High Performance Health System

illustrates that it would be possible to save $1.5 trillion in national health expenditures over 10 years and improve value in terms of access, quality, and outcomes through strategic options including better information, payment changes, and public health improvements, combined with insurance for all.[88] In sum, raising levels of performance to benchmarks offers the potential for significant national gains in health and value.

Looking across dimensions and trends, the 2008 Scorecard reveals several underlying patterns that have implications for policy.

WHAT RECEIVES ATTENTION GETS IMPROVED

Notably, the quality indicators showing significant improvement have all been targets of national and collaborative efforts to improve, informed by data with measurable benchmarks and indicators reached by consensus. These initiatives represent important breakthroughs from the status quo that can and should be emulated in other areas. These positive improvements in performance demonstrate that change can take place rapidly over a relatively short time period when there is leadership and measurement.

- Hospital quality indicators for heart attack, pneumonia, and heart failure (including provision of discharge instructions) were endorsed by a broad hospital quality alliance. Improvement on these indicators followed after Medicare made payment updates contingent on provision of data and public reporting. Hospital quality metrics have also been the focus of Medicare's Premier Hospital Quality Incentive Demonstration and private payer initiatives. This combination of public–private collaboration and federal leadership changed the landscape on hospital participation in public reporting, establishing a single consensus set of measures that are now well-accepted for benchmarking and improvement.
- Hospital standardized mortality ratios were the target of many local and national programs and collaborative initiatives that sought to publicize, implement, and spread evidence-based care and best practices to achieve better outcomes. Likewise, chronic disease indicators have been central to NCQA's monitoring of health plan performance through the Healthcare Effectiveness Data and Information Set (HEDIS).

Conversely, there was failure to improve in areas where we lack metrics or focused efforts to measure, compare, and improve at the local or facility level. These areas include mental health care, primary care, hospital readmission rates, or adverse drug events. Further, the continued failure to adopt health information technology makes it difficult to generate the information necessary to document performance and monitor improvement efforts.

BETTER PRIMARY CARE AND CARE COORDINATION HOLD POTENTIAL FOR IMPROVED OUTCOMES AT LOWER COSTS

Hospital readmission rates have increased and admissions for conditions sensitive to ambulatory care remain high and variable across the country, as do the total costs of caring for the chronically ill. Studies indicate that it is possible to prevent hospitalizations or rehospitalizations with better primary care, discharge planning, and follow-up care—a more integrated, "systems" approach. Following on a recommendation from the Medicare Payment Advisory Commission, the federal government recently proposed that readmission rates be included in an expanded set of quality indicators that hospitals would be required to report to receive the full Medicare payment update.[89]

Multiple indicators highlight the fact that the U.S. has a weak primary care foundation. Investing in primary care with enhanced capacity to provide patients with round-the-clock access, manage chronic care, and coordinate care will be key strategies to move to more organized care systems.[90]

However, current payment incentives for hospitals, physicians, and nursing homes do not support coordination of care or efficient use of expensive, specialized care.[91] Information also fails to flow with patients across sites of care due to lack of health information technology and information exchange systems. These inefficiencies require the attention of policymakers.

AIMING HIGHER: THE CASE FOR A SYSTEMS APPROACH TO CHANGE

In summary, the U.S. health system continues to exhibit suboptimal performance relative to what is achievable and to the resources invested. The 2008 Scorecard documents that there are significant human and economic costs of failing to address the problems in our health system. Recent analysis suggests it could be possible to insure everyone and achieve savings with improved value over

the next decade.[92] It is crucial to recognize that health care access, quality, and efficiency are interrelated. With health care expenditures projected to double to $4 trillion, or 20 percent of national income, and millions more Americans on a path to becoming uninsured or underinsured absent new policies, it is critical to start now on the road to higher performance.

Aiming higher will require strategies that address the multiple sources of poor performance. These strategies include:

- universal and well-designed coverage that ensures affordable access and continuity of care;
- incentives aligned to promote higher quality and more efficient care;
- care that is designed and organized around the patient, not providers or insurers;
- widespread implementation of health information technology with information exchange;
- explicit goals to meet and exceed benchmarks and monitor performance; and
- national policies that promote private–public collaboration and high performance.[93]

As rising costs put family, business, and public budgets under stress, access to care and financial protection are eroding for middle- as well as low-income families. New national policies that take a coherent, whole-system, population view are essential for the nation's future health and economic security.

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Appendices

Appendix A. Indicator, Scoring, and Dimensions Tables

Appendix B. Technical Notes: Scorecard Data Years, Databases, and Sources

Appendix A. Table 1: Changes in Indicator Scores and Rates, 2008 Scorecard Compared with 2006 Scorecard

	Total		Healthy Lives		Quality		Access		Efficiency	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
RATIO SCORES	**37**	**100%**	**5**	**100%**	**19**	**100%**	**5**	**100%**	**8**	**100%**
Score Improved	13	35%	1	20%	7	37%	0	0%	5	63%
Score Declined	15	41%	2	40%	7	37%	4	80%	2	25%
No Change	5	14%	0	0%	3	16%	1	20%	1	13%
Not Updated	4	11%	2	40%	2	11%	0	0%	0	0%
UPDATED INDICATORS*	**53**	**100%**	**3**	**100%**	**27**	**100%**	**5**	**100%**	**18**	**100%**
National Average Improved (>5%)	16	30%	0	0%	12	44%	0	0%	4	22%
National Average Declined (>5%)	15	28%	1	33%	6	22%	3	60%	5	28%
Little/No Change	22	42%	2	67%	9	33%	2	40%	9	50%

* Counts include all indicator and underlying data components with updated national data only. Eight indicators/subcomponents could not be updated.
Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2008

Appendix A. Table 2: Performance Indicators—Healthy Lives

	2006 Scorecard		2008 Scorecard		Score: Ratio of U.S. to Benchmark	
Dimension and Indicator	National Rate	Range of Performance (Bottom Group–Top Group)	National Rate	Range of Performance (Bottom Group–Top Group)	2006 Scorecard	2008 Scorecard
Mortality amenable to health care, Deaths per 100,000 population[a]	115	130–80	110	106–69	**70**	**63**
Infant mortality, Deaths per 1,000 live births[b]	7.0	9.9–4.8	6.8	10.1–4.7	**68**	**69**
Healthy life expectancy at age 60, Years (Average of 2 ratios):					**87**	**87***
Men[c]	15.3	14.4–17.4	*		88	88*
Women[c]	17.9	17.2–20.8	*		86	86*
Adults under 65 limited in any activities because of physical, mental, or emotional problems, percent[b]	14.9	20.1–11.5	17.5	23.4–13.2	**77**	**66**
Children missed 11 or more school days due to illness or injury, percent[b]	5.2	8.1–3.8	*		**73**	**73***
HEALTHY LIVES DIMENSION SCORE					**75**	**72**

Sources: See Appendix B.
Notes: Ranges of performance show the rates for the bottom (worst) and top (best) group as footnoted by indicator. In 2006, benchmark is the top group rate at that period; in 2008, benchmark is the best top group rate from either period. Underlined indicator scores were used to determine the dimension score.
* Indicates no updated data available; used baseline score from 2006.
[a] Average bottom or top three of 19 countries.
[b] Average bottom or top 10 percent of states.
[c] Average bottom or top three of 23 countries.

Appendix A. Table 3: Performance Indicators—Quality

Dimension and Indicator	2006 Scorecard		2008 Scorecard		Score: Ratio of U.S. to Benchmark	
	National Rate (%)	Range of Performance (Bottom Group–Top Group)	National Rate (%)	Range of Performance (Bottom Group–Top Group)	2006 Scorecard	2008 Scorecard
EFFECTIVE CARE SCORE					**74**	**78**
Adults received recommended screening and preventive care[a]	49	31–52	50	32–53	**61**	**62**
Children received recommended immunizations and preventive care (Average of 2 ratios):					**85**	**86**
Received all recommended doses of five key vaccines[b]	79	71–89	81	72–86	89	91
Received both medical and dental preventive care visits[b]	59	48–73	*		81	81*
Needed mental health care and received treatment (Average of 2 ratios):					**76**	**76**
Adults with major depressive episode who received treatment[c]	65	41–83	69	50–87	79	80
Children[b]	59	47–74	*		73	73*
Chronic disease under control (Average of 2 ratios):					**65**	**76**
Adults with diagnosed diabetes whose HbA1c level <9%[d]	79	23–89	88	30–88	89	98
Adults with hypertension whose blood pressure <140/90 mmHg[d]	31	48–75	41	39–68	41	54
Hospitalized patients received recommended care for heart attack, heart failure, and pneumonia (composite)[e]	84	75–91	90	78–95	**84**	**90**
COORDINATED CARE SCORE					**72**	**71**
Adults under 65 with accessible primary care provider[f]	66	38–84	65	37–85	**79**	**76**
Children with a medical home[b]	46	38–60	*		**77**	**77***
Care coordination at hospital discharge (Average of 3 ratios):					**70**	**74**
Hospitalized patients with new Rx: Medications were reviewed at discharge[g]	67	67–86	*		78	78*
Heart failure patients received written instructions at discharge[h]	50	9–87	68	36–94	58	72
Follow-up within 30 days after hospitalization for mental health disorder[i] (Average of health plans):					74	72
Private plans[d]	76	65–86	76	63–88	88	87
Medicare plans[d]	61	39–80	56	29–81	70	64
Medicaid plans[d]	54	22–81	58	17–80	63	66
Nursing homes: hospital admissions and readmissions among residents (Average of 2 ratios):					**71**	**65**
Hospital admissions[j]	17	26–11	19	27–12	63	56
Readmissions[j]	17	21–13	18	22–15	80	73
Home health: hospital admissions[k]	28	47–17	28	48–19	**62**	**62**

Sources: See Appendix B.
Notes: Ranges of performance show the rates for the bottom (worst) and top (best) group as footnoted by indicator. In 2006, benchmark is the top group rate from that period; in 2008, benchmark is the best top group rate from either period. Underlined indicator scores were used to determine the dimension score.
* Indicates no updated data available; used baseline score from 2006.
[a] Uninsured or insured all year. Benchmark is target rate at 80.
[b] Average bottom or top 10 percent of states.
[c] Uninsured or insured.
[d] 10th or 90th percentile health plans.
[e] 10th or 90th percentile hospitals. Benchmark is top hospital rate at 100.
[f] Uninsured adults under age 65 or high-income elderly.
[g] Worst or best of six countries.
[h] 10th or 90th percentile hospitals.
[i] Average of National Committee for Quality Assurance health plans; no national data available. Benchmark is 90th percentile private plans.
[j] 90th or 10th percentile states.
[k] Average bottom or top 25 percent of agencies

Appendix A. Table 4: Performance Indicators—Quality (continued)

Dimension and Indicator	2006 Scorecard National Rate (%)	2006 Scorecard Range of Performance (Bottom Group–Top Group)	2008 Scorecard National Rate (%)	2008 Scorecard Range of Performance (Bottom Group–Top Group)	Score: Ratio of U.S. to Benchmark 2006 Scorecard	Score: Ratio of U.S. to Benchmark 2008 Scorecard
SAFE CARE SCORE					**69**	**68**
Patients reported medical, medication, or lab test error[a]	34	34–22	32	32–19	**65**	**59**
Unsafe drug use (Average of 3 ratios):					**60**	**55**
Ambulatory care visits for treating adverse drug effects, per 1,000 population per year[b]	15	19–11	20	28–16	71	55
Children prescribed antibiotics for throat infection without a "strep" test[c]	43	75–12	35	74–14	27	33
Elderly used 1 of 33 inappropriate drugs[b]	18	20–15	17	20–13	83	76
Nursing home residents with pressure sores (Average of 2 ratios):					**67**	**66**
High-risk residents[d]	13	18–8	13	17–7	61	59
Short-stay residents[d]	19	24–14	17	23–12	73	73
Hospital-standardized mortality ratios, actual to expected deaths[e]	101	118–85	82	89–74	**84**	**90**
PATIENT-CENTERED, TIMELY CARE SCORE					**72**	**69**
Ability to see doctor on same/next day when sick or need medical attention[a]	47	36–81	46	32–74	**58**	**57**
Very/somewhat easy to get care after hours without going to the emergency room[a]	38	38–72	25	25–49	**53**	**35**
Doctor–patient communication: always listened, explained, showed respect, spent enough time[f]	54	55–74	57	59–75	**74**	**75**
Adults with chronic conditions given self-management plan[a]	58	37–65	*		**89**	**89***
Patient-centered hospital care (Avg. 3 ratios):					**87**	**87**
Staff always managed pain well[g]	70	61–79	67	60–75	89	90
Staff always responded when needed help to get to the bathroom or pressed call button[g]	63	52–74	60	48–72	86	83
Staff always explained medicines and side effects[g]	60	49–70	58	49–66	86	87
QUALITY DIMENSION SCORE					**72**	**71**

Sources: See Appendix B.

Notes: Ranges of performance show the rates for the bottom (worst) and top (best) group as footnoted by indicator. In 2006, benchmark is the top group rate from that period; in 2008, benchmark is the best top group rate from either period. Exception is patient-centered hospital care; in 2008, benchmark is the top group rate from that period. Underlined indicator scores were used to determine the dimension score.

* Indicates no updated data available; used baseline score from 2006.

[a] In 2006, worst or best of six countries; in 2008, worst or best of seven countries.

[b] Worst or best of four regions.

[c] 90th or 10th percentile health plans.

[d] Average bottom or top 10 percent of states.

[e] Average bottom or top 10 percent of hospitals.

[f] 10th or 90th percentile health plans.

[g] 10th or 90th percentile hospitals.

Appendix A. Table 5: Performance Indicators—Access

Dimension and Indicator	2006 Scorecard		2008 Scorecard		Score: Ratio of U.S. to Benchmark	
	National Rate (%)	Range of Performance (Bottom Group–Top Group)	National Rate (%)	Range of Performance (Bottom Group–Top Group)	2006 Scorecard	2008 Scorecard
PARTICIPATION SCORE					**65**	**62**
Adults under 65 insured all year, not underinsured[a]	65	32–83	58	28–73	**65**	**58**
Adults with no access problem due to costs[b]	60	60–91	63	63–95	**66**	**66**
AFFORDABLE CARE DIMENSION SCORE					**69**	**54**
Families spending <10% of income or <5% of income, if low income, on OOP medical costs and premiums[c]	81	56–95	77	56–92	**81**	**77**
Population under 65 living in states where premiums for employer-sponsored health coverage are <15% of under-65 median household income	58	NA	25	NA	**58**	**25**
Adults under 65 with no medical bill problems or medical debt[d]	66	53–84	59	44–79	**66**	**59**
ACCESS DIMENSION SCORE					**67**	**58**

Sources: See Appendix Table B.

Notes: Ranges of performance shows the rates for the bottom (worst) and top (best) group as footnoted by indicator. Benchmark is 100 percent of the U.S. population meeting each threshold. Exception is access problems due to cost; in 2006, benchmark is top group rate from that period, and in 2008, benchmark is best top group rate from either period. Underlined indicator scores were used to determine the dimension score. OOP is out-of-pocket.

NA Indicates not applicable.

[a] Less than 200 percent of the federal poverty level or 200 percent or more of poverty.

[b] In 2006, worst or best of five countries; in 2008, worst or best of seven countries.

[c] Less than 100 percent of the federal poverty level or 400 percent or more of poverty.

[d] Less than 200 percent of the federal poverty level or 400 percent of more of poverty.

Appendix A. Table 6: Performance Indicators—Efficiency

Dimension and Indicator	2006 Scorecard National Rate	2006 Scorecard Range of Performance (Bottom Group–Top Group)	2008 Scorecard National Rate	2008 Scorecard Range of Performance (Bottom Group–Top Group)	Score: Ratio of U.S. to Benchmark 2006 Scorecard	Score: Ratio of U.S. to Benchmark 2008 Scorecard
Potential overuse or waste (Average of 3 ratios):					**48**	**41**
Duplicate medical tests: doctor ordered test that had already been done, percent[a]	18	20–6	20	20–4	33	20
Tests results or records not available at time of appointment, percent[a]	23	23–11	22	22–9	48	41
Received imaging study for acute low back pain with no risk factors, percent[b] (Average of health plans):					62	62
Private plans[c]	25	33–18	26	35–19	58	56
Medicaid plans[c]	22	28–15	22	29–15	66	67
Went to emergency room for condition that could have been treated by regular doctor, percent[a]	26	26–6	21	21–6	**23**	**29**
Hospital admissions for ACS conditions (Average of 2 ratios):					**56**	**56**
National ACS admissions, per 100,000 population (Average of 3 conditions):					48	45
Heart failure[d]	498	631–258	476	634–246	52	52
Diabetes (composite)[d]	241	299–137	240	293–126	57	52
Pediatric asthma[d]	178	242–62	156	230–49	35	31
Medicare ACS admissions, per 10,000 beneficiaries[e]	771	1043–499	700	926–465	65	66
Medicare hospital 30-day readmission rates, percent[e]	18	22–14	18	21–14	**75**	**76**
Medicare annual costs of care and mortality for heart attacks, hip fractures, or colon cancer (Average of 2 ratios):					**88**	**89**
Resource costs, annual Part A and Part B $[e]	$26,829	$29,047–$23,314	$28,011	$30,263–$24,906	87	89
1-year mortality rate, percent[e]	30	32–27	30	33–27	90	89
Medicare annual costs of care for chronic diseases: Diabetes, heart failure, COPD, Part A and Part B $ (Average of 4 ratios):					**68**	**71**
All three conditions[e]	$31,792	$43,973–$20,960	$38,004	$53,019–$25,732	66	68
Diabetes + heart failure[e]	$18,461	$27,310–$12,747	$23,056	$32,199–$16,144	69	70
Diabetes + COPD[e]	$13,188	$18,024–$8,872	$15,367	$20,062–$11,317	67	74
Heart failure + COPD[e]	$22,415	$32,732–$15,355	$27,498	$37,450–$19,787	69	72
Health insurance administration as percent of national health expenditures[f]	7.4	6.8–2.4	7.5	6.7–2.3	**33**	**31**
Physicians using electronic medical records, percent[g]	17	7–80	28	23–98	**21**	**29**
EFFICIENCY DIMENSION SCORE					**52**	**53**

Sources: See Appendix B.

Notes: Ranges of performance show the rates for the bottom (worst) and top (best) group as footnoted by indicator. In 2006, benchmark is the top group rate from that period; in 2008, benchmark is the best top group rate from either period. Exceptions are cost indicators; in 2008, benchmark is the top group rate from that period. Underlined indicator scores were used to determine the dimension score.

ACS is ambulatory care–sensitive. COPD is chronic obstructive pulmonary disease.

[a] In 2006, worst or best of six countries. In 2008, worst or best of seven countries.

[b] Average of National Committee for Quality Assurance health plans; no national data available. Benchmark is 10th percentile Medicaid plans.

[c] 90th or 10th percentile health plans.

[d] Average bottom or top 10 percent of states.

[e] 90th or 10th percentile regions.

[f] Average bottom or top three of 11 countries.

[g] In 2006, average bottom or top three of 19 countries; in 2008, best or worst of seven countries.

Appendix A. Table 7: Performance Indicators—Equity

Dimension and Indicator	Insured Compared with Uninsured		High Income Compared with Low Income		White Compared with Black		White Compared with Hispanic	
	2006 Scorecard	2008 Scorecard	2006 Scorecard	2008 Scorecard	2006 Scorecard	2008 Scorecard	2006 Scorecard	2008 Scorecard
HEALTHY LIVES SCORE	**–**	**–**	**54**	**55**	**77**	**77**	**97**	**97**
Infant mortality	–	–	63	67	42	42	100	100
Adults under 65 limited in any activities because of physical, mental, or emotional problems	–	–	46	45	100	100	100	100
Children missed 11 or more school days due to illness or injury	–	–	51	51*	100	100*	100	100*
Cancer 5-year survival	–	–	82	82*	82	82*	97	97*
Coronary heart disease and diabetes-related deaths	–	–	29	29	64	64	86	88
EFFECTIVE CARE SCORE	**59**	**57**	**69**	**68**	**80**	**76**	**73**	**70**
Older adults did not receive recommended screening and preventive care	76	71	80	75	85	84	77	80
Children did not receive recommended immunizations and preventive care	57	57*	58	60	77	83	75	81
Needed mental health care and did not receive treatment	43	41	76	87	77	70	69	58
Untreated dental caries	45	43	33	32	49	51	50	50
Chronic disease not under control	66	63	93	85	97	73	92	67
Diabetics did not receive HbA1c, retinal, and foot exams	67	67*	72	67	93	97	78	83
SAFE CARE SCORE	**97**	**97**	**94**	**94**	**77**	**77**	**94**	**94**
Patient reported medical, medication, or lab test error	100	100*	94	94*	67	67*	100	100*
AHRQ patient safety indicators	95	94	95	93	84	86	96	95
Nursing home residents with pressure sores	–	–	–	–	79	79	87	86
PATIENT-CENTERED, TIMELY CARE SCORE	**56**	**56**	**59**	**59**	**72**	**62**	**54**	**64**
6+ days to see doctor when sick or need medical attention	57	67	54	62	58	44	45	57
Doctor–patient communication: sometimes/never listened, explained, showed respect, spent enough time	55	46	63	57	86	79	63	71
COORDINATED AND EFFICIENT CARE SCORE	**55**	**58**	**63**	**60**	**61**	**73**	**58**	**72**
Adults without an accessible primary care provider	47	46	68	66	74	77	63	63
Children without a medical home	62	62*	65	65*	78	78*	68	68*
Duplicate medical tests: doctor ordered test that had already been done	43	58	53	65	50	100	43	87
Tests results or records not available at time of appointment	58	61	74	61	62	75	46	75
Went to ER for condition that could have been treated by regular doctor	67	65	58	50	41	68	65	100
Hospital admissions for ACS conditions	–	–	50	42	32	33	51	54
ACCESS SCORE	**57**	**61**	**30**	**32**	**86**	**87**	**82**	**87**
Adults under 65 with time uninsured during the year	–	–	28	29	75	73	47	48
Adults under 65 with access problems because of costs	47	49	46	43	100	100	88	100
Families spending >10% of income or >5% of income, if low income, on OOP medical costs and premiums	82	94	11	19	94	93	92	100
Adults under 65 with medical bill problems or medical debt	50	54	34	38	75	80	100	100
SCORE BY EQUITY GROUP	**65**	**66**	**61**	**61**	**76**	**75**	**77**	**81**

Sources: See Appendix B.
ER is emergency room. ACS is ambulatory–care sensitive. OOP is out-of-pocket.
* Indicates no updated data available; used baseline score from 2006.
– Indicates not scored.

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Appendix B. Technical Notes: Scorecard Data Years, Databases, and Sources

The following list provides additional information for all indicators, including: 1) the date for national and benchmark data used in the 2006 and 2008 scorecards; 2) database; and 3) citation for data drawn from published sources, online databases, or researchers who conducted new data analysis. Further descriptions are provided below for select indicators marked by an asterisk.

		Year for 2006 Scorecard	Year for 2008 Scorecard	Database	Source Notes
LONG, HEALTHY & PRODUCTIVE LIVES					
1.	Mortality amenable to health care*	1997-1998	2002-2003	WHO mortality files	E. Nolte and C.M. McKee, "Measuring the Health of Nations: Updating an Earlier Analysis," *Health Affairs* 27, no. 1 (2008): 58-71.
2.	Infant mortality	2002	2004	NVSS-I	AHRQ, *National Healthcare Quality Report,* Data Tables Appendix (2005, 2007).
3.	Healthy life expectancy at age 60				
3.1.	Men	2002	Not Updated	WHO	WHO, *The World Health Report 2003: Shaping the Future* (Geneva: WHO, 2003).
3.2.	Women	2002	Not Updated	Same as above.	Same as above.
4.	Adults under 65 limited in any activities because of physical, mental, or emotional problems	2004	2006	BRFSS	Analysis by D. Belloff, Rutgers Center for State Health Policy.
5.	Children missed 11 or more school days due to illness or injury	2003	Not Updated	NSCH	Retrieved from the Data Resource Center website at http://www.nschdata.org.
QUALITY					
6.	Adults received recommended screening and preventive care*	2002	2005	MEPS	Analysis by B. Mahato, Columbia University.
7.	Children received recommended immunizations and preventive care				
7.1.	Received all recommended doses of five key vaccines	2003	2006	NIS	NCHS, National Immunization Program.
7.2.	Received both medical and dental preventive care visits	2003	Not Updated	NSCH	Retrieved from the Data Resource Center website at http://www.nschdata.org.
8.	Needed mental health care and received treatment				
8.1.	Adults with major depressive episode who received treatment	2004	2006	NSDUH	SAMHSA, *Results from the National Survey on Drug Use and Health: National Findings* (2006, 2007).
8.2.	Children	2003	Not Updated	NSCH	Retrieved from the Data Resource Center at http://www.nschdata.org.
9.	Chronic disease under control				
9.1.	Adults with diagnosed diabetes whose HbA1c level <9%: national data	1999-2000	2003-2004	NHANES	Analysis by J. M. McWilliams, Harvard Medical School.
	Adults with diagnosed diabetes whose HbA1c level <9%: benchmark data	2004	2006	HEDIS	NCQA, *HEDIS Audit Means, Percentiles and Ratios* (2005, 2007).
9.2.	Adults with hypertension whose blood pressure <140/90 mmHg: national data	1999-2000	2003-2004	NHANES	Analysis by J. M. McWilliams, Harvard Medical School.
	Adults with hypertension whose blood pressure <140/90 mmHg: benchmark data	2004	2006	HEDIS	NCQA, *HEDIS Audit Means, Percentiles and Ratios* (2005, 2007).
10.	Hospitalized patients received recommended care for heart attack, heart failure, and pneumonia (composite)*	2004	2006	CMS Hospital Compare	Analysis by A. Jha and A. Epstein, Harvard School of Public Health.
11.	Adults under 65 with accessible primary care provider*	2002	2005	MEPS	Analysis by B. Mahato, Columbia University
12.	Children with a medical home	2003	Not Updated	NSCH	Retrieved from the Data Resource Center website at http://www.nschdata.org.
13.	Care coordination at hospital discharge				
13.1.	Hospitalized patients with new Rx: Medications were reviewed at discharge	2005	Not Updated	Commonwealth Fund IHP Survey	Analysis by authors using survey sample of adults with health problems.
13.2.	Heart failure patients received written instructions at discharge	2004	2006	CMS Hospital Compare	Analysis by A. Jha and A. Epstein, Harvard School of Public Health.
13.3.	Follow-up within 30 days after hospitalization for mental health disorder: private plans, Medicare, Medicaid	2004	2006	HEDIS	NCQA, *HEDIS Audit Means, Percentiles and Ratios* (2005, 2007).
14.	Nursing homes: hospital admissions and readmissions among residents				
14.1.	Hospital admissions	2000	2004	MEDPAR, MDS	Analysis by V. Mor, Brown University.
14.2.	Readmissions	2000	2004	Same as above.	Same as above.
15.	Home health: hospital admissions	2003-2004	2006-2007	OASIS	2003–2004 data from K. Pace et al., Acute hospitalization of home health patients report of analyses, literature review, and technical expert panel (2005); 2006–2007 data retrieved from CMS Home Health Compare database at http://www.medicare.gov/HHCompare.

		Year for 2006 Scorecard	Year for 2008 Scorecard	Database	Source Notes
16.	Patients reported medical, medication, or lab test error	2005	2007	Commonwealth Fund IHP Survey	Analysis by authors using survey sample of adults with health problems.
17.	Unsafe drug use				
17.1.	Ambulatory care visits for treating adverse drug effects	2001	2004	NAMCS-NHAMCS	Analysis by C. Zhan, AHRQ.
17.2.	Children prescribed antibiotics for throat infection without a "strep" test: national data	1997-2003	2004	NAMCS-NHAMCS	Analysis by J. Linder, Brigham and Women's Hospital.
	Children prescribed antibiotics for throat infection without a "strep" test: benchmark data	2004	2006	HEDIS	NCQA, *HEDIS Audit Means, Percentiles and Ratios* (2005, 2007).
17.3.	Elderly used 1 of 33 inappropriate drugs	2002	2004	MEPS	AHRQ, *National Healthcare Quality Report,* Data Tables Appendix (2005, 2007).
18.	Nursing home residents with pressure sores				
18.1.	High-risk residents	2004	2006	MDS	AHRQ, *National Healthcare Quality Report,* Data Tables Appendix (2005, 2007).
18.2.	Short-stay residents	2004	2006	Same as above.	Same as above.
19.	Hospital-standardized mortality ratios*	2000-2002	2004-2006	Medicare data	Analysis by Sir Brian Jarman, Imperial College London, United Kingdom.
20.	Ability to see doctor on same/next day when sick or need medical attention	2005	2007	Commonwealth Fund IHP Survey	Analysis by authors using survey sample of adults with health problems.
21.	Very/somewhat easy to get care after hours without going to the ER	2005	2007	Commonwealth Fund IHP Survey	Analysis by authors using survey sample of adults with health problems.
22.	Doctor-patient communication: always listened, explained, showed respect, spent enough time: national data	2002	2004	MEPS	AHRQ, *National Healthcare Quality Report,* Data Tables Appendix (2005, 2007).
	Doctor-patient communication: always listened, explained, showed respect, spent enough time: benchmark data	2004	2006	CAHPS	Provided by NCQA.
23.	Adults with chronic conditions given self-management plan	2005	Not Updated	Commonwealth Fund IHP Survey	Analysis by authors using survey sample of adults with health problems.
24.	Patient-centered hospital care				
24.1.	Staff always managed pain well	2005	2007	HCAHPS	2005 data provided by Dale Shaller and AHRQ CAHPS benchmarking database team; 2007 data retrieved from CMS Hospital Compare database at www.hospitalcompare.hhs.gov.
24.2.	Staff always responded when needed help to get to the bathroom or pressed call button	2005	2007	Same as above.	Same as above.
24.3.	Staff always explained medicines and side effects	2005	2007	Same as above.	Same as above.
ACCESS					
25.	Adults under 65 insured all year, not underinsured	2003	2007	Commonwealth Fund Biennial Health Insurance Survey	Analysis by authors.
26.	Adults with no access problem due to costs	2004	2007	Commonwealth Fund IHP Survey	Analysis by authors.
27.	Families spending <10% of income or <5% of income, if low income, on OOP medical costs and premiums	2001	2005	MEPS	Analysis by P. Cunningham, Center for Studying Health System Change.
28.	Population under 65 living in states where premiums for employer-sponsored health coverage are <15% of under-65 median household income	2003	2005	MEPS (premiums), CPS (household income)	Analysis of CPS by B. Mahato, Columbia University. Complete analysis by authors.
29.	Adults under 65 with no medical bill problems or medical debt	2005	2007	Commonwealth Fund Biennial Health Insurance Survey	Analysis by authors.
EFFICIENCY					
30.	Potential overuse or waste				
30.1.	Duplicate medical tests: doctor ordered test that had already been done	2005	2007	Commonwealth Fund IHP Survey	Analysis by authors using survey sample of adults with health problems.
30.2.	Tests results or records not available at time of appointment	2005	2007	Commonwealth Fund IHP Survey	Analysis by authors using survey sample of adults with health problems.
30.3.	Received imaging study for acute low back pain with no risk factors: Private plans, Medicaid	2004	2006	HEDIS	NCQA, *HEDIS Audit Means, Percentiles and Ratios* (2005, 2007).
31.	Went to ER for condition that could have been treated by regular doctor	2005	2007	Commonwealth Fund IHP Survey	Analysis by authors using survey sample of adults with health problems.

		Year for 2006 Scorecard	Year for 2008 Scorecard	Database	Source Notes
32.	Hospital admissions for ACS conditions				
32.1.	National ACS admissions				
32.1a.	Heart failure	2002	2004	HCUP	AHRQ, *National Healthcare Quality Report,* Data Tables Appendix (2005, 2007).
32.1b.	Diabetes (composite)	2002	2004	Same as above.	Same as above.
32.1c.	Pediatric asthma	2003	2004	Same as above.	Same as above.
32.2.	Medicare ACS admissions*	2003	2005	Medicare SAF 5% Inpatient Data	Analysis by G. Anderson and R.Herbert, Johns Hopkins Bloomberg School of Public Health.
33.	Medicare hospital 30-day readmission rates*	2003	2005	Medicare SAF 5% Inpatient Data	Analysis by G. Anderson and R.Herbert, Johns Hopkins Bloomberg School of Public Health.
34.	Medicare annual costs of care and mortality for heart attacks, hip fractures, or colon cancer				
34.1.	Resource costs, annual Part A and Part B	2000-2002	2004	20% national sample of Medicare beneficiaries	Analysis by E. Fisher, J. Sutherland, and D. Radley, Dartmouth Medical School
34.2.	1-year mortality rate	2000-2002	2004	Same as above.	Same as above.
35.	Medicare annual costs of care for chronic diseases: Diabetes, heart failure, COPD				
35.1.	All three conditions	2001	2005	Medicare SAF 5% Inpatient Data	Analysis by G. Anderson and R. Herbert, Johns Hopkins Bloomberg School of Public Health.
35.2.	Diabetes + Heart failure	2001	2005	Same as above.	Same as above.
35.3.	Diabetes + COPD	2001	2005	Same as above.	Same as above.
35.4.	Heart Failure + COPD	2001	2005	Same as above.	Same as above.
36.	Health insurance administration as percent of national health expenditures	2003	2005	OECD Health Data 2007	
37.	Physicians using electronic medical records	2001	2006	Commonwealth Fund International Survey of Physicians	Analysis by authors.
EQUITY					
1.	Infant mortality	2002	2004	NVSS-I	AHRQ, *National Healthcare Disparities Report,* Data Appendix Tables (2005, 2007).
2.	Adults under 65 limited in any activities because of physical, mental, or emotional problems	2004	2006	BRFSS	Analysis by D. Belloff, Rutgers Center for State Health Policy.
3.	Children missed 11 or more school days due to illness or injury	2003	Not Updated	NSCH	Retrieved from the Data Resource Center website at http://www.nschdata.org.
4.	Cancer 5-year survival: race/ethnicity data	1988-1997	Not Updated	SEER	L. Clegg et al., "Cancer Survival among US Whites and Minorities: A SEER Program Population-Based Study," *Arch Intern Med* 162, no. 17 (2002): 1985-93
	Cancer 5-year survival: income data	1998-1994	Not Updated	SEER	G. Singh et al., *Area Socioeconomic Variations in US Cancer Incidence, Mortality, Stage, Treatment, and Survival 1975–1999* (Bethesda, MD: National Cancer Institute, 2003).
5.	Coronary heart disease and diabetes-related deaths	2003	2004	NVSS-M	Retrieved from NCHS DATA2010 database at http://wonder.cdc.gov/data2010.
6.	Older adults (age 50 and over) did not receive recommended screening and preventive care	2002	2005	MEPS	Analysis by B. Mahato, Columbia University.
7.	Children did not receive recommended immunizations and preventive				
7.1	Did not receive all recommended doses of five key vaccines	2003	2006	NIS	NCHS, National Immunization Program.
7.2	Did not receive both medical and dental preventive care visits	2003	Not Updated	NSCH	Retrieved from the Data Resource Center website at http://www.nschdata.org.
8.	Needed mental healthcare and did not receive treatment				
8.1.	Adults with major depressive episode who did receive treatment	2004	2006	NSDUH	SAMHSA, *Results from the National Survey on Drug Use and Health: National Findings* (2006, 2007).
8.2.	Children	2003	Not Updated	NSCH	Retrieved from the Data Resource Center at http://www.nschdata.org.
9.	Untreated dental caries: race/ethnicity data	1999-2002	2001-2004	NHANES	NCHS, *Health, United States, 2007* (Hyattsville, M.D.: Centers for Disease Control and Prevention, 2007).
	Untreated dental caries: income and insurance data	1999-2002	2001-2004	NHANES	Analysis by J. M. McWilliams, Harvard Medical School.

		Year for 2006 Scorecard	Year for 2008 Scorecard	Database	Source Notes
10.	Chronic disease not under control:				
10.1	Adults with diagnosed diabetes whose HbA1c level ≥9%: race/ethnicity and income data	1999-2002	1999-2004	NHANES	AHRQ, *National Healthcare Quality Report,* Data Tables Appendix (2005). Analysis updated by J. M. McWilliams, Harvard Medical School.
	Adults with diagnosed diabetes whose HbA1c level ≥9%: insurance data	1988-1994	1999-2004	NHANES	Saaddine et al., "A Diabetes Report Card for the United States: Quality of Care in the 1990s," *Ann Intern Med* 136, no 8: 565-74. Analysis updated by J. M. McWilliams, Harvard Medical School.
10.2	Adults with hypertension whose blood pressure ≥140/90 mmHg	1999-2002	1999-2004	NHANES	AHRQ, *National Healthcare Quality Report,* Data Tables Appendix (2005). Analysis updated by J. M. McWilliams, Harvard Medical School.
11.	Diabetic adults (age 40 and over) did not receive HbA1c, retinal, and foot exams	2002	2004	MEPS	AHRQ, *National Healthcare Quality Report,* Data Tables Appendix (2005, 2007).
12.	Patients reported medical, medication, or lab test error	2005	2007	Commonwealth Fund IHP Survey	Analysis by authors using survey sample of general adult population.
13.	AHRQ patient safety indicators				
13.1	Failure to rescue	2002	2004	HCUP	AHRQ, *National Healthcare Quality Report,* Data Appendix Tables (2005, 2007). AHRQ, *National Healthcare Disparities Report,* Data Appendix Tables (2005, 2007).
13.2	Decubitus ulcers	2002	2004	Same as above.	Same as above.
13.3	Selected infections due to medical care	2002	2004	Same as above.	Same as above.
13.4	Postoperative pulmonary embolus or deep vein thrombosis	2002	2004	Same as above.	Same as above.
13.5	Postoperative sepsis	2002	2004	Same as above.	Same as above.
14.	Nursing home residents with pressure sores				
14.1.	High-risk residents	2004	2005	MDS	AHRQ, *National Healthcare Disparities Report,* Data Tables Appendix (2005, 2007).
14.2.	Short-stay residents	2004	2005	Same as above.	Same as above.
15.	Waited 6 or more days to see doctor when sick or need medical attention	2005	2007	Commonwealth Fund IHP Survey	Analysis by authors using survey sample of general adult population.
16.	Doctor-patient communication: sometimes/never listened, explained, showed respect, spent enough time	2002	2004	MEPS	AHRQ, *National Healthcare Quality Report,* Data Tables Appendix (2005, 2007).
17.	Adults (age 19 and over) without an accessible primary care provider	2002	2005	MEPS	Analysis by B. Mahato, Columbia University
18.	Children without a medical home	2003	Not Updated	NSCH	Retrieved from the Data Resource Center website at http://www.nschdata.org.
19.	Duplicate medical tests: doctor ordered test that had already been done	2005	2007	Commonwealth Fund IHP Survey	Analysis by authors using survey sample general adult population.
20.	Tests results or records not available at time of appointment	2005	2007	Commonwealth Fund IHP Survey	Analysis by authors using survey sample general adult population.
21.	Went to ER for condition that could have been treated by regular doctor	2005	2007	Commonwealth Fund IHP Survey	Analysis by authors using survey sample of general adult population.
22.	Hospital admissions for ACS conditions				
22.1	Congestive heart failure: race/ethnicity data	2002	2005	NHDS	AHRQ, *National Healthcare Disparities Report,* Data Tables Appendix (2005, 2007).
	Congestive heart failure: income data	2002	2004	HCUP	Retrieved from HCUPnet database at http://hcupnet.ahrq.gov.
22.2	Diabetes (composite): race/ethnicity data	2002	2004	HCUP	Calculated by authors from AHRQ, *National Healthcare Disparities Report,* Data Tables Appendix (2005, 2007).
	Diabetes (composite): income data	2002	2004	HCUP	Calculated by authors from HCUPnet database at http://hcupnet.ahrq.gov.
22.3	Pediatric asthma: race/ethnicity data	2003	2004	HCUP	AHRQ, *National Healthcare Disparities Report,* Data Tables Appendix (2007).
	Pediatric asthma: income data	2003	2004	HCUP	AHRQ, *National Healthcare Quality Report,* Data Tables Appendix (2007).
23.	Adults under 65 with time uninsured during the year	2002	2004	MEPS	AHRQ, *National Healthcare Disparities Report,* Data Tables Appendix (2005, 2007).
24.	Adults under 65 with access problems because of costs	2005	2007	Commonwealth Fund Biennial Health Insurance Survey	Analysis by authors.
25.	Families spending >10% of income or >5% of income, if low income, on out-of-pocket medical costs and premiums	2001	2005	MEPS	Analysis by P. Cunningham, Center for Studying Health System Change.
26.	Adults under 65 with medical bill problems or medical debt	2005	2007	Commonwealth Fund Biennial Health Insurance Survey	Analysis by authors.

DEFINITION OF DATABASES

BRFSS = Behavioral Risk Factor Surveillance System
CAHPS = Consumer Assessment of Healthcare Providers and System
CDC = Centers for Disease Control and Prevention
CPS = Current Population Survey
HCAHPS = Hospital Consumer Assessment of Healthcare Providers and Systems Survey
HCUP = Healthcare Cost and Utilization Project
HEDIS = Healthcare Effectiveness Data and Information Set
IHP = International Health Policy
MDS = Nursing Home Minimum Data Set
MEDPAR = Medicare Provider Analysis and Review
MEPS = Medical Expenditure Panel Survey
NAMCS-NHAMCS = National Ambulatory Medical Care Survey-National Hospital Ambulatory Care Medical Survey
NCHS = National Center for Health Statistics
NHANES = National Health and Nutrition Examination Survey
NHDS = National Hospital Discharge Survey
NIS = National Immunization Survey
NSCH = National Survey of Children's Health
NSDUH = National Survey on Drug Use and Health
OASIS = Outcome and Assessment Information Set
OECD = Organization for Economic Cooperation and Development
NVSS-I = National Vital Statistics System, Linked Birth and Infant Death Data
NVSS-M = National Vital Statistics System, Mortality Data
SAF = Standard Analytical Files
SAMHSA = Substance Abuse and Mental Health Services Administration
WHO = World Health Organization

DEFINITIONS FOR SELECT INDICATORS

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).

Cause of deaths	Age
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

Adults received recommended screening and preventive care: Percent of adults 18 or who received seven key screening or preventive services as recommended by the U.S. Preventive Services Task Force, including: blood pressure screening within 2 years; cholesterol screening within 5 years; Pap test within 3 years for women age 18 and older; mammography within 2 years for women age 40 and older; fecal occult blood testing (FOBT) within 2 years or colonoscopy/sigmoidoscopy ever for adults age 50 and older (either test); and influenza vaccination within past year for adults 65 or older.

Hospitalized patients received recommended care for heart attack, heart failure, and pneumonia (composite): Proportion of cases where a hospital provided the recommended process of care for patients with heart attack (acute myocardial infarction), heart failure, and pneumonia for 10 indicators. The composite includes 5 clinical services for heart attack (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 heart failure (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).

Adults under 65 with accessible primary care provider: Percent of adults ages 19 to 64 that have a usual source of care who provides preventive care (such as general checks ups, examinations, and immunizations), care for new and ongoing health problems, and referrals to other health professionals when needed and who is easy to get to.

Hospital-standardized mortality ratios: Ratio of actual to expected in-hospital deaths among Medicare beneficiaries diagnosed with conditions accounting for 80 percent of inpatient mortality. The number of deaths that would be expected is based on national hospital death rates, stratified by patient age, sex, race, admission source, admission type and length of stay. Expected rates use national hospital deaths in 2000 as the standard. The standardized ratio is further adjusted for community risk factors using regression analysis.

Medicare ACS admissions: Hospital admissions of fee-for-service Medicare beneficiaries age 65 and older for one of 11 ambulatory care-sensitive conditions (AHRQ Prevention Quality 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.

Medicare hospital 30-day readmission rates: Fee-for-service Medicare beneficiaries age 65 and older with initial admissions due to one of 31 select conditions (see list) who are readmitted within 30 days following discharge for the initial admission.

1. Abnormal heartbeat
2. Chronic obstructive pulmonary disease (COPD)
3. Congestive heart failure
4. Diabetes with amputation
5. Diabetes - medical management
6. Kidney failure
7. Kidney and urinary tract infections
8. Pneumonia - aspiration
9. Pneumonia - infectious
10. Respiratory failure with mechanical ventilation
11. Respiratory failure without mechanical ventilation
12. Stomach and intestinal bleeding
13. Stroke - hemorrhagic
14. Stroke - non-hemorrhagic
15. Abdominal aortic aneurysm repair
16. Gallbladder removal - laparoscopic
17. Gallbladder removal - open
18. Hip fracture - surgical repair
19. Hysterectomy - vaginal
20. Removal of blockage of neck vessels
21. Bronchitis & asthma, complicated DRG096
22. Bronchitis & asthma, uncomplicated DRG097
23. Hypotension & fainting, complicated DRG141
24. Chest pain DRG143
25. Cirrhosis & alcoholic hepatitis DRG202
26. Noncancerous pancreatic disorders DRG204
27. Liver disease except cancer, cirrhosis, alcoholic hepatitis, complicated DRG205
28. Medical back problems DRG243
29. Surgery for infectious or parasitic disease DRG415
30. Infection after surgery or trauma DRG418
31. Vascular operations except heart, complicated DRG478

Further Reading

Publications listed below can be found on the commonwealth fund's web site at www.Commonwealthfund.org.

The North Dakota Experience: Achieving High-Performance Health Care Through Rural Innovation and Cooperation (May 2008). Douglas McCarthy, Rachel Nuzum, Stephanie Mika, Jennifer Wrenn, and Mary Wakefield.

The Building Blocks of Health Reform: Achieving Universal Coverage and Health System Savings (May 2008). Karen Davis, Cathy Schoen, and Sara R. Collins.

Bending the Curve: Options for Achieving Savings and Improving Value in U.S. Health Spending (Dec. 2007). Cathy Schoen, Stuart Guterman, Anthony Shih, Jennifer Lau, Sophie Kasimow, Anne Gauthier, and Karen Davis.

A High Performance Health System for the United States: An Ambitious Agenda for the Next President (Nov. 2007). The Commonwealth Fund Commission on a High Performance Health System.

A Roadmap to Health Insurance for All: Principles for Reform (Oct. 2007). Sara R. Collins, Cathy Schoen, Karen Davis, Anne Gauthier, and Stephen C. Schoenbaum.

An Analysis of Leading Congressional Health Care Bills, 2005–2007: Part II, Quality and Efficiency (July 2007). Karen Davis, Sara R. Collins, and Jennifer L. Kriss.

Denver Health: A High-Performance Public Health Care System (July 2007). Rachel Nuzum, Douglas McCarthy, Anne Gauthier, and Christina Beck.

Aiming Higher: Results from a State Scorecard on Health System Performance (June 2007). Joel C. Cantor, Cathy Schoen, Dina Belloff, Sabrina K. H. How, and Douglas McCarthy.

An Analysis of Leading Congressional Health Care Bills, 2005–2007: Part I, Insurance Coverage (Mar. 2007). Sara R. Collins, Karen Davis, and Jennifer L. Kriss.

Slowing the Growth of U.S. Health Care Expenditures: What Are the Options? (Jan. 2007). Karen Davis, Cathy Schoen, Stuart Guterman, Tony Shih, Stephen C. Schoenbaum, and Ilana Weinbaum.

Why Not the Best? Results from a National Scorecard on U.S. Health System Performance (Sept. 2006). The Commonwealth Fund Commission on a High Performance Health System.

Framework for a High Performance Health System for the United States (Aug. 2006). The Commonwealth Fund Commission on a High Performance Health System.

Public Views on Shaping the Future of the U.S. Health System (Aug. 2006). Cathy Schoen, Sabrina K. H. How, Ilana Weinbaum, John E. Craig, Jr., and Karen Davis.

Gaps in Health Insurance: An All-American Problem—Findings from the Commonwealth Fund Biennial Health Insurance Survey (Apr. 2006). Sara R. Collins, Karen Davis, Michelle M. Doty, Jennifer L. Kriss, and Alyssa L. Holmgren.

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