Why Not the Best?

Results from the National Scorecard on U.S. Health System Performance, 2011

THE COMMONWEALTH FUND COMMISSION ON A HIGH PERFORMANCE HEALTH SYSTEM

OCTOBER 2011

THE COMMONWEALTH FUND

THE COMMONWEALTH FUND COMMISSION ON A HIGH PERFORMANCE HEALTH SYSTEM

Membership

The Commonwealth Fund

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, 2011

THE COMMONWEALTH FUND COMMISSION ON A HIGH PERFORMANCE HEALTH SYSTEM

OCTOBER 2011

ABSTRACT The *National Scorecard on U.S. Health System Performance, 2011,* updates a series of comprehensive assessments of U.S. population health and health care quality, access, efficiency, and equity. It finds substantial improvement on quality-of-care indicators that have been the focus of public reporting and collaborative initiatives. However, U.S. health system performance continues to fall far short of what is attainable, especially given the enormity of public and private resources devoted nationally to health. Across 42 performance indicators, the U.S. achieves a total score of 64 out of a possible 100, when comparing national rates with domestic and international benchmarks. Overall, the U.S. failed to improve relative to these benchmarks, which in many cases rose. Costs were up sharply, access to care deteriorated, health system efficiency remained low, disparities persisted, and health outcomes failed to keep pace with benchmarks. The Affordable Care Act targets many of the gaps identified by the Scorecard.

Support for this research was provided by The Commonwealth Fund. The views presented here are those of the authors and not necessarily those of The Commonwealth Fund or its directors, officers, or staff. This and other Fund publications are available online at www.commonwealthfund.org. To learn more about new publications when they become available, visit the Fund's Web site and register to receive e-mail alerts. Commonwealth Fund pub. no. 1500.

Contents

List of Exhibits

About the Authors

Douglas McCarthy, M.B.A., is senior research adviser to The Commonwealth Fund and the Institute for Healthcare Improvement (IHI) in Cambridge, Mass., where he conducts qualitative research on state and local efforts to promote health system transformation. He supports The Commonwealth Fund's Health System Scorecard and Research Project team at IHI. His 25-year career has spanned research, policy, operations, and consulting roles for government, corporate, academic, and philanthropic organizations. He has authored or coauthored numerous publications, including a series of 50 case studies of high-performing organizations and initiatives and *A Chartbook on the Quality of Health Care in the United States* (written with Sheila Leatherman), named by AcademyHealth as one of 20 core books in the field of health outcomes. Mr. McCarthy received his bachelor's degree with honors from Yale College and a master's degree in health care management from the University of Connecticut. During 1996–1997, he was a public policy fellow at the Hubert H. Humphrey School of Public Affairs at the University of Minnesota.

Sabrina K. H. How, M.P.A., is senior research associate for The Commonwealth Fund's Health System Scorecard and Research Project, a team based at the Institute for Healthcare Improvement in Cambridge, Mass., with responsibilities for developing and producing national, state, and substate regional analyses on health care system performance. She also served in this capacity at The Commonwealth Fund in New York from 2006 until July 2010, when the project team was created. Previously, Ms. How was a program associate for the Fund's former Health Care in New York City and Medicare's Future programs. Prior to joining the Fund in 2002, she was a research associate for a management consulting firm focused on the health care industry. Ms. How holds a B.S. in biology from Cornell University and an M.P.A. in health policy and management from New York University.

Ashley-Kay Fryer is research associate for The Commonwealth Fund's Health System Scorecard and Research Project, a team based at the Institute for Healthcare Improvement in Cambridge, Mass., with responsibilities for developing and producing national, state, and substate regional analyses on health care system performance. She provides research and writing support for the ongoing series of national and state scorecard reports and new health care market analyses and supports the work of the team. Ms. Fryer joined the Fund in June 2009 as the program assistant for Health System Quality and Efficiency. Upon graduation from Harvard College in 2008, she worked at J. P. Morgan Chase as an investment banking equity sales analyst. Ms. Fryer graduated cum laude from Harvard College with a B.A. in a self-designed major, "The Determinants of Population Health," and a minor in health policy.

David C. Radley, Ph.D., M.P.H., is senior analyst and project director for The Commonwealth Fund's Health System Scorecard and Research Project, a team based at the Institute for Healthcare Improvement in Cambridge, Mass. Dr. Radley and his team develop national, state, and substate regional analyses on health care system performance and related insurance and care system market structure analyses. Previously, he was associate in domestic health policy for Abt Associates, with responsibility for a number of projects related to measuring long-term care quality and evaluating health information technology initiatives. Dr. Radley received his Ph.D. in health policy from the Dartmouth Institute for Health Policy and Clinical Practice. He holds a B.A. from Syracuse University and an M.P.H. from Yale University.

Cathy Schoen, M.S., is senior vice president for Policy, Research, and Evaluation at The Commonwealth Fund. Ms. Schoen is a member of the Fund's executive management team and research director of the Fund's Commission on a High Performance Health System. Her work includes strategic oversight and management of surveys, research, and policy initiatives to track health system performance. From 1998 through 2005, she directed the Fund's Task Force on the Future of Health Insurance. Prior to joining the Fund in 1995, Ms. Schoen taught health economics at the University of Massachusetts School of Public Health and directed special projects at the UMASS Labor Relations and Research Center. During the 1980s, she directed the Service Employees International Union's research and policy department. In the late 1970s, she was on the staff of President Carter's national health insurance task force, where she oversaw analysis and policy development. Prior to federal service, she was a research fellow at the Brookings Institution in Washington, D.C. She has authored numerous publications on health policy issues, insurance, and national/international health system performance and coauthored the book, *Health and the War on Poverty*. She holds an undergraduate degree in economics from Smith College and a graduate degree in economics from Boston College.

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 The Commonwealth Fund's Health System Scorecard and Research Project team including: Douglas McCarthy, M.B.A., Sabrina K. H. How, M.P.A., Ashley-Kay Fryer, and David C. Radley, Ph.D., M.P.H., for research, writing, and preparation of the Scorecard and related materials.

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; Paul Fronstin, Ph.D., Employee Benefit Research Institute; Jonathan Gruber, Ph.D., and Ian Perry, Massachusetts Institute of Technology; Sir Brian Jarman, M.D., Imperial College, London, U.K.; Ashish Jha, M.D., M.P.H., Harvard School of Public Health; J. Michael McWilliams, M.D., Harvard Medical School; Vincent Mor, Ph.D., and Zhanlian Feng, Ph.D., Brown University; Ellen Nolte, Ph.D., RAND Europe, and Martin McKee, M.D., London School of Hygiene and Tropical Medicine; and Yuting Zhang, Ph.D., University of Pittsburgh. Dina Belloff, M.A., Rutgers Center for State Health Policy, and Nicholas Tilipman, Columbia University Mailman School of Public Health, provided programming and analytical support. Martina Dolan and Ti-Kuang Lee at IPRO provided analysis of CMS Hospital Compare quality data. Additionally the Commission thanks Karen Ho, M.H.S., at the Agency for Healthcare Research and Quality for her assistance with data updates from the National Healthcare Quality and Disparities Reports.

The authors are especially grateful to Karen Davis, Ph.D., and Anthony Shih, M.D., for reviewing drafts; and the Fund's communications team, including Barry Scholl, Chris Hollander, Mary Mahon, Christine Haran, Suzanne Augustyn, and Paul Frame for their guidance, editorial and production support, and public dissemination efforts. The authors also wish to acknowledge the Institute for Healthcare Improvement for its support of the research unit, which enabled the analysis and development of the report.

Preface

The Commonwealth Fund Commission on a High Performance Health System is pleased to introduce findings from the *National Scorecard on U.S. Health System Performance, 2011*. Now in its third edition, the National Scorecard tracks where our nation's health system stands on improving health outcomes, delivering care that is high-quality and high-value, and making such care accessible to everyone. The report is particularly timely, as the nation prepares to implement the major reforms of the Affordable Care Act and attain the goals embodied in the law.

Findings from the 2011 National Scorecard show the United States is not reaching attainable benchmarks across multiple dimensions of health system performance. Performance relative to benchmarks worsened or remained stagnant more often than improved since the first National Scorecard was issued in 2006 and updated in 2008. As observed in previous scorecards, the U.S. is not achieving the health outcomes or quality that should be possible with the resources the nation invests.

During the period leading up to enactment of health reform, the U.S. continued to lose ground on health care coverage and affordability. The recession has stripped millions of people of not only their jobs but also their health benefits, and the full effects of the lagging job market remain to be seen. At the same time, U.S. health care spending per person is still more than twice that in other major industrialized countries, and costs are projected to double over the next decade. Moreover, evidence continues to mount that the delivery of health care is widely variable.

Still, the 2011 update demonstrates what is possible when leadership and concerted effort come together to set and reach for specific goals and targets linked to performance metrics and accountability for results. This approach is urgently needed to improve performance across all dimensions of health care. Provisions in the Affordable Care Act can help states and local communities take up this challenge.

The Commission on a High Performance Health System's National Scorecard offers targets for change and underscores the urgency of realizing the potential of the new national reforms. Looking forward, it will be necessary to understand how access, quality, and cost performance change over time so that we can refine or even design new policies to move the nation in the right direction. Although the task of moving to a system that is truly high performing is enormous, the stakes are even higher if we fail.

David Blumenthal, M.D.
Chairman

Stuart Guterman
Executive Director

The Commonwealth Fund Commission on a
High Performance Health System

Executive Summary

As the United States implements national health care reforms, it is instructive to take stock of how well our health system is able to provide access to high-quality, efficiently delivered care. Evidence from the new 2011 edition of the *National Scorecard on U.S. Health System Performance* shows substantial erosion in access to such care in the period leading up to health reform, along with rising costs that are stressing families, businesses, and all levels of government. Variations in health care delivery, moreover, persist throughout the U.S., as opportunities are routinely missed to prevent disease, disability, hospitalization, and mortality. At the same time, the Scorecard finds notable gains in quality of care in those areas where the nation has made a commitment to accountability and undertaken targeted improvement efforts.

Based on the Scorecard's 42 indicators of health system performance, the U.S. earned an overall score of 64 out of a possible 100 when comparing national averages with benchmarks of best performance achieved internationally and within the U.S. Although the Scorecard draws on the latest available data, primarily from the period 2007 to 2009, the results do not fully reflect the effects of the recent economic recession on access to and use of care. The overall performance on the indicators failed to improve relative to benchmarks since the first National Scorecard was issued in 2006, or since the last update in 2008. Benchmarks, however, improved in many cases, raising the bar on what is attainable.

Some good news can be found in an exception to the overall pattern of U.S. performance: rapid progress on quality metrics that have been the focus of national initiatives and public reporting efforts. Hospitals, nursing homes, and home health care agencies are showing marked improvement in patient treatment and outcomes for which data are collected and reported nationally on federal Web sites and as part of improvement campaigns. There has also been significant improvement in the control of high blood pressure, a measure that is publicly reported by health plans; increasingly, physician groups are being rewarded for improving their treatment of this and other chronic conditions. Better management of chronic diseases also has likely contributed to reductions in rates of avoidable hospitalizations for certain conditions, though rates continue to vary substantially across the country.

Of great concern, access to health care significantly eroded since 2006. As of 2010, more than 81 million working-age adults—44 percent of those ages 19 to 64—were uninsured during the year or underinsured, up from 61 million (35%) in 2003. Further, the U.S. failed to keep pace with gains in health outcomes achieved by the leading countries. The U.S. ranks last out of 16 industrialized countries on a measure of mortality amenable to medical care (deaths that might have been prevented with timely and effective care), with premature death rates that are 68 percent higher than in the best-performing countries. As many as 91,000 fewer people would die prematurely if the U.S. could achieve the leading country rate.

Sharply rising costs are putting both access and budgets at risk. Health care spending per person in the U.S. is double that in several other major industrialized countries, and costs in the U.S. continue to rise faster than income. We are headed toward spending $1 of every $5 of national income on health care. We should expect a better return on this investment.

Performance on indicators of health system efficiency remains especially low, with the U.S. scoring 53 out of 100 on measures that gauge the

level of inappropriate, wasteful, or fragmented care; avoidable hospitalizations; variation in quality and costs; administrative costs; and use of information technology. Lowering insurance administrative costs to benchmark country rates could alone save up to $114 billion a year, or $55 billion if such costs were lowered to the level in countries with a mixed private–public insurance system, like the U.S. has.

The lack of improvement on many health system indicators—such as preventive care, adults and children with strong primary care connections, and hospital readmissions—likely stems from the nation's weak primary care foundation and from inadequate care coordination and teamwork both across sites of care and between providers. These gaps highlight the need for a whole-system approach, in which performance is measured and providers are held accountable for performance across the continuum of care.

To produce greater value from the resources the nation devotes to health care, action is urgently needed to improve access to care and the performance of the care delivery system. Provisions in the Affordable Care Act target many of the gaps identified by the National Scorecard, particularly access, affordability, and support for innovations to make care more patient-centered and coordinated. Scorecard indicators in each of these areas provide a baseline for monitoring performance over time and assessing whether these reforms and others being pursued in the public and private sectors succeed in closing performance gaps.

THE NATIONAL SCORECARD

The 2011 National Scorecard comprises an expanded set of 42 indicators within five dimensions of health system performance: healthy lives, quality, access, efficiency, and equity. The Scorecard compares U.S. average performance with benchmarks drawn from the top 10 percent of U.S. states, regions, health plans, and hospitals or other providers, as well as from the top-performing countries. If average U.S. performance came close to the top rates achieved here at home or abroad, then average scores would approach the maximum of 100.

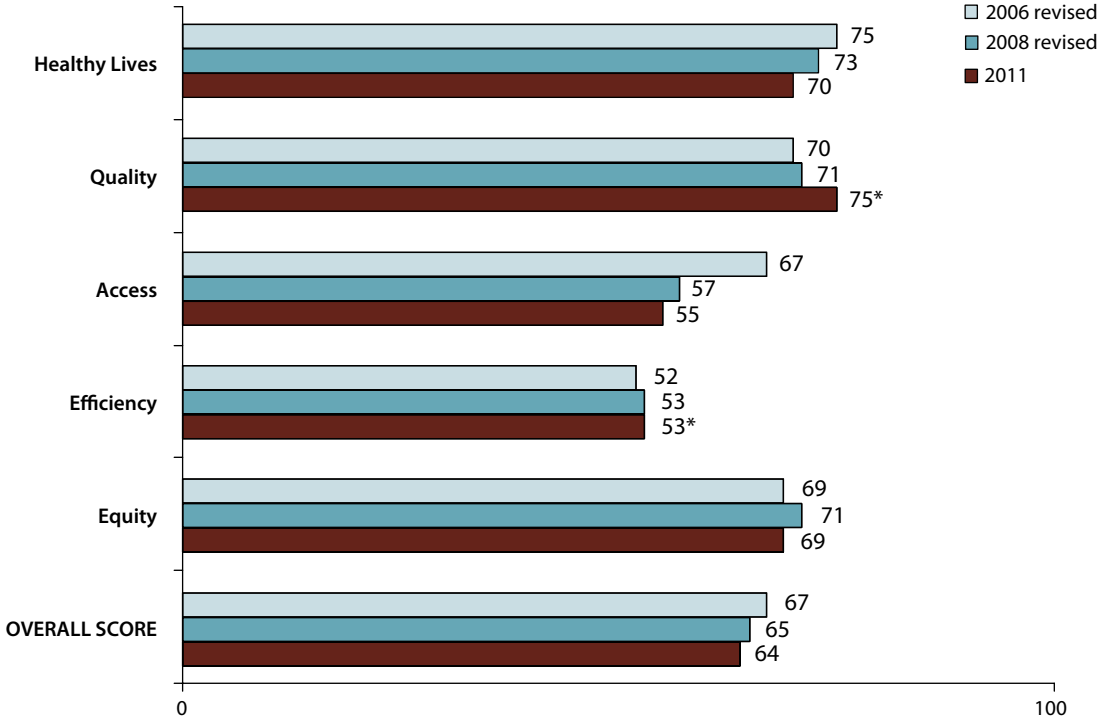
The 2011 Scorecard finds that the U.S. as a whole scores only 64, compared with 67 in 2006 and 65 in 2008—well below the benchmarks (Exhibit 1). Average scores on each of the five dimensions of performance range from a low of 53 for efficiency to a high of 75 for quality of care. Exhibit 2 lists the 42 indicators and summarizes benchmarks and ratio scores across the five dimensions for the latest period (historical data can be found in Appendices A2 to A6).

Performance compared with benchmarks improved on less than half of the indicators for which data are available to assess trends since the first Scorecard. National rates for three of five (58%) Scorecard indicators worsened or failed to substantially improve. On a few indicators, such as mortality amenable to health care (described above), the score declined because benchmark performance improved more than the national average.

As observed in the 2006 and 2008 National Scorecards, the bottom-performing group of hospitals, health plans, or geographic regions typically performs well below average, with as much as a fourfold spread between the top and bottom rates. Across all measures, a 40 percent improvement or more would be required in U.S. national rates to achieve benchmark levels of performance.

Exhibit 1

Scores: Dimensions of a High Performance Health System



* Note: Includes indicator(s) not available in earlier years.

Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2011.

HIGHLIGHTS OF THE 2011 NATIONAL SCORECARD

There have been encouraging improvements on several key performance indicators, as well as a number of instances where performance declined or failed to keep pace with the performance of leading nations, delivery systems, states, or regions.

Indicators That Show Promising Improvements

- *Information systems.* The proportion of primary care physician practices that use electronic medical record (EMR) systems increased from 17 percent to 46 percent from 2000 to 2009. Still, the U.S. lags far behind the leading countries, where nearly all physicians now use EMRs. Financial incentives for the adoption and "meaningful use" of EMRs, enacted as part of the federal economic stimulus legislation, should promote greater uptake of this technology.
- *Care for chronic conditions.* Control of high blood pressure improved from 31 percent in 1999–2000 to 50 percent in 2007–2008 among national samples of adults with hypertension, a likely result of stepped-up awareness campaigns and preventive treatment targeting heart disease and stroke. Nevertheless, there continues to be room for improvement, as the benchmark rate of control attained by the best-performing health plans is 75 percent.

National Scorecard on U.S. Health System Performance, 2011: Scores on 42 Key Performance Indicators

	Indicator	U.S. Average Rate*	Benchmark	Benchmark Rate*	Score: Ratio of U.S. to Benchmark
	OVERALL SCORE				**64**
	HEALTHY LIVES				
1	Mortality amenable to health care, deaths per 100,000 population	96	Top 3 of 16 countries	57	60
2	Infant mortality, deaths per 1,000 live births	6.8	Top 10% states	4.7	69
3	Healthy life expectancy at age 60, years (average of two ratios)	Various	Various	Various	88
4	Adults ages 18–64 limited in any activities because of physical, mental, or emotional problems	18.4	Top 10% states	11.5	63
5	Children ages 6–17 missed 11 or more school days because of illness or injury	5.8	Top 10% states	3.8	66
6	Adults who smoke	17.0	Top 10% states	12.2	72
7	Children ages 10–17 who are overweight or obese	32	Top 10% states	23	72
	QUALITY				
8	Adults received recommended screening and preventive care	51	Target	80	64
9	Children received recommended immunizations and preventive care (average of two ratios)	Various	Various	Various	88
10	Adults and children needed mental health care and received treatment (average of two ratios)	Various	Various	Various	75
11	Chronic disease under control (average of two ratios)	Various	Various	Various	81
12	Hospitalized patients received recommended care for heart attack, heart failure, and pneumonia	96	Top hospitals	100	96
13	Surgical patients received appropriate care to prevent complications	96	Top hospitals	100	96
14	Adults ages 19–64 with an accessible primary care provider	56	65+ yrs, high income	77	73
15	Children with a medical home	58	Top 10% states	68	85
16	Care coordination at hospital discharge (average of three ratios)	Various	Various	Various	80
17	Nursing homes: hospital admissions and readmissions among residents (average of two ratios)	Various	Various	Various	61
18	Home health care: hospital admissions among home health patients	29	Top 25% agencies	17	60
19	Sicker adults reported medical, medication, or lab test error	32	Best of 8 countries	16	50
20	Unsafe drug use (average of three ratios)	Various	Various	Various	62
21	Nursing home residents with pressure sores (average of two ratios)	Various	Various	Various	68
22	Hospital-standardized mortality ratios, actual to expected deaths	73	Top 10% hospitals	68	94
23	Risk-adjusted 30-day hospital mortality rates for heart attack, heart failure, and pnuemonia (average of three ratios)	Various	Various	Various	85
24	Sicker adults able to see doctor on same/next day when sick or needed medical attention	43	Best of 8 countries	81	53
25	Sicker adults reported very/somewhat easy to get care after hours without going to the emergency room	37	Best of 8 countries	72	51
26	Adults whose health providers always listened carefully, explained things clearly, respected what they had to say, and spent enough time with them	57	90th %ile health plans	77	75
27	Sicker adults with chronic conditions received self-management plan	66	Best of 8 countries	66	100
28	Patient-centered hospital care (average of three ratios)	Various	Various	Various	88
29	Home health care patients whose ability to walk or move around improved	47	Top 25% agencies	58	81
	ACCESS				
30	Adults ages 19–64 insured all year, not underinsured	56	Target	100	56
31	Adults with no access problems because of costs	67	Best of 11 countries	95	71
32	Persons under age 65 in families that spend 10 percent or less of income (or 5 percent or less, if in low-income family) on out-of-pocket medical expenses and premiums	78	Target	100	78
33	Persons under age 65 living in states where premiums for employer-sponsored health coverage are less than 15 percent of under-65 median household income	4	Target	100	4
34	Adults ages 19–64 with no medical bill problems or medical debt	60	Target	100	60
	EFFICIENCY				
35	Potential overuse or waste (average of three ratios)	Various	Various	Various	40
36	Sicker adults went to emergency room for condition that could have been treated by regular doctor	21	Best of 8 countries	6	29
37	Potentially preventable hospital admissions for ambulatory care–sensitive conditions (average of two ratios)	Various	Various	Various	56
38	Readmissions within 30 days of hospital discharge among Medicare beneficiaries initially admitted for one of 45 medical conditions or surgical procedures	20	10th %ile regions	15	72
39	Medicare annual costs of care and mortality for heart attack, hip fracture, and colon cancer (average of two ratios)	Various	Various	Various	89
40	Medicare annual costs of care (dollars) for beneficiaries with multiple chronic diseases (average of four ratios)	Various	Various	Various	69
41	Spending on health insurance administration as percent of national health expenditures	7.0	Top 3 of 10 countries	2.4	34
42	Use of electronic medical records (average of two ratios)	Various	Various	Various	34

* All rates are expressed as percentages unless otherwise labeled. Various denotes that the indicator consists of two or more related measures; the scorecard averages the ratio scores for each of the measures to produce the indicator score.
Note: See Exhibit 25 on page 50 for Equity scores. See Appendix A for scores in 2006 and 2008 editions of the National Scorecard and Appendix B for information on data and sources.

Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2011.

- *Effective hospital care*. Hospitals provided proven treatments to prevent surgical complications 96 percent of the time in 2009, an increase from 71 percent in 2004. Adherence to treatment standards for heart attack, heart failure, and pneumonia rose from 84 percent to 96 percent. This rapid improvement came on the heels of a consensus reached on quality measures and the federal policy linking Medicare payment updates to hospitals' agreement to publicly report their results. Still, a significant gap remains between leading and lagging hospitals.
- *Preventable hospitalizations.* Rates of hospitalizations for some ambulatory care–sensitive conditions declined. For example, admission rates for heart failure and pediatric asthma each dropped by 13 percent from 2004 to 2007, a possible reflection of improved disease management. But rates continued to vary twofold to fourfold across hospital referral regions and states.
- *Quality of postacute and long-term care*. Rates of pressure sores among short-stay nursing home residents fell from 19 percent to 14 percent from 2004 to 2008, with a similar decline among long-stay residents. The proportion of home health care patients who gained improved mobility grew from 37 percent to 47 percent from 2004 to 2009. These results likely reflect the influence of public reporting and collaborative efforts, such as the national Advancing Excellence in America's Nursing Homes campaign.
- *Cigarette smoking.* Continuing a long-running trend, the prevalence of U.S. adults who smoked cigarettes declined from 21 percent in 2004 to 17 percent in 2010. Two leading states (Utah and California) reached or exceeded the federal government's Healthy People 2010 goal of 12 percent. Yet rates in the states with the highest smoking prevalence are twice that level, pointing to the need for wider adoption of comprehensive evidence-based tobacco control measures.
- *Preventable mortality.* The rate of mortality amenable to health care—deaths that might have been prevented with timely and effective care—improved 21 percent in the U.S. between 1997–98 and 2006–07 (from 120 to 96 deaths per 100,000). However, rates improved by 32 percent, on average, in 15 other industrialized nations, meaning the U.S. ranks last, with a rate 68 percent higher than the rate in the leading countries.

Indicators That Show Significant Deterioration or No Improvement

- *Insurance and access.* As of 2010, 81 million adults—representing 44 percent of all working-age adults—were either uninsured sometime during the year or underinsured, meaning they were insured all year but had medical bills or deductibles that were high relative to their incomes. This represents a 33 percent increase from 2003, when the total was 61 million. Rates were even higher, and increased, among lower- and middle-income adults.
- *Affordable care*. As insurance premiums rose faster than wages, the share of working-age adults living in a state where group health insurance premiums averaged less than 15 percent of household income dropped from 57 percent in 2003 to just 4 percent in 2009. Forty percent reported they had medical debt or problems paying medical bills in 2010,

compared with 34 percent in 2005, in a likely carryover from the recession.

- *Primary and preventive care*. In 2008, more than two of five (44%) nonelderly adults lacked a regular primary care provider that is easy to get to and consult with by phone during office hours, and only half received a set of basic preventive services—representing little change from 2002. The vaccination rate for young children recovered in 2010 following a sharp decline caused by a vaccine shortage in 2009, yet one-quarter of children still lacked full protection against communicable diseases.
- *Hospitalizations from nursing homes*. From 2000 to 2008, the rehospitalization rate increased for patients who were discharged to skilled nursing facilities (from 18% to 21%), as did the hospitalization rate for long-stay nursing home residents (from 18% to 20%). This signals a need to improve both quality of care and patients' transitions from one care setting to another.
- *Rehospitalizations*. Average rates of hospital readmissions within 30 days of discharge for selected conditions or procedures remained high—20 percent of discharged Medicare patients in both 2003 and 2009. Rates in the highest-rate regions were 50 percent higher than those in the lowest-rate regions. The Affordable Care Act will provide incentives for lowering readmission rates.

Additional Indicators That Raise Concerns

- *Infant mortality*. While infant mortality modestly improved from 2002 to 2007 (from 7.0 to 6.8 deaths per 1,000 live births), the U.S. rate is still more than 35 percent higher than the rates achieved by the best individual states. In fact, rates in the best states are twice as high as those achieved in certain industrialized countries. High infant mortality is related to high rates of preterm births, which in turn are related to long-term maternal health as well as quality of pregnancy care.
- *Childhood obesity*. Nearly one-third (32%) of children ages 10 to 17 were overweight or obese as of 2007, with rates ranging from 24 percent to 39 percent among the top and bottom five states. Unless there is an improvement in healthy eating and weight control, obesity and related health problems are likely to rise—and could wipe out recent health gains from declining smoking rates.
- *Safe care*. In a sign that safety concerns extend beyond the hospital, in 2007 one-quarter of elderly Medicare beneficiaries were prescribed a drug that is potentially inappropriate for older people. Rates were twice as high in some regions of the country as in others (36% vs. 18%). Wider use of electronic systems that alert clinicians of such risks may help improve safety in the near future.
- *Patient-centered, timely, coordinated care*. In 2008, only 43 percent of U.S. adults with health problems were able to rapidly secure an appointment with a physician when they were sick—about half the rate in the best country. U.S. adults also were among the most likely of those in eight countries surveyed to report difficulty obtaining health care after regular office hours without going to the emergency department. And 19 percent of U.S. patients reported undergoing duplicate tests—almost five times the rate in the benchmark country.
- *Disparities*. Minorities and low-income or uninsured adults and children were generally more likely than their white, higher-income,

or insured counterparts to wait to see a doctor when sick, to encounter delays and experience poorly coordinated care, and to have untreated dental caries, uncontrolled chronic disease, avoidable hospitalizations, and worse outcomes. And they were less likely to receive preventive care or have an accessible source of primary care.

SUMMARY AND IMPLICATIONS

Potential for Improvement

Overall, the *National Scorecard on U.S. Health System Performance, 2011,* finds that the United States is losing ground in the effort to ensure affordable access to health care. Although there are promising improvements on key indicators, quality of care remains uneven. The Scorecard also finds broad evidence of inefficient and inequitable care. Other advanced countries are outpacing the U.S. in providing timely access to primary care, reducing premature mortality, and extending healthy life expectancy, all while spending considerably less on health care and administration.

In contrast, improvement on key quality metrics demonstrates that significant progress is possible when the country sets specific goals and targets linked to performance metrics and accountability for results. This approach is urgently needed to improve performance across all domains and care settings. Average U.S. health system performance would have to improve by 40 percent or more to reach the benchmark levels of performance attained by leading nations, states, regions, health plans, and care providers.

The nation can learn from and apply lessons about what works in the best-performing counties, states, regions, health plans, and care systems. By doing so, the country could realize substantial benefits in terms of health, patient experiences, and financial savings. For example:

- Up to 91,000 fewer people would die prematurely each year from causes amenable to health care if the U.S. achieved the lower mortality rate of the leading country—more than two times the number of people who die in motor vehicle accidents each year.
- 38 million more adults would have an accessible primary care provider, and 66 million more adults would receive all recommended preventive care.
- According to the National Committee for Quality Assurance, improving control of diabetes and blood pressure to benchmark levels would prevent disease and reduce disease complications, saving $1.6 billion to $3.1 billion per year in medical costs.
- The Medicare program alone could potentially save more than $12 billion a year by reducing hospital readmissions, based on an analysis by the Medicare Payment Advisory Commission. Additional savings could be realized from reductions in hospitalizations among the under-65 population.
- Reducing health insurance administrative costs to the average level in countries with mixed private–public insurance systems would free up $55 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 $114 billion per year.

Many of these gaps in performance are the targets of reforms included in the Affordable Care Act and the American Recovery and Reinvestment Act to stimulate and reward more effective and efficient delivery of care. Recent estimates show that health reform legislation will reduce health care spending by $590 billion over 10 years and

lower premiums by nearly $2,000 per family by slowing the annual growth rate in national health expenditures. Successful implementation of these reforms, together with community-based efforts to build on this new foundation, offer the potential for improved population health, more positive care experiences, and more affordable care.

Aiming Higher to Achieve the Potential of Reform

Access to care is the essential foundation for improvement. Access to care, health care quality, and efficiency are interrelated. By expanding insurance coverage for adults as well as children, the Affordable Care Act will for the first time ensure that coverage is accessible and affordable for families across the nation. Once reform is fully implemented, coverage rates for adults in the vast majority of states are projected to rival the high rates currently achieved by only the leading states. Coverage rates for children will also improve, as whole families have access to more-affordable insurance plans that include essential benefits. New federal survey data reveal that the early provisions of the Affordable Care Act are already having a positive impact among young adults ages 19 to 25. Approximately 1 million more young adults have become insured since health plans were required to allow young adults under age 26 to stay on or join their parents' health plan.

Better primary care and care coordination offer the potential for improved outcomes at lower costs. Investment in the nation's primary care capacity will be necessary to ensure that all Americans have round-the-clock access to care, patients with chronic illnesses receive help in managing their conditions, and health services are well coordinated. Many hospitalizations or rehospitalizations are preventable with better primary care, discharge planning, and transitional and follow-up care—all part of an integrated, systems approach to care. The Affordable Care Act has the potential to strengthen primary care, reduce high rates of readmissions, and support health care organizations that agree to be accountable for providing better care, achieving better outcomes, and lowering costs. Demonstration and pilot programs will develop and test innovative payment and care delivery approaches to improve outcomes and efficiency.

Measurement and accountability focus attention on improvement. The quality indicators that showed significant improvement in the National Scorecard have been the target of national campaigns and collaborative efforts employing benchmarks and measures developed through consensus. Conversely, there was failure to improve in those areas for which common metrics or focused efforts have been lacking. The improvements in performance that did occur demonstrate that change can take place rapidly when there is leadership and accountability. These initiatives should be emulated in other areas, such as through coordinated medical and community-level interventions to promote healthy behaviors.

Strengthening the Nation's Capacity to Improve

Fundamental to a high-performing health care system is having ample capacity to innovate and improve. This requires:

- A skilled and motivated health care workforce, particularly in the areas of primary care and population health.
- Payment and insurance benefit designs that support system transformation and primary care medical homes, ensure providers are accountable for population-level results, and activate consumers to use the care system

wisely and optimize their personal health behaviors.

- A culture of quality improvement and continuous learning in which providers seek out opportunities to improve patient safety and outcomes and are recognized and rewarded for doing so.
- Investment in public health initiatives, in research, and in generating the information necessary for evidence-based health care decisions and quality improvement.

To begin to address these needs, the Affordable Care Act makes investments in prevention and provides incentives to encourage physicians to select and maintain primary care careers. New national innovation and research centers, as well, will support the development of promising payment and health care delivery models and generate evidence on the relative effectiveness of clinical practices. And, over time, federal incentives and supports to spur the adoption and meaningful use of health information technology will expand health system capacity for monitoring performance and supporting improvement efforts.

Importance of Tracking Change and Sentinel Indicators

Moving from enactment of federal legislation to successful implementation of reforms will require action on the part of multiple stakeholders and a commitment to collaborate to improve. Looking to the future, it will be critical to track key indicators of access, quality, and cost performance over time as health care delivery systems and markets respond to new incentives. As these new initiatives unfold, it will be important to monitor progress to identify areas of the health system where adjustments or new policies are needed to achieve better performance. Monitoring activities would be strengthened by federal participation in and support for state and community efforts to create all-payer databases providing information on health services and costs across the continuum of care.

The Case for a Systems Approach to Change

The U.S. health system continues to perform suboptimally relative to what is achievable and relative to the large resources invested by the nation. The Commonwealth Fund's 2011 National Scorecard documents that there are significant human and economic costs attached to our failure to address the problems in the health care system. As rising costs put family, business, and government budgets under stress, access to care and financial protection are eroding for middle-income and low-income families alike.

Successful implementation of reforms will require stakeholders at all levels to adopt a coherent, whole-system approach in which goals and policies are coordinated to achieve the best results for the entire population. By integrating all components of the health system to ensure better access, higher quality, and greater value, we would be far more able to safeguard the health and economic security of current and future generations.

Introduction

Every family wants the best care for an ill or injured family member. Most are grateful for the care and attention received. Yet patients and their families cannot always access or afford the care they need. Likewise, health care providers want to do well for their patients, but a fragmented care system and mismatched financial incentives can pose barriers to doing so. And while those who pay for care want to ensure good value for money spent, they may lack the necessary evidence or influence to positively engage with others to change practice. As a result, health care in the United States often falls short of what patients desire and what providers can achieve.

Health system performance can be measured as the degree to which all individuals have access to high-quality, efficiently delivered care. The findings presented in the 2011 edition of the *National Scorecard on U.S. Health System Performance* reveal that in the period immediately preceding enactment of major national health care reforms, the U.S. continued to fall well short of achievable benchmarks for equity, accessibility, efficiency, and quality—all crucial aspects of health care that can be improved through comprehensive policy efforts at the federal, state, and community levels. Despite the best efforts of health care professionals and others across the U.S., the performance of our health system lags behind that of other industrialized countries.[1] Moreover, numerous studies make it clear that the U.S. health system does not produce results commensurate with the nation's vast expenditures on health.[2]

Simply put, the U.S. is an outlier among advanced nations in spending on health care (Exhibit 3). The amount spent per person in the U.S. was almost double that of many other countries in 2009. As a share of gross domestic product (GDP), U.S. health care spending was 40 percent to 80 percent higher. Per capita health spending also has grown much faster in the U.S. than in other countries (approximately $8,000 per person in 2009), even though many have older populations than the U.S. does. Since 1980, the increase in health care spending in the U.S. has outpaced growth in other sectors of the nation's economy, rising faster than wages and general economic growth. As a result, the proportion of U.S. GDP devoted to health care doubled from 9 percent in 1980 to 18 percent in 2009—representing more than one-sixth of the economy.[3]

Quality of health care encompasses not only whether patients receive care that is safe and scientifically proven to be effective, but also whether physicians communicate well with patients and coordinate care effectively when patients transition from one place of care to another. Across the U.S., evidence continues to mount that quality of care is variable and often significantly lower than what it could be.[4] The fee-for-service reimbursement incentives currently in place typically do not support health care providers' efforts to improve quality, integrate care, or make more efficient use of resources. Too often, patients are left hanging to navigate the fragmented care system on their own. The percentage of patients as well as providers expressing dissatisfaction with the heath system remains consistently high, reflecting broad public concerns with access, costs, and care experiences.[5]

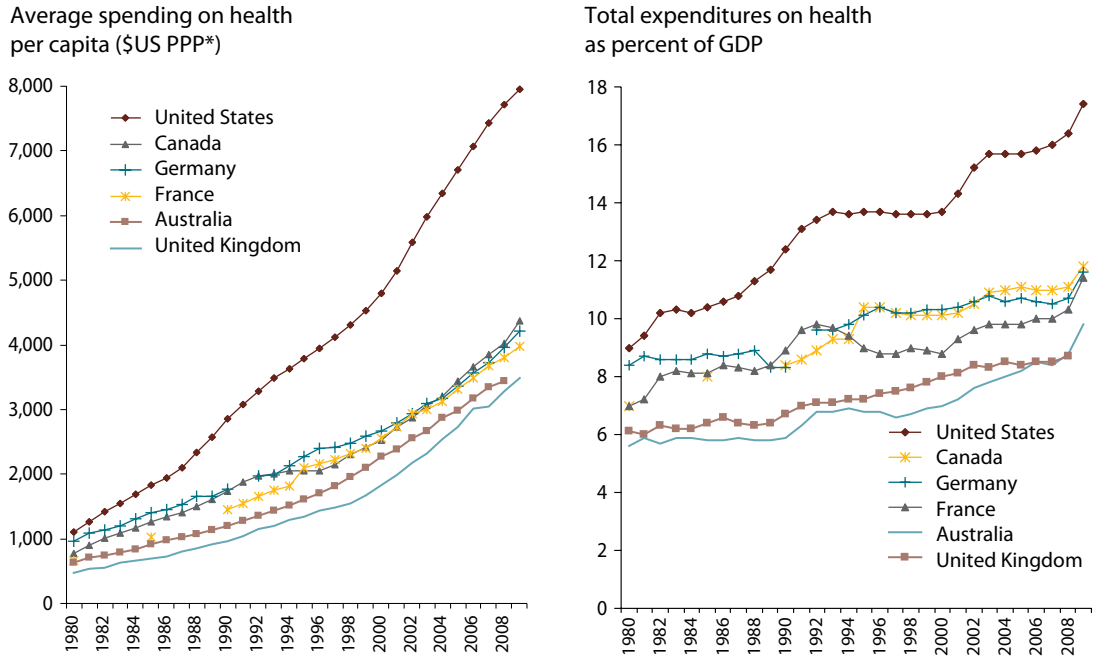
As the states and providers prepare to implement national health reforms designed to address these concerns, the Scorecard provides a framework to take stock of where they stand *before* major reforms unfold and what the nation could gain by reaching and then raising benchmark performance levels. It is important to note that although the Scorecard draws

on the most recent data available, it does not fully capture the effects that the recent severe recession has had on access, affordability, or health care outcomes. Thus, it likely underestimates the pressing need for effective policy action.

Developing policies that help move the U.S. toward a higher-value health system, and evaluating the effects of individual policies relative to goals, requires a way to monitor health system performance across all of its dimensions. To meet this need for a whole-system view at the national level, the Commonwealth Fund Commission on a High Performance Health System created the first *National Scorecard on U.S. Health System Performance* in 2006.[6] The Scorecard compares average U.S. performance to benchmarks set abroad as well as here at home, using indicators spanning five dimensions of performance—healthy lives, quality, access, efficiency, and equity.

Exhibit 3

International Comparison of Spending on Health, 1980–2009



* PPP=Purchasing Power Parity.
Data: OECD Health Data 2011 (database), version 6/2011.

Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2011.

The National Scorecard: Measuring and Monitoring Health System Performance

The *National Scorecard* 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 the prevalence of health-related activity limitations, smoking, and overweight or obesity among children;
- *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 the ability to participate in the health care system and the affordability of health insurance coverage and medical services;
- *efficiency*, which assesses the overuse or inappropriate use of health 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 2011 National Scorecard uses the same framework and methods introduced in the first edition, published in 2006. To keep pace with the development of national performance data, the 2011 Scorecard expands the set of core performance indicators to 42 (see box on next page for information on new metrics and methodology).

For each indicator, the Scorecard compares national performance against benchmark levels achieved by top-performing groups within the U.S. or top-performing countries. In a few instances, benchmarks reflect targets or policy goals. The report updates the benchmarks whenever the top level of performance improved from the values observed in earlier Scorecards. Each score is a simple ratio of the current U.S. average performance to the benchmark representing the highest 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 span at least three years for all indicators for which trend data are available; the majority capture at least five years of data. The tables in Appendix A present data and scores for all indicators.

An extensive chartpack displaying performance data for each Scorecard indicator is available online at www.commonwealthfund.org.

SCORECARD METHODOLOGY

The *National Scorecard on U.S. Health System Performance, 2011*, includes a set of 42 core performance indicators that builds on metrics developed by public and private quality improvement efforts, as well as several unique indicators not currently tracked elsewhere.

Changes from the 2008 Edition. To keep pace with the development of national performance data, the 2011 Scorecard has expanded the set of metrics from the inaugural 2006 edition and the 2008 update. As many indicators comprise two or more measures reflecting a single concept, the 42 indicators can be broken down to 70 individual metrics, 10 of which are new in this 2011 edition:

- two in healthy lives (adults who smoke and children who are overweight or obese);
- one in effective care (surgical patients who received appropriate care to prevent complications);
- five in safe care (Medicare beneficiaries who received at least one drug that should be avoided in the elderly, Medicare beneficiaries with dementia, hip/pelvic fracture, or chronic renal failure who received a prescription that is contraindicated for that condition, and risk-adjusted 30-day hospital mortality rates for heart attack, heart failure, and pneumonia);
- one in patient-centered care (home health care patients who become better able to walk or move around); and
- one in efficiency (hospitalized patients who received care in a hospital with basic or comprehensive electronic health records).

Six of the 10 new measures—specifically, those related to unsafe drug use among Medicare beneficiaries, 30-day hospital mortality rates, and hospital use of electronic health records—were developed only recently, so historical data are lacking. Therefore, we were not able to revise results from the 2006 and 2008 editions of the National Scorecard to include all new measures. Three measures (of safe care) in the original National Scorecard could no longer be tracked and were removed from the Scorecard entirely.

Hence, changes in dimension scores should be interpreted with caution, as it was not possible to score using the same set of metrics in all periods. Expanded data primarily affect the quality dimension. If we restrict the analysis to the subset of 20 quality indicators with baseline data, the quality dimension score would be 73 (rather than 75) in 2011. Likewise, if we exclude the new efficiency measure from the 2011 analysis, the efficiency dimension score would be 54 (rather than 53) in 2011. The overall performance score is not affected.

Subsequent to the 2008 report, the definitions of five indicators were modified (by the sources) such that national rates are not comparable over time. These include: children who received both medical and dental preventive care visits; adults with a major depressive episode who received treatment; children with a medical home; sicker adults with chronic conditions who were given a self-management plan; and Medicare ambulatory care–sensitive hospital admissions. We did not assess trends for these measures, but scores can be calculated comparing national to benchmark performance in each period.

On the remaining measures for which there were adequate and comparable data, updates spanned at least three years; more than two-thirds (68%) assessed change over five years or more. Updated data in the 2011 Scorecard cover the period 2006 to 2010; over 90 percent of the metrics fall between 2007 and 2009.

Scoring Methodology. 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 or 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 individuals with health insurance. Four access benchmarks aim for logical policy goals, such as 100 percent of the population with adequate insurance coverage. Likewise, we set a policy goal of 90 percent of patients admitted to a hospital with a basic or comprehensive electronic health record. For one 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. The selection of benchmark groups reflects the level at which data are available as well as the appropriate actors or opportunities for policy action for that particular indicator.

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 broad sample to benchmark since the first edition of the Scorecard only had the pilot set. For two indicators—long-stay nursing home residents with a hospital admission and first-time residents readmitted within 30 days of hospital discharge to the nursing home—we switched the benchmark from states to top 10th percentile of hospital referral regions.

To score, we calculated ratios of national 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.

To summarize, we averaged ratios within a dimension and averaged all dimensions for an overall score. For equity, we compared the percentage of the group at risk (e.g., percentage not receiving recommended care) 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 the insured population to rates for the uninsured population; high income to low income; and whites to blacks and Hispanics.

We recalculated baseline scores when necessary because of data revisions. It is important to note that data found in this report may not match data reported in the earlier editions of the National Scorecard. See Appendices A and B for scoring tables and details regarding indicator data, years, and sources.

Findings from the 2011 National Scorecard

OVERALL SCORES AND TRENDS

Overall, the *National Scorecard on U.S. Health System Performance, 2011,* 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 the five dimensions. The health system as a whole scores only 64 in 2011—36 percent below the benchmarks of best performance. Average dimension scores ranged from a low of 53 for efficiency to 75 for quality (Exhibit 1).

The overall score for U.S. health system performance failed to improve over the five years since the first National Scorecard in 2006. Access to care declined substantially, owing to the continuing erosion in health insurance coverage and affordability. Across the 42 core indicators, performance more often declined than improved, primarily because of worsening national rates. Looking at underlying national rates for those metrics for which we have time–trend data, two of five (42%) showed substantial improvement (i.e., at least a 5 percent change in rate) while three of five (58%) either worsened or showed little or no change since 2006 (Appendix A1).

Indicators showing notable *deterioration* included:

- affordability of insurance premiums and medical bill problems;
- coverage and insurance adequacy among adults; and
- hospital readmissions among patients discharged to nursing homes.

Indicators showing notable *improvement* included:

- adoption of electronic medical records by primary care physicians;
- control of high blood pressure—adherence to evidence-based treatment standards in the hospital;
- declines in rates of some preventable hospitalizations;
- reduction in pressure sores among nursing home residents; and
- improved mobility among home health patients.

Performance remains uneven across the U.S., with up to a fourfold variation—a twofold variation, on average—between the top- and bottom-tier states, regions, health care providers, or health plans (Appendices A2 through A6). Moreover, the range of performance within the U.S. widened or remained the same (less than 5% change) more often than it narrowed since the 2006 Scorecard. Equity gaps also persisted between advantaged and disadvantaged groups. Overall, the bottom of the performance range would have to improve an average of 30 percent simply to reach current national rates of performance, which are often only mediocre.

As these results make plain, despite encouraging pockets of improvement, the U.S. still has a long way to go to make its health system the best it can be. The country as a whole is often failing to keep pace with levels of performance attained by leading nations, states, and health care 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 2011 National Scorecard, highlighting policy-relevant indicators and changes in performance since the 2006 Scorecard.

HEALTHY LIVES

Overview

The overarching goal of any health care system is to help people lead long, healthy, and productive lives. The National Scorecard assesses how well the U.S. supports this goal for its population based on indicators of mortality and some of the health-related challenges faced by adults and children.

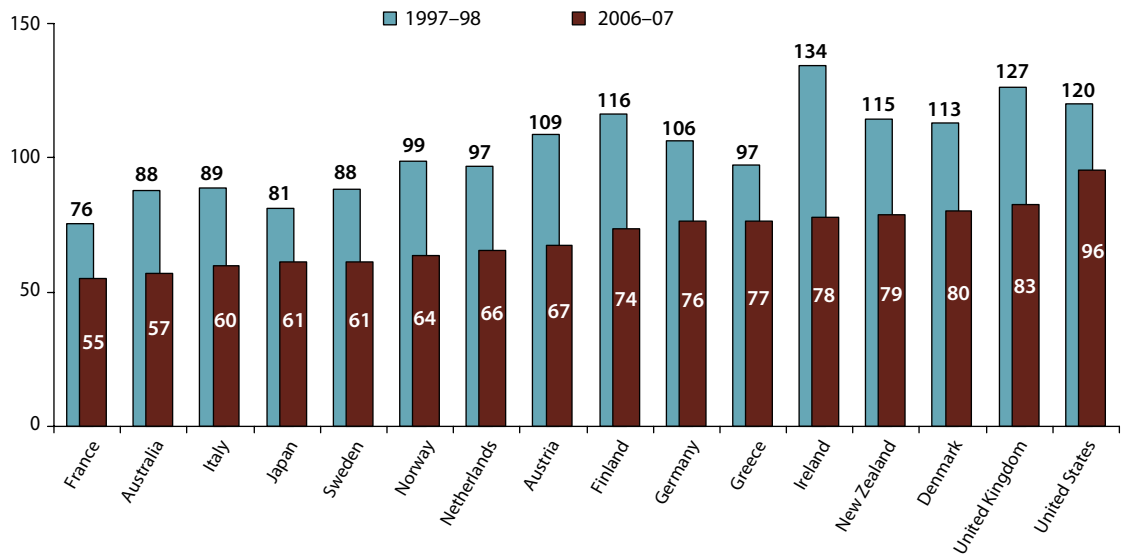
Compared with top-performing countries and states, the U.S. as a whole falls short on the important dimension of "healthy lives." Over the past five years, average performance has deteriorated relative to benchmarks, dropping from a score of 75 in 2006 to 70 in 2011, reflecting a decline in five of seven indicator scores. Although national rates substantially improved for two indicators, the scores declined nonetheless because the pace of improvement in the U.S. lagged behind that in other industrialized nations (in the case of premature mortality) or leading U.S. states (adult cigarette smoking). U.S. performance worsened for three other indicators: overweight/obesity and missed school days among children, and activity limitations among adults. Two indicators, infant mortality and healthy life expectancy, showed only slight change. Appendix A2 presents the national rate, range of performance, and scores for indicators within this dimension.

Preventable Mortality

Since the 2006 Scorecard, the U.S. has fallen into last place among 16 industrialized countries on national rates of "mortality amenable to health care"—deaths before age 75 that are caused by at least partially preventable or treatable conditions, such as bacterial infections, screenable cancers, diabetes, heart disease, stroke, or complications of

HEALTHY LIVES Exhibit 4

Mortality Amenable to Health Care



* Countries' age-standardized death rates before age 75; including 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, RAND Europe, and M. McKee, London School of Hygiene and Tropical Medicine, analysis of World Health Organization mortality files and CDC mortality data for U.S. (Nolte and McKee, 2011).

Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2011.

common surgical procedures (Exhibit 4). While the U.S. rate improved 21 percent between 1997–98 and 2006–07 (from 120 to 96 deaths per 100,000), rates improved by 32 percent, on average, in the other countries. The U.S. lagged markedly in preventing or delaying deaths among people under age 65.[7]

Countries that once had considerably higher rates of premature mortality, such as the United Kingdom and Ireland, now outperform the U.S. The best-performing countries also continued to improve. As a result, the U.S. rate is now 68 percent worse than the benchmark rate. Improving U.S. mortality from amenable causes to the benchmark levels achieved by leading countries—France, Australia, and Italy—would translate to 84,000 fewer deaths per year before age 75, and up to 91,000 if the U.S. could achieve the lowest country rate (France). Notably, 78,000 fewer premature deaths would occur each year if all U.S. states succeeded in lowering premature death rates to the level in states that performed best on The Commonwealth Fund's 2009 State Scorecard.[8]

Infant mortality rates are an important health system indicator of performance because they are associated with maternal health, access to and quality of medical care, socioeconomic conditions, and public health practices.[9] While the rate of U.S.-born infants who die before their first birthday has generally improved since 1998, it remains well above rates in the best-performing states and countries (Exhibit 5). Between the 2006 and 2011 Scorecards, the U.S. infant mortality rate fell slightly, from 7.0 deaths per 1,000 live births in 2002 to 6.8 deaths in 2007.

Infant mortality rates in the five states with the highest rates are more than twice those in the best-performing states (9.9 deaths vs. 5.0 deaths per 1,000 live births). Many of the high-rate states have a high proportion of minority and poor families. Even in the best-performing states in the U.S., infant mortality rates are higher than in Iceland, Sweden, Japan, Finland, Norway, and Denmark, whose average rate was 2.8 per 1,000 live births. The high and rising rate of preterm births in the U.S. accounts for most of the observed difference in infant mortality between the U.S. and other countries.[10] Research shows that public policies and practice guidelines can make a difference—by promoting planned births and adequate birth spacing, providing early access to health care so that mothers are healthy both before and during pregnancy, and, whenever appropriate, supporting the clinical goal of achieving full-term births.[11]

Impacts of Poor Health

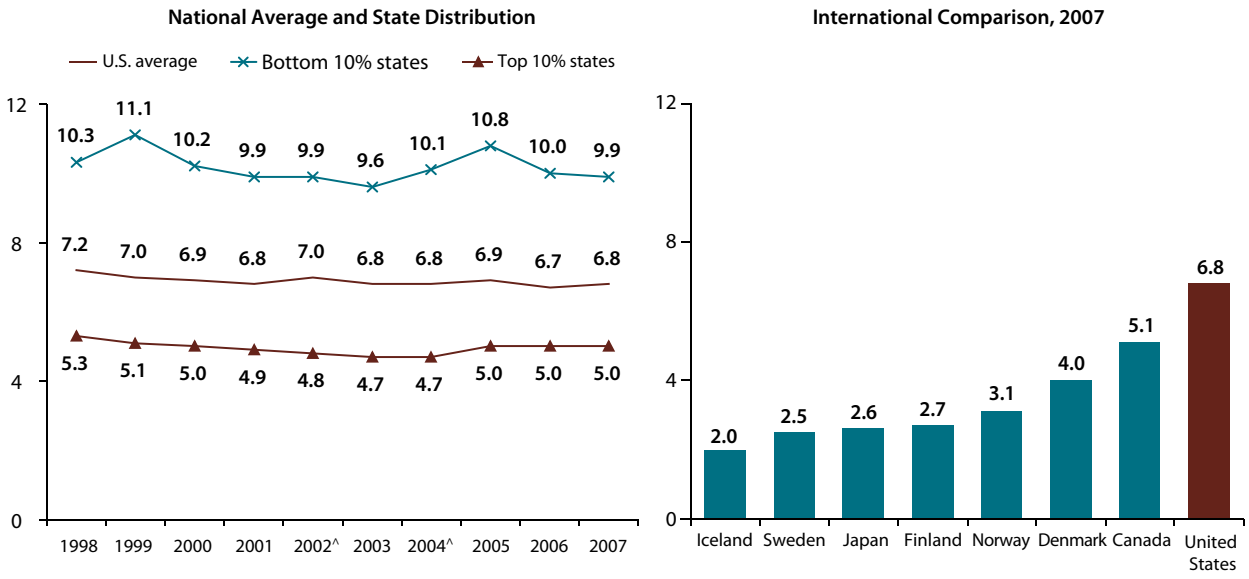
Healthy life expectancy. Reflecting these mortality trends, life expectancy in the U.S. has not kept pace with gains made in other advanced countries,[12] even as the U.S. rate reached a new high of 78-plus years in 2009.[13] The nation also ranks low on "healthy life expectancy," a measure of population health that combines length and quality of life into a single measure, taking into consideration time spent in poor health as a result of disease and/or injury. In a 2007 comparison of 23 countries, the U.S. was among the bottom five on healthy life expectancy at age 60—changing little from 2002 to 2007 in relation to the benchmark. On average, U.S. men at age 60 enjoy two fewer healthy years, and U.S. women three fewer healthy years, than their counterparts in the benchmark countries. This finding is perhaps not surprising, given that older adults in the U.S. face a greater burden of chronic health problems and are more likely to experience gaps in insurance coverage and other access problems, leading to adverse health consequences.[14]

Activity limitations. More than one of six (18%) working-age adults reported being unable to work or carry out everyday activities because of health

HEALTHY LIVES Exhibit 5

Infant Mortality Rate

Infant deaths per 1,000 live births



^ Denotes years in 2006 and 2008 National Scorecards.
Data: National and state—National Vital Statistics System, Linked Birth and Infant Death Data (AHRQ 2003–2008; Mathews and MacDorman, 2011); international comparison—OECD Health Data 2011 (database), Version 06/2011.

Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2011.

problems—physical, mental, or emotional—in 2010, compared with 15 percent reporting limitations in 2004. The rate in the worst-performing five states (24%) would have to be cut in half to reach the benchmark rate (12%). Activity limitations increase with age, affecting one-quarter of adults ages 50 to 64. Reducing health-related activity limitations will depend not only on prevention and management of chronic diseases but also on reducing obesity, which has been a major contributing factor in rising rates of disability among working-age adults.[15]

Missed school days. Rising rates of childhood obesity and related health problems may be contributing to children missing school, which can limit educational attainment.[16] The percentage of children ages 6 to 17 who missed 11 or more school days because of illness or injury did not change much from 2003, when it was 5 percent, to 2007, when it was 6 percent. Rates vary more than twofold between top- and bottom-ranked states (from 4% to 8%), as well as between children in low- and high-income households.

Unhealthy Behaviors

Adults who smoke. Cigarette smoking is the single most preventable cause of disease and death in the U.S. Each year, cigarettes are responsible for an estimated 443,000 premature deaths and $193 billion in direct health care expenditures and productivity losses, both from direct use and the effects of second-hand smoke.[17] As of 2010, 17 percent of adults smoked cigarettes, down from 21 percent in 2004 (Exhibit 6), continuing a long-running decline in smoking rates since the 1960s. Two leading states (Utah and California) have

reached or surpassed the Healthy People 2010 goal of 12 percent. Yet rates in the five states with the highest smoking prevalence are twice those in the five states with the lowest prevalence (24% vs. 12%). There are also wide disparities in rates: smoking is more prevalent among lower-income adults compared with higher-income adults (27% vs. 11%), and more prevalent among the uninsured compared with the insured (30% vs. 15%).

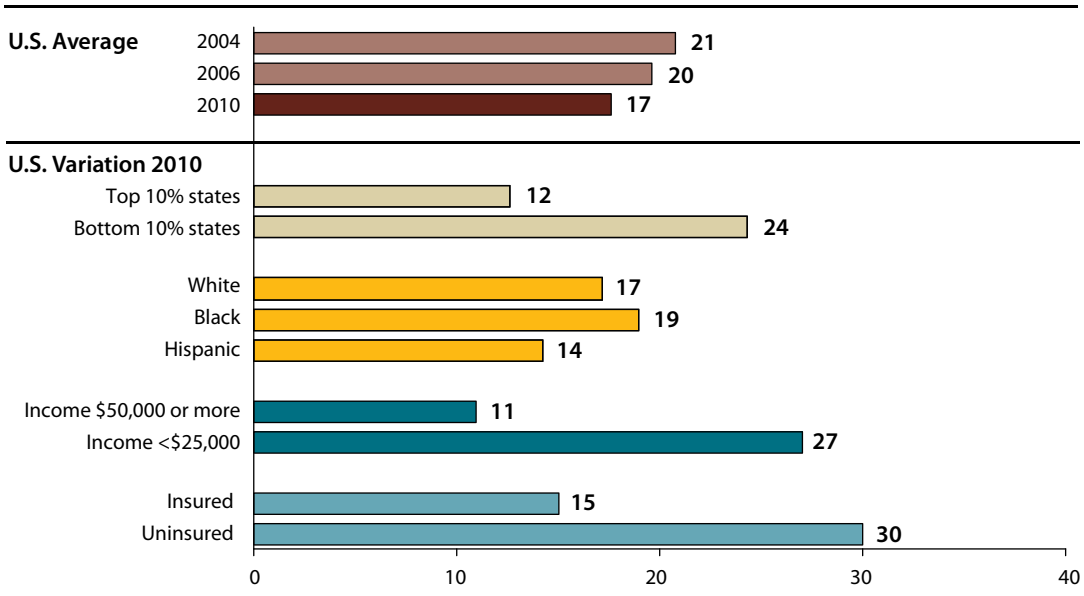
To lower smoking rates even further, the Institute of Medicine has recommended the adoption of comprehensive, evidence-based tobacco control measures, including increasing taxes on cigarettes, enacting smoke-free worksite laws, funding public education campaigns, helping smokers quit, and restricting youth access to tobacco products.[18] Between 2009 and 2010, the combined federal and average state excise tax on a pack of cigarettes rose from $1.57 to $2.45 as a result of actions by the federal government and 20 states.[19] It is estimated that a nationwide $1 increase in the price per pack of cigarettes would result in 1.2 million additional smokers quitting and $50 billion in health care cost savings over five years.[20]

Overweight or obesity in children. High rates of childhood obesity threaten the potential for children to have a healthy and productive life. In 2007, nearly one-third (32%) of children ages 10 to 17 were either overweight or obese, according to parent-reported height and weight. Even in the best-performing states, almost one-quarter (24%) of girls and boys were overweight or obese, as were almost two of five (39%) in states with the highest rates. Children in low-income families were twice as likely to be overweight or obese as children in high-income families.

HEALTHY LIVES Exhibit 6

Adults Who Smoke

Percent of adults who currently smoke



Data: D. Belloff, Rutgers Center for State Health Policy, and D. Radley, analysis of Behavioral Risk Factor Surveillance System.

Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2011.

Some targeted interventions show promise for addressing overweight and obesity in children by improving nutrition, increasing physical activity, or promoting weight loss.[21] Community-level public health interventions also have been recommended by experts.[22] Without further action, obesity-related health problems are likely to rise and drive further increases in health care costs.[23] Carried into adulthood, the negative effects of rising obesity on the health of the U.S. population may increasingly outweigh the gains from declining smoking rates.[24]

QUALITY OF CARE

During the period prior to health reform, the quality of health care did not consistently get better, as there was improvement in only half of the 22 National Scorecard indicators that track the extent to which patients receive care that is effective, safe, well-coordinated, timely, and patient-centered. Among those indicators for which baseline data were available, 52 percent substantially improved (by 5 percent or more), 14 percent substantially worsened, and 34 percent showed little change (Appendix A1).*

Although quality garnered the highest score among the Scorecard's five dimensions of performance, it still fell 25 percent below benchmark levels. Quality was particularly weak with respect to adult preventive care; care coordination indicators such as follow-up after mental health hospitalizations and hospital admissions or readmissions of nursing home residents; safety indicators such as medical errors and appropriate antibiotic prescribing; and patient-centered care indicators measuring the ability to get timely appointments and after-hours care. Appendix A3 presents the national rate, range of performance, and score for each indicator in this dimension.

National average performance substantially improved on certain indicators of effective care: control of chronic diseases and the provision of evidence-based hospital care on measures that are tracked and publicly reported. But the rate of adult preventive care was relatively unchanged, while childhood immunization rates declined. Performance was particularly variable on indicators of well-coordinated, patient-centered, and safe care. Substantial gains in some indicators—such as a reduction in pressure ulcers among nursing home residents and increased mobility among home health care patients—were accompanied by corresponding improvement in benchmark performance, leading to only modest changes in scores. Overall, the Scorecard continues to find widespread gaps in quality between leading and lagging geographic areas of the country as well as pervasive disparities in quality of care by income, insurance status, and race/ethnicity.

Effective Care

The nation made substantial progress in the area of effective hospital care, which has notably been the focus of public policy, public reporting, and collaborative efforts to learn and improve. There have also been promising improvements in the control of chronic conditions, such as high blood pressure. By continuing to build on the improvements in disease management, patient morbidity and mortality, as well as health care costs, could be substantially lowered. Still, significant weaknesses remain in the delivery of primary care and mental health care.

Preventive care. Only half of adults received all age-appropriate preventive services in 2008, such as immunizations, cancer screenings, and blood pressure and cholesterol tests, with little change

* *Note: The overall 2011 score for the quality dimension is not directly comparable to past years.* The 2011 Scorecard added seven new quality metrics to keep pace with expanding national performance data (see methodology, page 22), but historical data are not available for five metrics that make up two safe care indicators: unsafe drug use and 30-day hospital mortality. Among the subset of 20 quality indicators with baseline data, the average quality dimension score improved slightly from 70 in 2006 to 73 in 2011.

since 2002. There continue to be wide income- and insurance-based disparities in receipt of preventive care (Exhibit 7). Improvement in these areas will require expanding insurance coverage, strengthening people's connections to primary care, and implementing practice interventions to make the delivery of preventive services a routine part of patient care.[25] Achieving the Scorecard's target of 80 percent would mean that 66 million more adults would receive comprehensive preventive care.

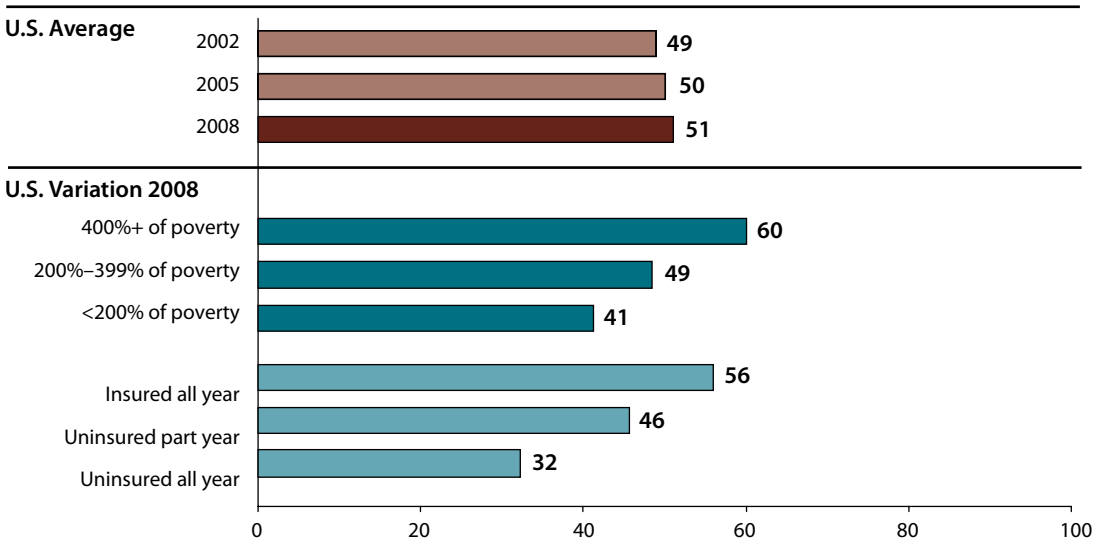
The proportion of young children who received all recommended doses of six key vaccines recovered to 75 percent in 2010 following a sharp decline caused by a shortage of the *Haemophilus influenza* type b vaccine during 2009.[26] However, the rate still lagged behind the level achieved in 2006. Immunization rates also continue to vary greatly across states with almost two of five children lacking full protection against communicable diseases in the worst-performing state. Indicating further gaps in children's preventive care, more than one-quarter of children failed to receive both preventive medical and dental visits in 2007, the latest year for which national data are available (the rate is not comparable to baseline). These gaps indicate a need for better access to primary care, improved vaccine supply, and sustained interventions to immunize children on time.[27]

Mental health care. Treatment of mental health problems remains inadequate in the U.S. Among adults who had major depressive episodes during 2009, more than one-third did not receive treatment (the rate is not comparable to prior years) (Exhibit 8). Rates were substantially lower among minority

QUALITY: EFFECTIVE CARE Exhibit 7

Receipt of Recommended Screening and Preventive Care for Adults

Percent of adults age 18+ who received all recommended screening and preventive care within a specific time frame given their age and sex*



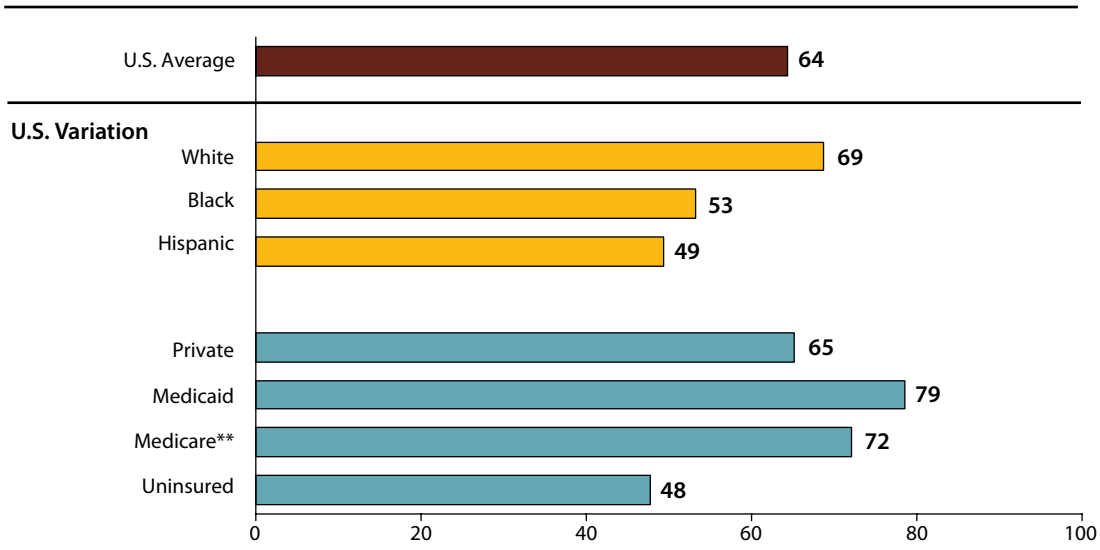
* Recommended care includes at least six key screening and preventive services: blood pressure, cholesterol, Pap, mammogram, fecal occult blood test or sigmoidoscopy/colonoscopy, and flu shot. See Appendix B for complete description.
Data: N. Tilipman, Columbia University analysis of Medical Expenditure Panel Survey.

Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2011.

QUALITY: EFFECTIVE CARE Exhibit 8

Adults with Major Depressive Episode Who Received Treatment, 2009

Percent of adults age 18+ with major depressive episode who received treatment in the past year*



*Major depressive episode is defined as a period of at least 2 weeks when a person experienced a depressed mood or loss of interest or pleasure in daily activities and had a majority of the symptoms for depression.
**Medicare includes other insurance such as military and veterans health care.
Data: National Survey on Drug Use and Health (SAMHSA 2010).

Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2011.

Americans (e.g., 49% for Hispanics vs. 69% for whites) and those without health insurance (e.g., 48% for the uninsured vs. 79% for Medicaid beneficiaries). Among children who needed mental health care in 2007, two of five did not receive any services, according to parents' reports, with treatment rates ranging from 47 percent to 78 percent among the bottom and top 10 percent of states.

Collaborative care interventions show promise for improving the detection and treatment of depression by primary care providers. But poor care coordination and the lack of reimbursement for deploying multidisciplinary care teams and for training primary care providers in mental health, among other enhanced services, impedes uptake of such interventions.[28] 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.[29]

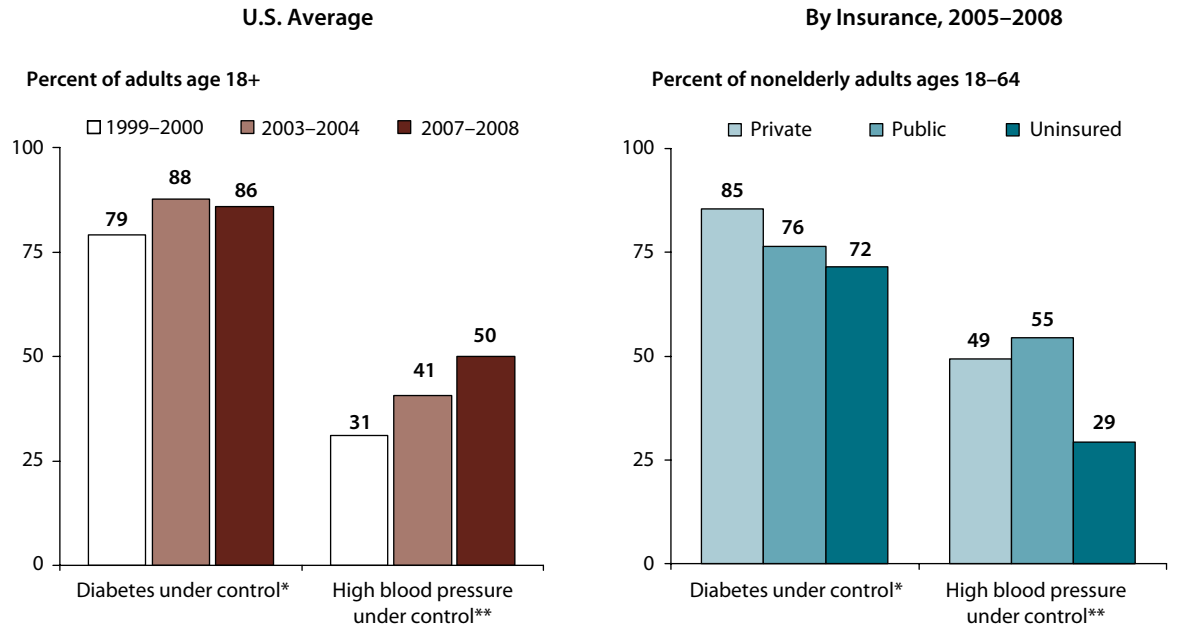
Chronic disease management. Control of two common chronic conditions—diabetes and hypertension—improved from 1999–2000 to 2003–04, based on the results of physical exams conducted on nationally representative samples of community-dwelling adults. From 2003–04 to 2007–08, there was continued improvement in hypertension control, but not diabetes control (Exhibit 9). Again, rates varied significantly by insurance coverage and income. Achieving the rate of control in the best-performing health plans could annually prevent up to 89,000 deaths and save up to $3.1 billion in medical costs.[30]

- Among adults with diabetes, the rate of controlled blood sugar levels (hemoglobin A1c less than 9%) increased from 79 percent in 1999–2000 to 88 percent in 2003–04, but failed to improve further and remained at 86 percent in 2007–08. The rate ranged from 37 percent to 89 percent among health plans, indicating the need for more effective efforts in many places.
- Control of high blood pressure increased from 31 percent of adults with hypertension in 1999–2000 to 41 percent in 2003–04 and 50 percent in 2007–08. This improvement corresponded to increased awareness and treatment of hypertension during this time.[31] There is substantial opportunity for continuing improvement relative to the high rate of control (73%) achieved in the best-performing health plans.
- During 2005–08, the rate of uncontrolled diabetes (hemoglobin A1c 9% or higher) was almost twice as high among uninsured diabetics as it was among privately insured diabetics (28% vs. 15%). Likewise, 71 percent of uninsured adults with hypertension did not have their blood pressure under control during this time, compared with 45 percent of adults with public insurance. There were similar disparities in rates of control by income level.

Effective hospital care. In 2009, hospitals delivered nationally recognized evidence-based treatments 96 percent of the time to patients with heart attack, heart failure, and pneumonia—up from

QUALITY: EFFECTIVE CARE Exhibit 9

Chronic Disease Under Control: Diabetes and Hypertension



*Refers to diabetic adults whose hemoglobin A1c is <9.0% **Refers to hypertensive adults whose blood pressure is <140/90 mmHg.
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, 2011.

84 percent in 2004 and 89 percent in 2006. Despite this notable improvement, the disparity between the top 10 percent and bottom 10 percent of performers on this set of indicators remains wide, particularly for pneumonia and heart failure. U.S. hospitals' performance on publicly reported process indicators for heart attack treatment are now consistently good: the national rate for delivery of recommended care now stands at 98 percent, and the spread between leading and lagging hospitals is narrow. Treatment of pneumonia and heart failure, however, is a different story: the bottom 10 percent of hospitals trail the top 10 percent by 12 to 18 percentage points.

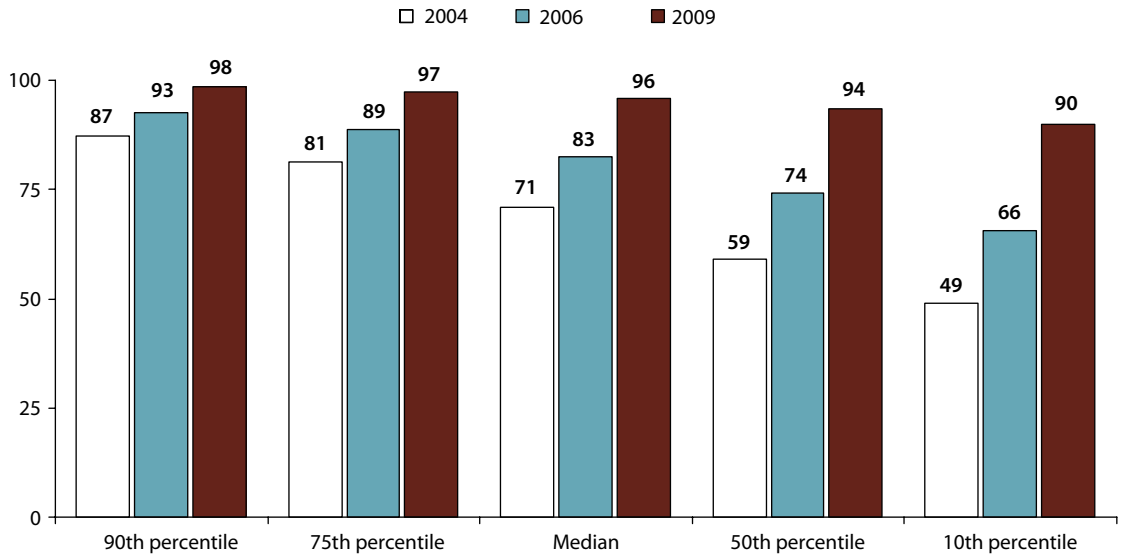
Hospitals also achieved rapid improvement in the delivery of an expanded set of process measures to prevent surgical infections and other complications, with rates increasing from 71 percent of eligible surgical patients in 2004, to 83 percent in 2006 and 96 percent in 2009 (Exhibit 10). The worst-performing hospitals dramatically improved their performance: the bottom 10 percent of hospitals raised their performance from 49 percent in 2004 to 90 percent in 2009, and consequently narrowed the gap with the top-performing hospitals from 38 percentage points in 2004 to just 8 percentage points in 2009.

The positive general trend in hospital quality indicators is a reflection of three factors: the achievement of a national consensus on a single set of measures; widespread reporting of performance data by hospitals, which followed the linkage of such reporting to Medicare payment updates; and public reporting of hospital-specific results on the federal Hospital Compare Web site.[32] These changes have led to broad acceptance of public reporting by hospitals and sparked efforts to improve performance. Today,

QUALITY: EFFECTIVE CARE Exhibit 10

Hospitals: Prevention of Surgical Complications

Percent of adult surgical patients who received appropriate care to prevent complications*



* See Appendix B for methods and description of clinical indicators.
Data: IPRO analysis of data from CMS Hospital Compare.

Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2011.

the benchmark hospitals have reached 100 percent on delivery of recommended treatment for people with certain common conditions, indicating that full adherence to national guidelines is possible if there is an institutional commitment to creating reliable care processes.[33]

Coordinated Care

Poor coordination of care continued to characterize the U.S. health system during the 2007–09 period covered by this National Scorecard, owing to a fragmented delivery system, a lack of incentives for integrating care across providers, weak attachments to primary care, and communication gaps across sites of care. Symptomatic of our fragmented care delivery system are hospital readmission rates that remain high and variable, especially for frail, disabled, or older patients. Coordination scores were, on average, 28 percent below achievable benchmarks, and the majority of rates worsened or failed to improve substantially.

Better coordination of services throughout the course of treatment and across sites of care help ensure that patients receive appropriate treatment and follow-up care, minimize the risk of error, and prevent complications that can lead to costly emergency department visits and hospitalizations. Good coordination also reduces patients' stress and confusion and saves them time navigating a complex health system.

Accessible primary care. People who have a regular source of primary care are more likely to keep doctor appointments, adhere to treatment, and receive preventive care, and they are less likely to have unmet health care needs, to be hospitalized, and to incur high costs.[34] Yet in 2008, more than two of five (44%) nonelderly adults did not have a regular provider they could go to for primary care and specialty care referrals whom they could easily get to and contact by phone. This rate has remained basically unchanged since 2002.[35] As of 2007, a similar percentage of children (42%) lacked a primary care medical home (personal doctor or nurse) that provided accessible and coordinated care, according to parent reports.[36] For both adults and children, there are stark disparities by income, insurance status, and race and ethnicity, with gaps of about 20 percentage points for adult primary care (Exhibit 11) and 30 percentage points for children's medical home.

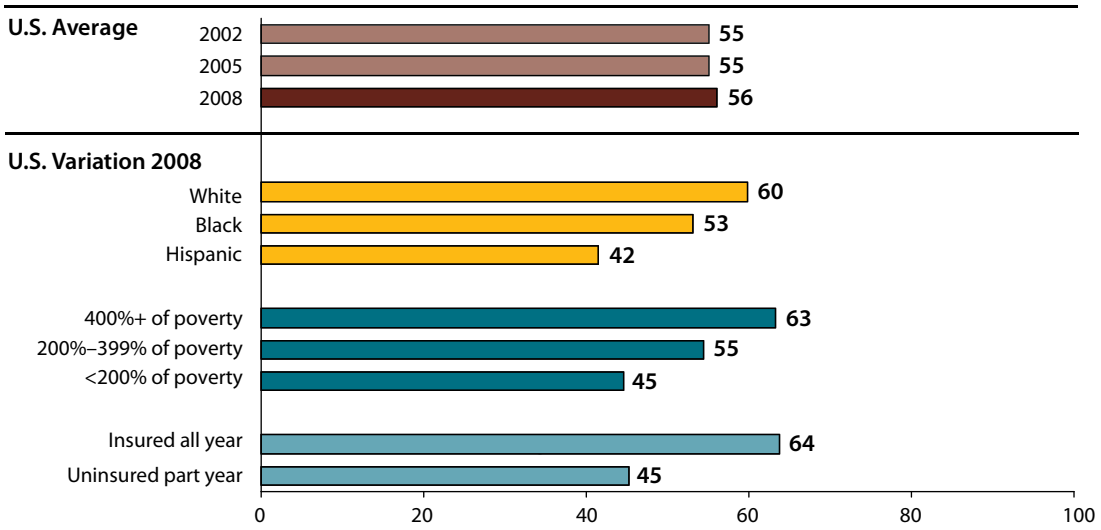
Coordination of care for hospital patients. Proper hospital discharge planning ensures that patients understand what to do when they get home and whom to call if they have questions or concerns, and it facilitates arrangements for follow-up care. In 2009, 90 percent of patients hospitalized with heart failure received written instructions at discharge, based on hospital records—a major increase from 2004, when the rate was just 53 percent (Exhibit 12).

Still, one-third of heart failure patients discharged from those hospitals among the bottom 10 percent of performers did not receive such instructions, although the variation among hospitals narrowed. As discussed below (see Health System Efficiency), persistently high hospital readmission rates—particularly for heart failure patients—further indicate there is substantial room to improve teamwork among providers and coordination across sites of care.

Proper follow-up care is also essential for patients who have been hospitalized with mental illness. Such care is needed to ease patients' transition back into the community, and to head off further acute crises.[37] But in about one of every four cases in private health plans, and about two of five cases in Medicare and Medicaid health plans, follow-up care was not provided. Among private health plans that voluntarily report quality data to the National Committee for Quality Assurance (NCQA), the

Adults with an Accessible Primary Care Provider

Percent of adults ages 19–64 with an accessible primary care provider*

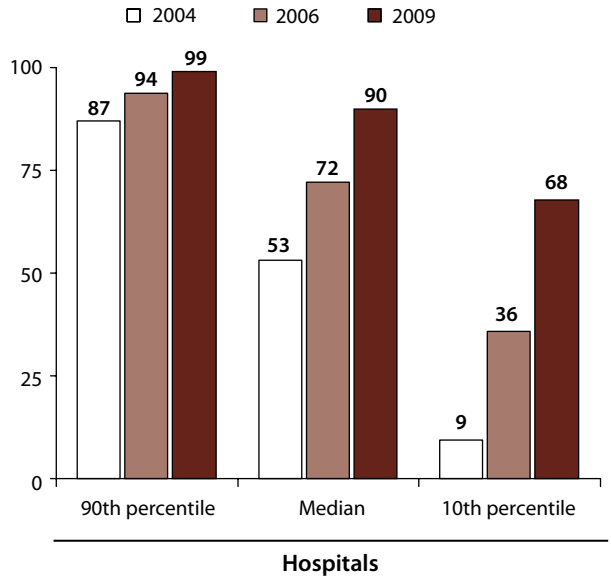


* An accessible primary care provider is defined as a usual source of care who provides preventive care, care for new and ongoing health problems, referrals, and who is easy to get to and easy to contact by phone during regular office hours.
Data: N. Tilipman, Columbia University analysis of Medical Expenditure Panel Survey.

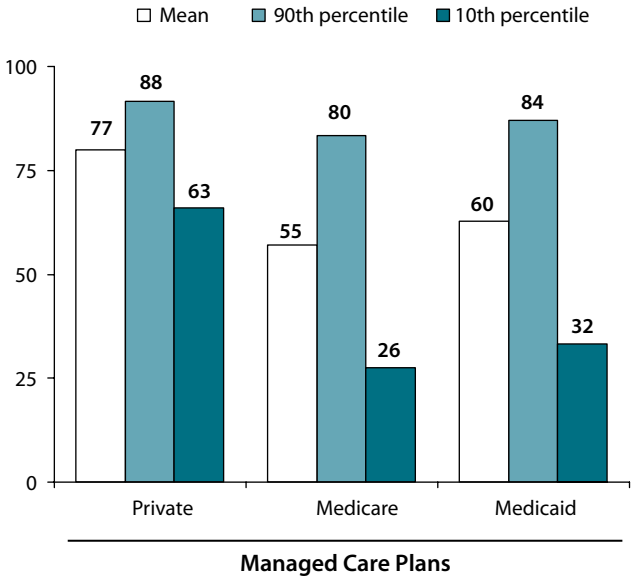
Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2011.

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

Percent of heart failure patients discharged home with written instructions*



Percent of health plan members hospitalized for mental illness with follow-up within 30 days after discharge, 2009



* 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—IPRO analysis of data from CMS Hospital Compare; follow-up after hospitalization for mental illness—Healthcare Effectiveness Data and Information Set (NCQA 2010).

Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2011.

rate of mental health follow-up after discharge was stagnant from 2004 to 2009. A small improvement among Medicaid plans was offset by a similar decline among Medicare plans. Moreover, rates varied by as much as threefold between the top and bottom-performing health plans, with two-thirds failing to receive follow-up care in the worst-performing plans (Exhibit 12).

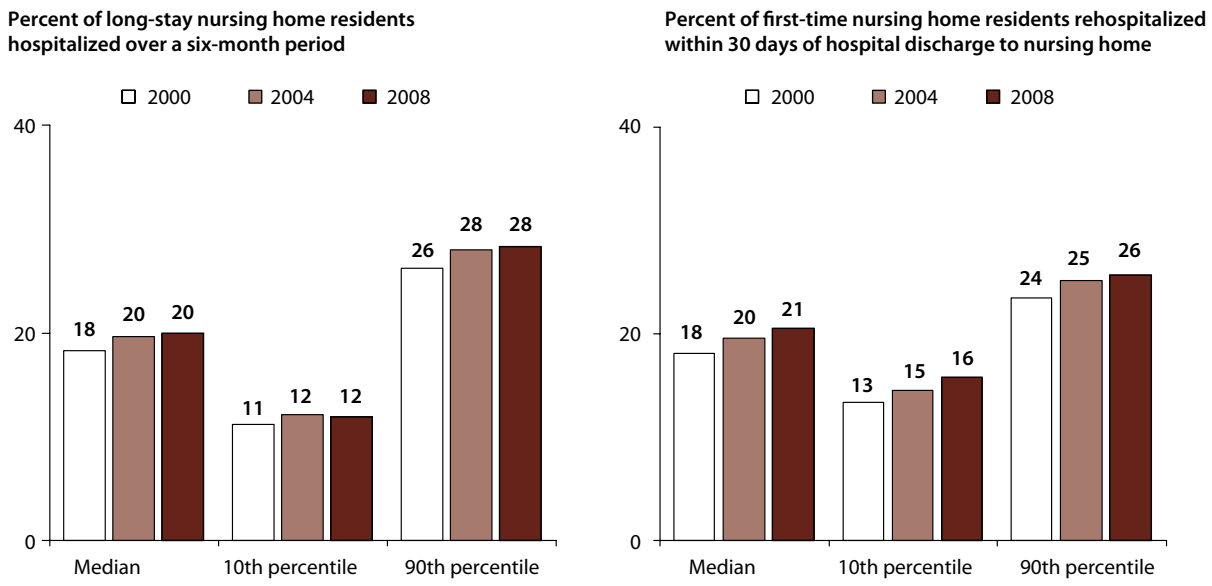
Hospitalization of nursing home residents and home health patients. Potentially avoidable hospitalizations put frail elders at risk for poor outcomes or complications that can lead to deterioration in their health.[38] According to the Scorecard, trends in this area are moving in the wrong direction. One of five (20%) long-term nursing home residents was hospitalized in 2008, up from 18 percent in 2000 (Exhibit 13). Moreover, 21 percent of hospitalized patients who were discharged to a skilled nursing facility in 2008 were readmitted to the hospital within 30 days, up from 18 percent in 2000. Geographical performance on these two indicators varied widely, with a 10-to-16-percentage-point spread between hospital referral regions with the lowest and highest hospital admission or readmission rates from nursing homes.

Among home health care agencies, 29 percent of patients on average were hospitalized during an episode of care during 2009, virtually unchanged from 2004 (28%). Rates for the top and bottom quartiles of home health agency performance ranged from 19 percent to 45 percent.

The greater-than-twofold difference in performance between the lowest- and highest-performing groups of nursing homes and home health agencies on these hospital admission measures indicates there is substantial room to

QUALITY: COORDINATED CARE Exhibit 13

Nursing Homes: Hospital Admission and Readmission Rates Among Nursing Home Residents, by Hospital Referral Regions



Data: V. Mor and Z. Feng, 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.

Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2011.

improve care coordination for frail and disabled elderly patients. Even bringing rates in the areas with the highest admission rates down to the national rate would represent significant progress. Toward this end, the voluntary, federally funded Home Health Quality Improvement Project is disseminating resources on best practices and collaboration to help home health agencies reduce hospitalizations.[39]

Rates of potentially avoidable hospital readmissions serve as a system-level indicator of quality across the care continuum, including the adequacy of hospital discharge planning and timing, the availability of high-quality postacute care services, and the coordination of care transitions.[40] Medicare and Medicaid payment policies currently in place are often barriers to improvement in care coordination for long-term care residents—particularly in the case of "dual eligibles" who qualify for both Medicare and Medicaid.[41] Moreover, neither hospitals nor nursing homes have financial incentives to work together to improve care outcomes and avoid acute-care episodes that result in hospitalization.

Leading hospitals are collaborating with post-acute care and community-based providers and agencies to reduce readmissions in their communities. The Affordable Care Act's Community-Based Care Transitions program creates a payment mechanism to promote such cross-continuum partnerships.[42]

Safe Care

In the decade or so since the Institute of Medicine published its landmark report, *To Err Is Human*, there has been some progress in patient safety, including reductions in hospital mortality and health care–associated infections in intensive care units.[43] Nevertheless, the nation remains far from the ideal of eliminating harm to patients.[44] Safe-care indicator scores were an average of 28 percent below benchmark levels. The gaps between national average rates and benchmark rates were particularly wide for reported medical errors, potentially unsafe drug use, and pressure sores in nursing home residents. Hospital discharge data show increases in rates of some specific adverse events (not scored), though this may reflect increased attention to safety and thus better detection and reporting (see chartpack online for data on supplemental indicators not scored).

Medical errors. Nearly one-third (32%) of U.S. patients with health problems who responded to an international survey in 2008 said that, in the last two years, a medical mistake or a medication or laboratory test error was made during their care, with the majority of respondents reporting that the mistakes occurred outside the hospital. The rate is about the same as that found in the 2005 edition of the survey. The likelihood of reporting an error was twice as great among those patients who see four or more physicians. To attain the 16 percent error-reporting rate in the Netherlands, the benchmark country, the U.S. rate would need to be cut in half.[45]

Drug safety. Patient injuries from medications may be caused by drug side effects, by human error, or by system-level failures in prescribing and monitoring medication use. While efforts to reduce adverse drug events often focus on hospitals, patients are also at risk in ambulatory care settings, where the majority of care is delivered. Elderly patients are at particular risk for experiencing adverse drug events because of their greater medication use and physiological vulnerability.[46]

In 2007, 25 percent of elderly Medicare beneficiaries received at least one drug from a list of 13 classes of high-risk prescription drugs that experts say the elderly should avoid. Rates of potentially inappropriate prescribing varied twofold, from a low of 18 percent to a high of 36 percent, across hospital referral regions (Exhibit 14). Among elderly adults

who have one of three conditions—dementia, hip or pelvic fracture, or chronic renal failure—for which certain prescription drugs are specifically contraindicated, one of five (20%) received a drug that could produce a harmful interaction. Rates of contraindicated drug use ranged from a low of 15 percent to a high of 26 percent across geographic regions.[47]

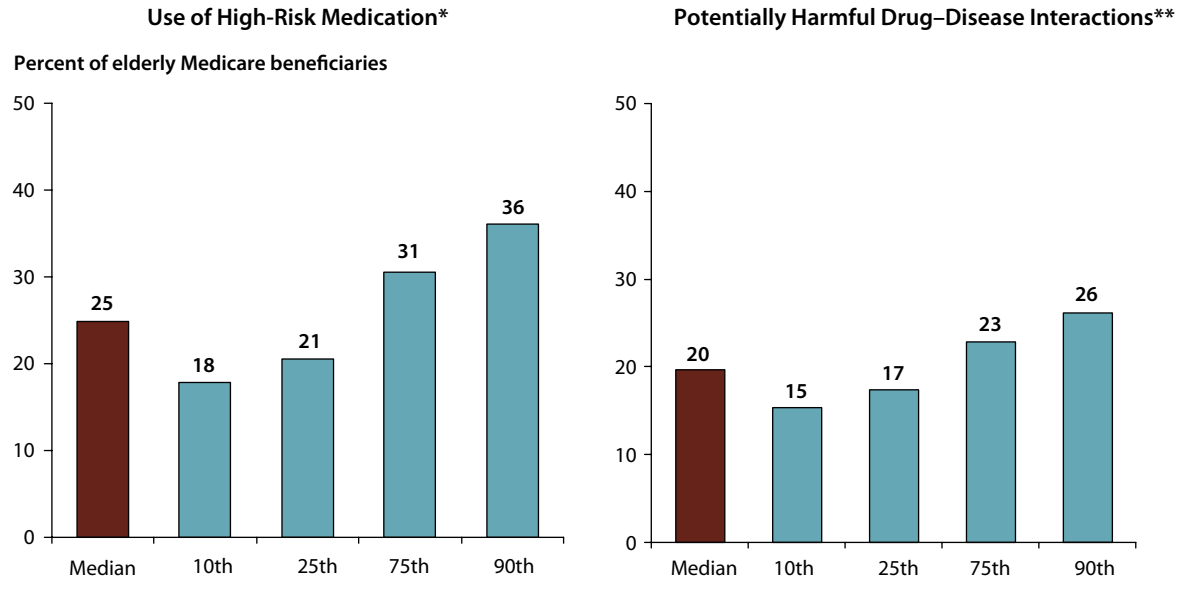
Overuse of antibiotics puts all patients at risk for antibiotic-resistant pathogens. Among children who saw a doctor for a sore throat during 2009, 23 percent in private health plans and 38 percent in Medicaid plans were prescribed an antibiotic without a "strep" test to determine first whether they had a bacterial infection warranting antibiotic treatment. This rate improved (declined) by 4 to 8 percentage points, on average, from 2004. Variation among health plans reporting this data to NCQA narrowed from 2004 to 2009, but nevertheless ranged from 11 percent to 37 percent in private plans and from 19 percent to 60 percent in Medicaid plans.

Inappropriate prescribing of drugs is expected to diminish as electronic prescribing is increasingly adopted as part of health information technology (HIT) systems. Such systems have the capacity to alert clinicians about potentially harmful medications or possibly dangerous interactions with other drugs or with certain diseases. By tracking trends through data obtained from the Medicare Part D prescription drug program and public reporting efforts, we should be able to get an early indication of the impact that "meaningful use" of HIT is having.

Nursing home care. Pressure sores can lead to serious complications—even death—in nursing

QUALITY: SAFE CARE Exhibit 14

Prescription of Potentially Unsafe Medications Among Elderly Beneficiaries, by Hospital Referral Regions, 2007



* Medicare beneficiary received at least one drug from a list of 13 classes of high-risk prescriptions that should be avoided by the elderly. ** Medicare beneficiaries with dementia, hip or pelvic fracture, or chronic renal failure, and received a prescription in an ambulatory care setting that is contraindicated for the condition.
Data: Y. Zhang analysis of 5% sample of Medicare beneficiaries enrolled in stand-alone Medicare Part D plans (Zhang et al., 2010).

Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2011.

home residents, particularly among those who are unable to get out of bed or move about on their own. Fortunately, they can often be prevented with regular assessment, scheduled turning, and other good care practices. From 2004 to 2008, rates of pressure sores fell in the nation's nursing homes, from 13.4 percent to 11.6 percent among high-risk residents, and from 18.8 percent to 14.1 percent among short-stay residents. Nursing home quality also improved in other areas, such as a reduction in the use of physical restraints (see chartpack online for data on supplemental indicators not scored). These results likely reflect the influence of collaborative efforts, such as the national campaign Advancing Excellence in America's Nursing Homes.[48] Further reductions of 27 percent to 38 percent would be required to reach benchmark levels of performance achieved in the top five states.

Hospital mortality. The hospital standardized mortality ratio (HSMR) is included in the Scorecard as a measuring stick for the impact of improvements in quality and safety on patient outcomes. Drawn from Medicare data, the HSMR is a risk-adjusted ratio of actual deaths to expected deaths in the hospital; expected death rates are generated based on average national mortality in 2000, with adjustments made for patient and community risk factors.[49] The HSMR declined 28 percent over eight years, from 101 over the years 2000 to 2002, to 73 over 2006 to 2008. During this time, several high-profile national initiatives were undertaken to improve hospital patient safety and mortality by promoting the uptake of proven interventions. The change in this indicator is suggestive of, but not sufficient to demonstrate, improvement, since the measure does not capture deaths in the period following hospitalization.

To supplement this historical measure of in-hospital mortality, the 2011 National Scorecard adds three new risk-adjusted, 30-day all-cause mortality rates for Medicare patients hospitalized for heart attack (16.1%), heart failure (11.2%), or pneumonia (11.5%) during 2006–2009. (These rates measure deaths from any cause within 30 days after patients are admitted with one of the principal diagnoses, adjusted for patients' risk factors.) Across hospitals and conditions, 30-day mortality rates varied from 30 percent to 50 percent between the top and bottom 10 percent of hospital performance. To address the wide variation in these mortality rates, the federal government's Hospital Compare Web site recently began reporting whether individual hospitals perform significantly better or worse than the national average (historical data are not available for comparison). Recent research indicates that hospitals with lower mortality rates are characterized by an organizational culture that supports quality improvement, teamwork, and coordination.[50]

Patient-Centered and Timely Care

Having health care that is patient-centered and accessible in a timely fashion can help patients adhere to their treatment plans, be more engaged in decisions regarding their care, and achieve better outcomes.[51] Scores on patient-centered care and timely access to care were an average of 25 percent lower than the benchmarks, and in some cases as much as 50 percent lower. Across five indicators of patient-centered care that can be compared to the baseline, only two improved: doctor–patient communication and home health care patient mobility.

Rapid access to primary care. In an eight-country survey of adults with health problems, U.S. patients were much less likely than those in six other countries to report being able to get a doctor's appointment the same day or the next day when they were sick. Only 43 percent of U.S. patients reported having such rapid access in 2008, down from 47 percent in 2005.[52] This gap highlights the need for advanced-

access models of care in physician practices and clinics. The U.S. rate would need to almost double to reach the benchmark of 80 percent achieved in the Netherlands.

After-hours care. In the same eight-country survey of adults with health problems, U.S. patients were among the most likely to report difficulty obtaining health care after hours without going to the emergency department (Exhibit 15). Less than two of five (37%) U.S. adults reported it was very or somewhat easy to get such after-hours care in 2008, with little change from 2005. A near doubling in the U.S. rate would be required to reach the benchmark of 70 percent. Improved after-hours care and better access to primary care can reduce the need for relatively costly emergency department visits, particularly among high-risk, low-income patients.[53]

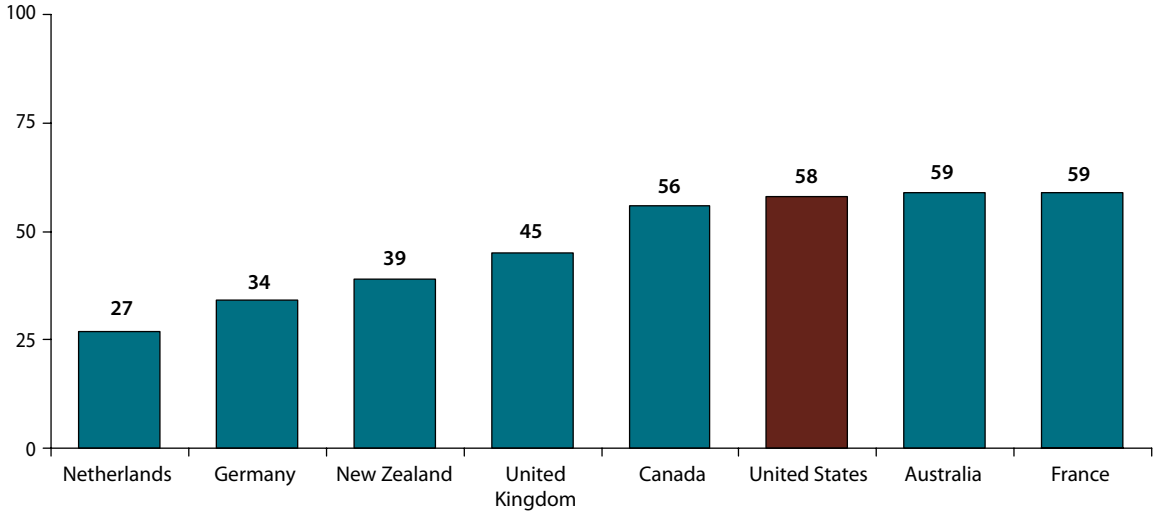
Physician communication. Open and clear communication between doctor and patient is a key component of patient-centered care. Somewhat over half of U.S. patients in 2007 and 2002 (57% and 54%, respectively) said their doctors always listened carefully, explained things clearly, respected what they had to say, and spent enough time with them. Patient communication experiences vary widely by insurance status and source of coverage. The national rate remained well below the 77 percent benchmark set by top-performing health plans. Interventions directed at both physicians and patients may improve the quality of interpersonal medical interactions.[54]

Hospital responsiveness to patients. A wide range in performance persisted among hospitals on three specific indicators of patient-centered hospital care, with a spread of 13 to 23 percentage points

QUALITY: PATIENT-CENTERED, TIMELY CARE Exhibit 15

Difficulty Getting Care After Hours Without Going to the Emergency Room, Among Sicker Adults, 2008

Percent of adults who sought care reported "very" or "somewhat" difficult to get care on nights, weekends, or holidays without going to the emergency room

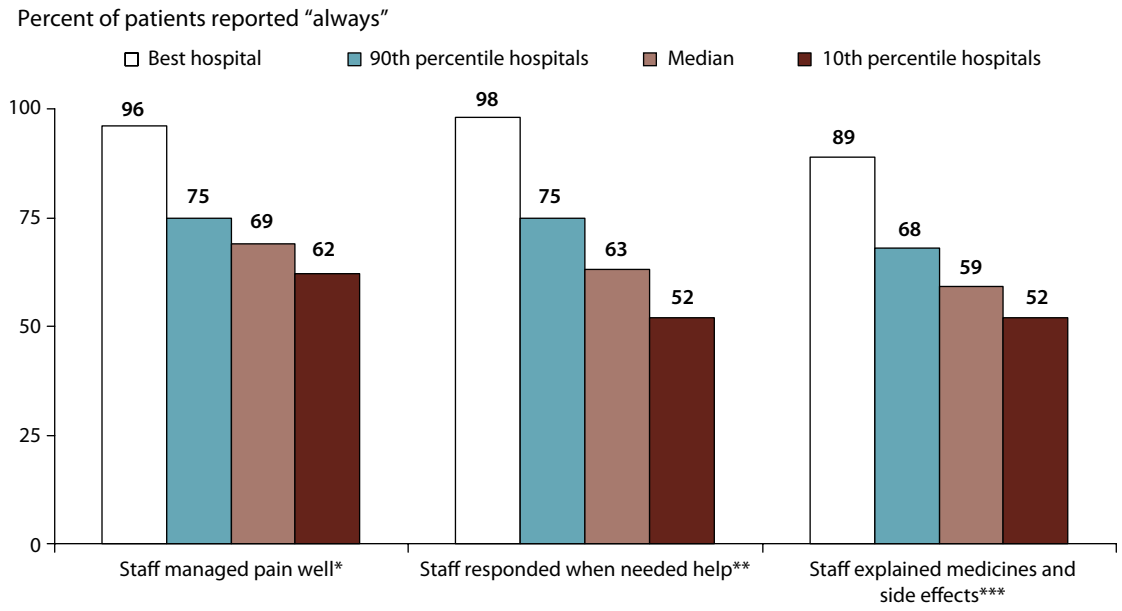


Sicker adults met at least one of the following criteria: health is fair or poor; serious illness in past two years; or was hospitalized or had major surgery in past two years.
Data: 2008 Commonwealth Fund International Health Policy Survey.

Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2011.

QUALITY: PATIENT-CENTERED, TIMELY CARE Exhibit 16

Patient-Centered Hospital Care: Staff Managed Pain, Responded When Needed Help, and Explained Medicines, by Hospitals, 2009



* 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: IPRO analysis of HCAHPS from CMS Hospital Compare.

Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2011.

between the top 10 percent of hospitals (those with rates of 68% to 75%) and the bottom 10 percent (those with rates of 52% to 62%) on measures of how well hospital staff manage pain, respond when patients press a call button or need help going to the bathroom, or explain medications and their possible side effects (Exhibit 16). With the best hospitals achieving ratings as high as 98 percent, it is clear that hospitals nationally can do much better in meeting patients' needs.

These results from the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) Survey are similar to those observed in a smaller pilot version of the survey reported in the first National Scorecard. The public release of these data on the federal government's Hospital Compare Web site in March 2008 marked a turning point: it was the first time that consumers were able to compare hospital performance on a uniform patient survey. It also demonstrated how government—by sponsoring the development of a standard survey and encouraging its use through Medicare payment incentives—can help foster greater accountability among hospitals for providing patient-centered care.

In contrast to the improvement in hospital clinical quality, rates on these measures of patient-centered care have improved only slightly since public release. This likely reflects the difficulty of identifying and instituting strategies for change and the lower emphasis on patient-reported experiences in pay-for-performance initiatives.

Home health care mobility outcomes. A new Scorecard indicator shows a large increase in the percentage of home health care patients with compromised mobility who became more able to walk or move around, a key outcome measure for

home health care agencies. The improved mobility rate increased from 37 percent of patients, on average, across agencies in 2004 to 47 percent in 2009. Yet, looking across the country, there is a 26-percentage-point spread between the bottom and top quartiles of performance among home health care agencies in 2009, indicating much room for improvement.

HEALTH CARE ACCESS

Easy access to health care is the foundation of a high-performance health system. Inadequate access leads to inefficient care: it causes people who are sick or injured to delay seeking treatment right away, which increases the likelihood of medical complications that could have been avoided; it encourages reliance on emergency departments for primary care, a major contributor to high costs within the health system; and it results in duplication of services and failure to follow-up on test results or preventive care. Over the last decade, declining health insurance coverage, rising insurance premiums, and escalating health care costs have erected barriers to care and financially strained the insured and uninsured alike.[55]

The 2011 National Scorecard finds that access deteriorated substantially over the past five years. Reflecting a decline in both insurance coverage and affordability, the overall performance dimension score dropped from 67 to 55 since the 2006 Scorecard. This drop is largely driven by rising uninsured and underinsured rates, premiums that are rising far faster than incomes, and higher rates of medical debt. Of five access indicators, four declined, as growing numbers of both middle-income and low-income families have found themselves with inadequate access to affordable care. Appendix A4 presents the national rate, benchmarks, range of performance, and scores for each of the indicators within this dimension.

Participation

The foremost determinant of whether people can access care when needed is having health insurance that covers essential services without financial stress. Over the last decade, U.S. adults experienced an erosion in their health coverage (Exhibit 17). Based on a Commonwealth Fund survey, 28 percent of working-age adults, or an estimated 52 million people, were uninsured at some time during 2010, up from 26 percent, or 45 million people, in 2003.[56] There also has been an increase in working-age adults who are "underinsured," defined as those who are insured all year but have medical bills or deductibles that are high relative to income. By 2010, 16 percent of working-age adults (an estimated 29 million) were underinsured, up from 9 percent (16 million) in 2003. Adding the underinsured to those who were uninsured during the year means that a total of 44 percent of working-age adults (81 million) were at risk in 2010, a sharp increase from 35 percent (61 million) in 2003.

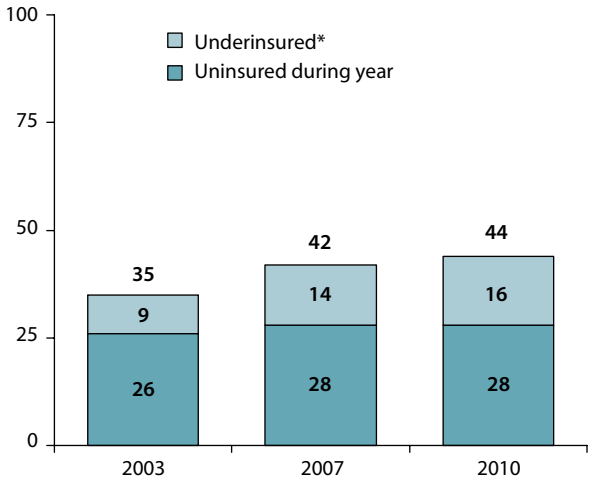
By 2010, nearly three-quarters (74%) of those with incomes below 200 percent of the federal poverty level were either uninsured or underinsured, up from 68 percent in 2003. Although low-income families are most at risk of having inadequate coverage or lacking it altogether, a rising share of middle-income families have joined the ranks of the uninsured and underinsured—and felt the negative consequences when trying to access care or pay medical bills.[57]

Looking at insurance coverage across the U.S., from 1999–2000 to 2009–2010 the number of states that had a low rate (under 14%) of uninsured working-age adults declined from 24 to five. By 2009–2010, in over half the states the uninsured rate for working-age adults was 19 percent or higher, and 15 states had a rate of 23 percent or higher. In contrast to adults, children's insurance coverage rates held steady or improved in most states during

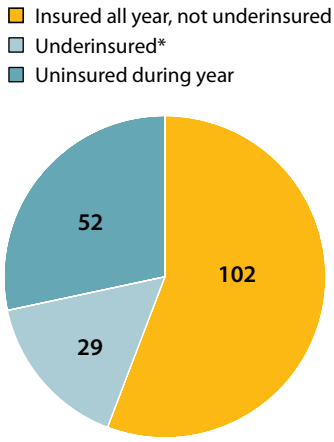
ACCESS: PARTICIPATION Exhibit 17

Uninsured and Underinsured Adults

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



Millions of adults ages 19–64 who are uninsured or underinsured, 2010



Total: 184 million**

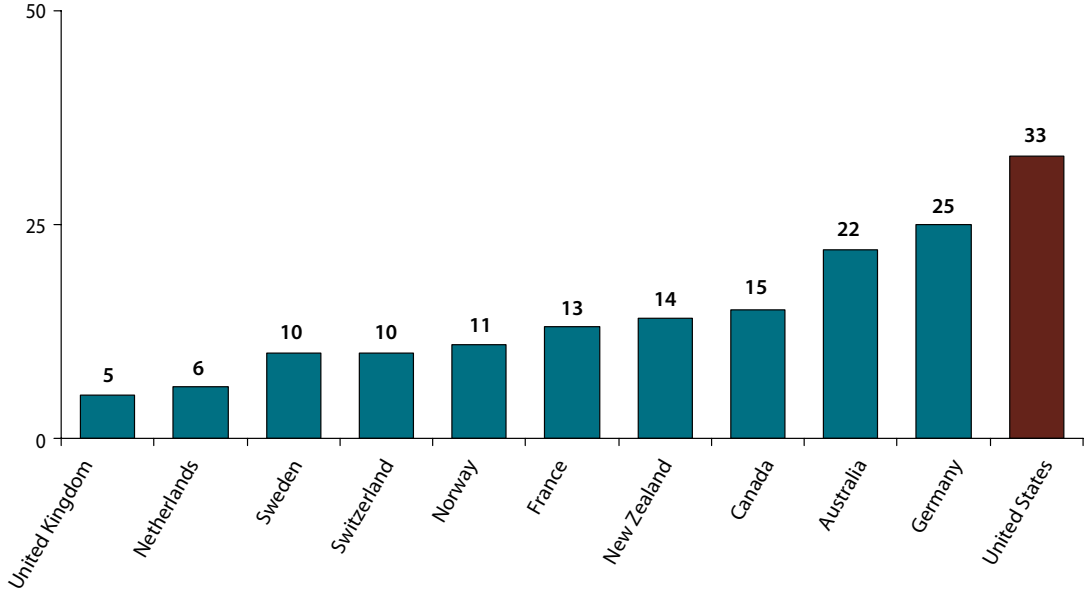
* Underinsured defined as insured all year but experienced one of the following: medical expenses equaled 10% or more of income; medical expenses equaled 5% or more of income if low-income (<200% of poverty); or deductibles equaled 5% or more of income.
** Subgroups may not sum to total because of rounding.
Data: 2003, 2007, and 2010 Commonwealth Fund Biennial Health Insurance Surveys.

Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2011.

ACCESS: PARTICIPATION Exhibit 18

Access Problems Because of Costs, 2010

Percent of adults who had any of three access problems* in past year because of costs



*Did not get medical care because of cost of doctor's visit; skipped medical test, treatment, or follow-up because of cost; or did not fill Rx or skipped doses because of cost.
Data: 2010 Commonwealth Fund International Health Policy Survey.

Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2011.

this period, reflecting the expansion of Medicaid and the Children's Health Insurance Program, even during the economic recession. From 1999–2000 to 2009–2010, the number of states with high rates of uninsured children (16% or more) declined from seven to two, and the number of states with low rates (less than 7%) expanded from 10 to 14. (See chartpack online for maps depicting these changes.)

The recession officially ended in 2009, but the full effects of continued high rates of unemployment and stagnant incomes on access to care remain to be seen.[58] The twin loss of job and health insurance can drain any family's savings and cause them to accumulate unsustainable medical debt. During the recession, 9 million workers lost their employment-based health insurance when they lost their job.[59] Maintaining health insurance coverage during periods of unemployment would enable families struggling with basic living costs to maintain their health and future productivity.

The erosion in insurance coverage, coupled with rising health care costs, undermines access to care. As of 2010, one-third of U.S. adults reported going without needed care, including prescription medicines, because of costs. In contrast, only 5 percent of adults in the United Kingdom and 6 percent of adults in the Netherlands reported such financial barriers to care in 2010 (Exhibit 18). Although the U.S. rate has fluctuated in international surveys depending on the specific wording of the question, the U.S. has persistently been an outlier among high-income countries on the extent to which residents go without needed and recommended care because of costs.

Affordable Care

Rapidly rising medical expenses and health insurance costs have put an increasing strain on individuals and families. By 2009, the average annual cost of employer-based policies for families reached $13,027, a 41 percent increase since 2003. If the pace continues over the next decade, the average premium for family coverage will rise 79 percent by 2020, to more than $23,000.[60] Making matters worse, premiums have been rising far faster than incomes. By 2009, average premiums in 26 states were at or above 18 percent of median income for the working-age population; in 2003, only 3 states had premiums this high relative to income. And in no states were premiums averaging less than 12 percent of median income. As a result, the percentage of all adults living in a state where premiums averaged less than 15 percent of median household income dropped sharply over the past six years, from 57 percent in 2003 to 4 percent in 2009 (Exhibit 19).

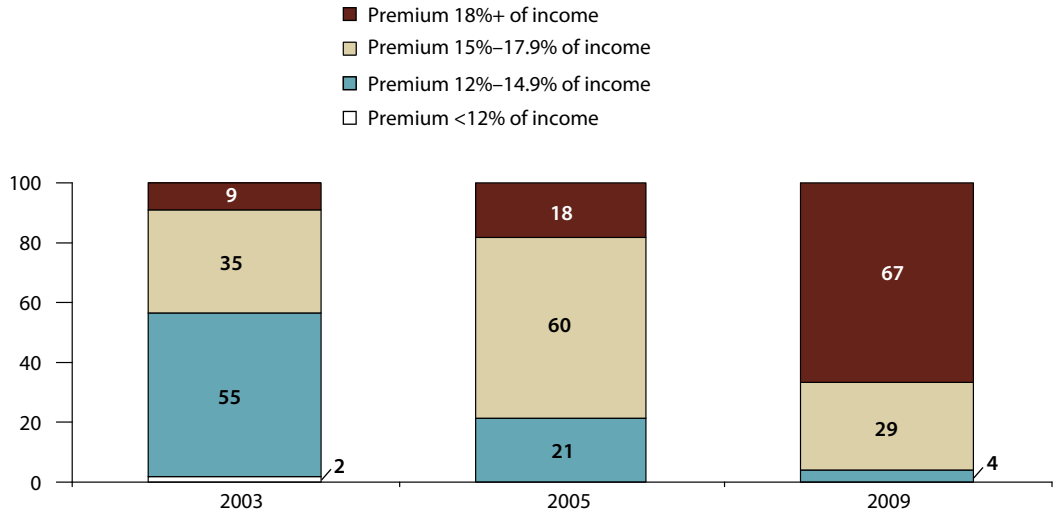
As of 2007, more than one of five (22%) individuals under age 65 lived in families with high out-of-pocket health care costs relative to family income, up from 19 percent in 2001.[61] Families with incomes below 200 percent of the federal poverty level were particularly at risk: more than two of five (42%) low-income families incurred high out-of-pocket expenses, compared with 8 percent of families with higher incomes. Financial burdens are especially high among people who purchased insurance in the nongroup market, with more than half (51%) facing high out-of-pocket costs relative to income as of 2007.

Efforts to moderate increases in premiums have led to a shift toward higher deductibles and cost-sharing for the under-65 population. As health care costs continue to rise faster than incomes, adults increasingly find themselves unable to pay for their medical costs. By 2010, two of five (40%) U.S. working-age adults reported having problems paying medical bills, being contacted by collection agencies, or paying medical debt over time; this is up from 34 percent in 2005. Having health insurance is no longer a guarantee of financial protection—

ACCESS: AFFORDABLE CARE Exhibit 19

Employer Premiums as Percentage of Median Household Income for Population Under Age 65

Under-65 population living in states where premiums as share of median household income are within following ranges



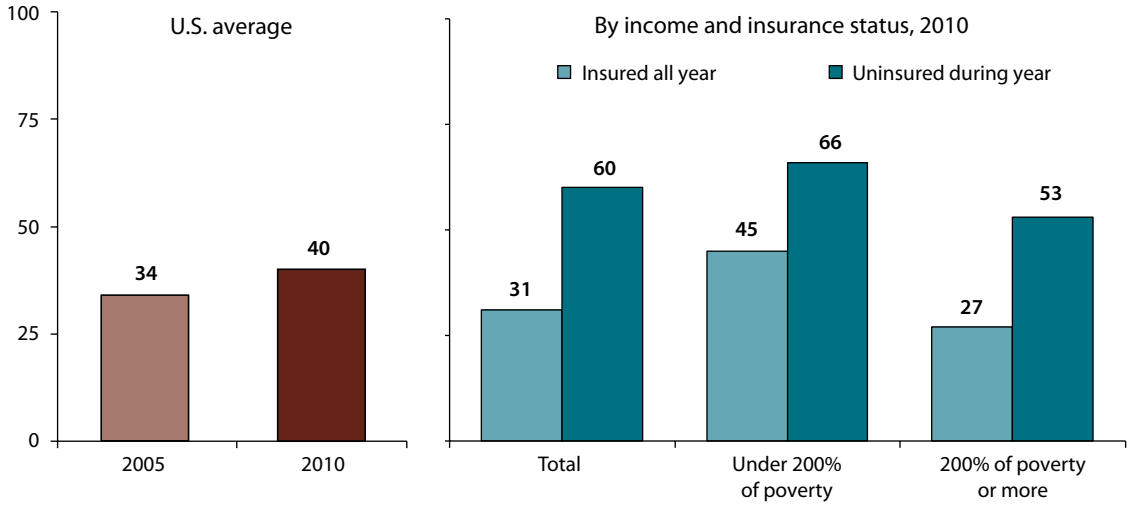
Data: Average total premiums—2003, 2005, and 2009 Medical Expenditure Panel Survey; state median income for single and family households (all under age 65) —2003–2004, 2005–2006, and 2009-2010 Current Population Survey.

Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2011.

ACCESS: AFFORDABLE CARE Exhibit 20

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 2010 Commonwealth Fund Biennial Health Insurance Surveys.

Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2011.

nearly one of three (31%) working-age adults who were insured all year had medical bill problems or outstanding medical debt. The uninsured and adults earning low incomes are most at risk (Exhibit 20). Two-thirds (66%) of lower-income (under 200% of poverty) working-age adults who were uninsured during the year reported medical bill problems.[62]

Access and Its Relationship to Quality and Efficiency

Reduced access to care has serious implications for the overall performance of the health system. High-quality treatment and preventive care are instrumental in promoting and establishing good health. Uninsured people often fail to get timely and appropriate care when it is needed, leading to worse health outcomes and more costly emergency or acute care. When they do get care, the uninsured experience more medical errors or care coordination problems, such as delays in transferring lab results or medical records and duplication of tests.[63]

Studies also find that high uninsured rates undermine the quality of care for entire communities and states.[64] 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. Notably, across the country, states with better access to care also perform better on quality overall.[65] Poor access, and poor quality, drives up the costs of care. As discussed later in this report, the Affordable Care Act's insurance reforms have the potential to provide a more secure foundation to improve quality and achieve more efficient care over time.

HEALTH SYSTEM EFFICIENCY

Efficient health care systems seek to maximize health outcomes and quality for the resources spent and to enhance value over time. Barriers to access, poorly coordinated and fragmented care, and the overuse of marginally effective therapies waste resources and patients' time while adding to rising costs of care. Based on the relative successes achieved by a number of U.S. states and local health care markets, as well as other countries, opportunities exist to achieve savings and enhance value. Overall, the U.S. achieved a score of 53 across eight indicators of efficiency in health system performance—the lowest scoring dimension in the 2011 National Scorecard.[†]

Among national rates for efficiency indicators with time trends, 33 percent improved by 5 percent or more, 40 percent substantially worsened, and 27 percent showed little or no change since the 2006 Scorecard (Appendix A1). The most dramatic improvement was in the adoption of health information technology by primary care physician practices, although the U.S. still lags well behind other countries. Rates of potentially preventable hospitalizations also improved, but were still two times higher than benchmark levels, resulting in little change in the ratio scores. Performance on some measures of potential overuse or waste substantially worsened, while rates of hospital 30-day readmission rates remained high.

The failure to improve overall points to efficiency as the area with the greatest potential for future gains in performance. Appendix A5 presents the national rates, benchmarks, and range of performance for each of the indicators used for this dimension.

[†] *Note: The overall 2011 score for the efficiency dimension is not directly comparable to past years.* The 2011 Scorecard added one new metric of hospital adoption of health information technology, but historical data were not available for earlier periods. Among the subset of seven indicators that have baseline data, the average efficiency dimension score improved slightly, from 52 in 2006 to 54 in 2011.

Inappropriate, Wasteful, or Fragmented Care

Inefficient, fragmented care wastes time and effort for providers and patients alike and often leads to additional doctor visits and increased spending. In a 2008 survey conducted in eight nations, 23 percent of U.S. adults with health problems reported that their medical records or test results were not available at the time of their doctor appointment. In the Netherlands, the country with the best rate, the rate was only 9 percent (Exhibit 21). Patients in the U.S. were also more likely than patients in other advanced nations to report that their health care provider ordered the same test multiple times within the previous two years. In the same 2008 cross-national survey, 19 percent of U.S. adults with health problems reported the receipt of a duplicate medical test—nearly five times the rate reported by Dutch patients.

In the United States, the predominant fee-for-service payment model can encourage health care providers to "do more," even when the additional services are of marginal or no value.[66] An example of potential overuse or inappropriate use of services is imaging tests conducted on patients who have lower-back pain but no apparent risk factors or signs of serious pathology. Among health plans that report data on quality to NCQA, rates for this indicator of potentially inappropriate testing varied up to twofold, with averages 50 percent to 62 percent higher than benchmark rates for the top 10 percent of health plans (Exhibit 22). Rates of inappropriate imaging for lower-back pain failed to improve from 2004 through 2009, despite increased awareness among payers and focused attention by policymakers.[67]

EFFICIENCY Exhibit 21

Test Results or Medical Records Not Available at Time of Appointment, Among Sicker Adults, 2008

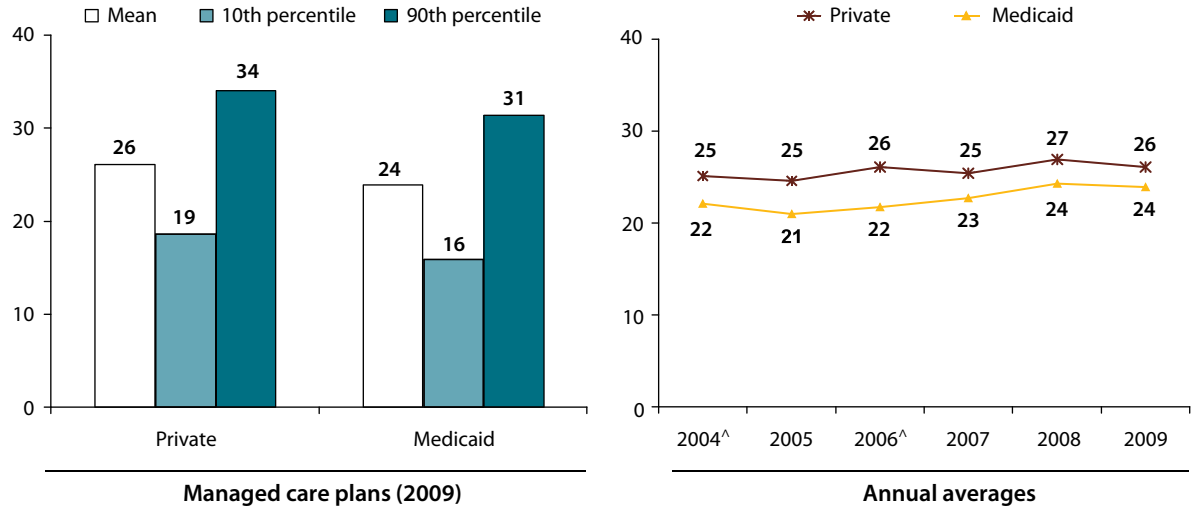
Sicker adults met at least one of the following criteria: health is fair or poor; serious illness in past two years; or was hospitalized or had major surgery in past two years.
Data: 2008 Commonwealth Fund International Health Policy Survey.

Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2011.

EFFICIENCY Exhibit 22

Managed Care Health Plans: Potentially Inappropriate Imaging Studies for Low Back Pain, by Plan Type

Percent of health plan members with a primary diagnosis of low back pain who received an imaging study within 28 days of the diagnosis*



* Lower rate represents better performance.
^ Denotes years in 2006 and 2008 National Scorecards.
Data: Healthcare Effectiveness Data and Information Set (NCQA 2010).

Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2011.

Together, these three measures suggest that patients in the U.S. receive more health care services than are necessary or appropriate. Even more disconcerting is that in recent years, despite widespread efforts to streamline health service provision, performance on each of these measures worsened. Clearly, more collaborative and systematic approaches are needed to effect improvements.

Potentially Avoidable Hospital Use

When patients have timely access to primary care and are fully informed about how to manage their health condition, they are much less likely to require expensive visits to the emergency department (ED) or to be admitted to the hospital, and their risk of medical complications is greatly diminished as well. In a 2008 cross-national survey, more than one of five (21%) U.S. adults with health problems reported that they received treatment in an ED for a condition they thought could have been treated by a regular doctor if one had been available. In contrast, only 7 percent of adult patients in Germany, the benchmark country, reported using an ED for routine care.

Hospitalizations for ambulatory care–sensitive (ACS) conditions is a key indicator of efficiency, since such hospitalizations can often be avoided with high-quality, well-coordinated care. Rates of ACS admissions have fallen in recent years, and substantially so for certain conditions (although trends must be interpreted with caution, given that they are influenced by disease prevalence and other factors, such as changes in diagnostic coding). Between 2004 and 2007, hospitalization rates for heart failure and childhood asthma each fell 13 percent, suggesting that management of these conditions, such as increased use of controller

medications for asthma, had improved. There has been little change, however, in admission rates for uncontrolled diabetes and related complications.

A decline in the ACS admission rate among Medicare beneficiaries also occurred from 2003 to 2007 (rates were not strictly comparable to 2009). Medicare Part D coverage of drugs for chronic disease control may have contributed to this improvement. Yet a twofold to fourfold variation in rates of ACS admissions persists between top- and bottom-performing states and regions of the country, indicating that further gains are possible. Reducing Medicare ACS admissions to benchmark levels would save $4.2 billion annually.

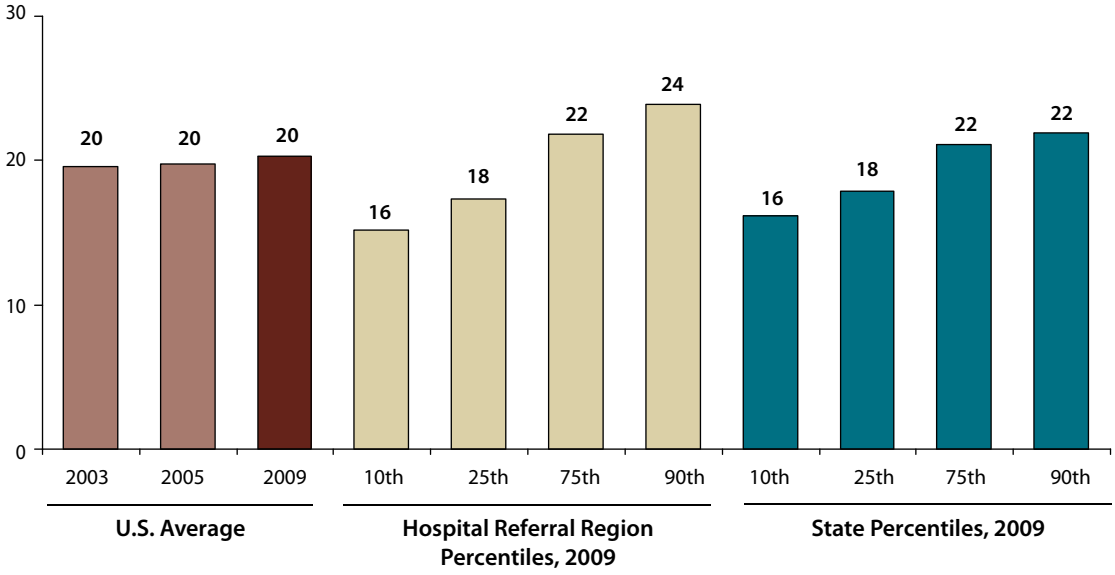
Hospital readmission rates are in effect a "whole" system indicator, providing a marker for potentially poor-quality hospital care, poor discharge planning and care transitions, weak primary care, or fragmented postacute care provided in the community. Nationally there has been a failure to improve readmission rates, which are costly, put vulnerable patients' health at risk, and put patients and their families at financial risk. In 2009, 20 percent of Medicare beneficiaries hospitalized with one of 45 conditions or procedures were readmitted within 30 days of discharge. Rates for specific geographic markets ranged from 16 percent to 24 percent. On average, there was little change in readmission frequency between 2003 and 2009 (Exhibit 23).

An analysis completed by the Medicare Payment Advisory Commission found that up to three-quarters of readmissions may be preventable through better primary care and transitional care and through reducing complications from care received

EFFICIENCY Exhibit 23

Medicare Hospital 30-Day Readmission Rates

Percent of Medicare beneficiaries initially admitted for one of 45 medical conditions or surgical procedures who are readmitted within 30 days following discharge*



* See Appendix B for list of conditions and procedures 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, 2011.

while hospitalized, which cost Medicare $12 billion a year.[68] Reducing the national average to benchmark levels alone would save the Medicare program $4.0 billion annually.

Variation in Quality and Costs

Medicare spending is highly concentrated among the many beneficiaries who suffer from multiple chronic diseases. In 2009, average spending for individual Medicare beneficiaries with diabetes, heart failure, and chronic obstructive pulmonary disease (COPD) was $48,107, up 39 percent from 2003, when it was $34,498. During this period, spending increased 27 percent for patients with COPD and diabetes, 36 percent for patients with heart failure and COPD, and 42 percent for those with heart failure and diabetes. Per-beneficiary spending in the most costly 10 percent of hospital markets was nearly double that in the least costly markets, suggesting there are opportunities to improve care and use resources more efficiently.

Insurance and Administrative Costs

Private health insurance in the United States is characterized by complex benefit packages and cost-sharing designs and high rates of turnover in health plan enrollment. Plans also incur significant marketing and underwriting costs. From 2000 to 2009, per capita administrative costs in the U.S. rose 85 percent, from $287 to $532, versus 66 percent in national health expenditures per capita.[69] In 2009, administrative costs associated with insurance administration accounted for 7 percent of total health care spending, changing little in recent years. Administrative costs as a share of national health spending are about three times higher in the U.S. than in Japan, Finland, Australia, and Austria, the industrialized countries with the lowest rates, and 30 percent to 75 percent higher than in Germany, Switzerland, and the Netherlands, countries where private insurance plays a substantial role. On a per capita basis, administrative costs in the U.S. were two times higher than in France, the country spending the next-highest amount per capita ($271).

Reducing U.S. insurance overhead—through greater standardization, streamlined functions, and more continuous coverage—to be more in line with that seen in the midrange of peer nations would save up to $55 billion annually. And lowering rates to the benchmark countries would save more than $114 billion per year.

Information Systems to Support Efficient Care

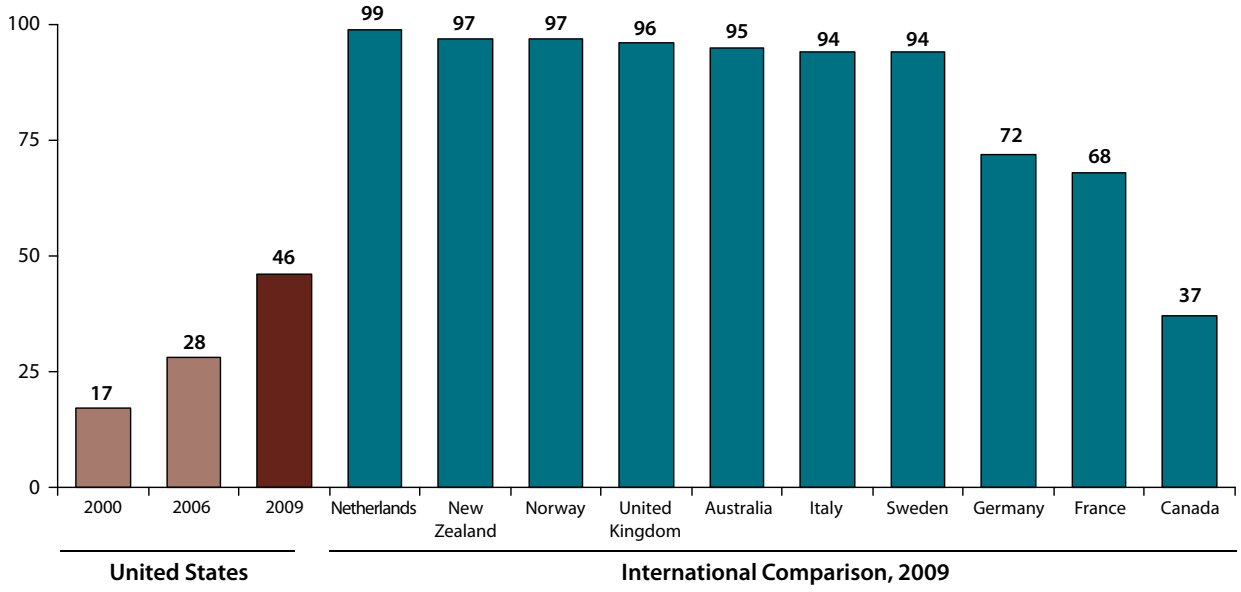
Well-integrated electronic information systems have the capacity to improve the delivery and coordination of care, reduce medical errors, and provide a mechanism for tracking and assessing performance. Although adoption of electronic medical records (EMRs) by U.S. primary care physicians increased substantially, from 17 percent in 2000 to 46 percent in 2009, the U.S. continues to lag well behind several other countries in spread and capacity to support exchange and clinical decisions (Exhibit 24). In seven other industrialized countries, 94 percent or more of physician practices are equipped with EMRs. Further, practices in these countries are often 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.[70]

U.S. hospitals have lagged behind primary care physicians in adopting health information technology, indicating the nation falls well short of the national goal of widespread adoption of EMRs by 2014.[71] (The Scorecard interprets this goal as a 90 percent target.) As of 2009, only 19 percent of hospital patients were treated in a hospital having at least basic EMR functionality.[72] (There are no comparable data for the baseline period.) Looking forward, incentives created by the American

EFFICIENCY Exhibit 24

Use of Electronic Medical Records

Percent of primary care physicians using electronic medical records



Data: Commonwealth Fund International Health Policy Survey of Physicians.

Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2011.

Recovery and Reinvestment Act, plus direct investment in community capacity and technical assistance, are expected to spur more rapid adoption and "meaningful use" of health information technology for improving the quality, safety, and efficiency of care.

EQUITY IN THE HEALTH SYSTEM

Overview

Ideally, our health care system would provide everyone with an equal opportunity to lead a healthy, productive life. But the reality is that disparities in health outcomes and care experiences are pervasive across different U.S. racial, ethnic, and socioeconomic groups, despite a national focus on reducing such inequities. The National Scorecard finds wide and persistent gaps on key indicators between vulnerable populations and their benchmark reference groups, with no improvement seen since the first National Scorecard in 2006—the total score remains at 69. As shown in Exhibit 25, wide inequities persist for each vulnerable group in healthy lives, quality, access, and efficiency.

To reach the same level of health outcomes and care enjoyed by whites, blacks and Hispanics would need to experience on average a 20 percent to 26 percent reduction in their risk for poor health outcomes and inadequate or inefficient care. For uninsured and low-income populations, the gaps are even wider: it would require a 36 percent to 42 percent average improvement to achieve parity with insured and high-income populations, respectively. While gaps in certain areas are closing, a greater

proportion of gaps have worsened or stayed the same. And in many cases, disparities have narrowed only because of worsening experiences for white, insured, or higher-income groups. In fact, the ultimate goal of both narrowing the gap *and* improving outcomes and care for vulnerable groups was achieved on only 26 percent to 36 percent of the equity indicators when viewed by race and ethnicity; 22 percent of the indicators when viewed by income; and 8 percent when viewed by insurance status.

Disparities in Insurance Contribute to Disparate Care Experiences

Overall, racial and ethnic minorities are much less likely than whites to get preventive care or proper treatment when it is needed. Among adults ages 50 to 64, nearly 60 percent of blacks and 70 percent of Hispanics do not receive all preventive clinical services recommended for their gender and age, compared with half of white adults. The gap has improved for blacks but worsened for Hispanics, a group that has seen less improvement in this area than other racial and ethnic groups. Minority adults and children are also less likely to get needed mental health treatment than white adults and children. And although rates of untreated dental caries have gone down across all racial and ethnic groups, more than 20 percent of black and Mexican American children still report untreated tooth decay, compared with 13 percent of white children (Exhibit 26). The gap is even wider among nonelderly adults, where the probability of untreated tooth decay among blacks and Mexican Americans is up to two times greater than it is among whites.

Having access to a usual source of primary care increases the likelihood that a person will seek preventive services or successfully manage a chronic condition, which in turn leads to improved health status over the long run. Unfortunately, racial and ethnic minorities are less likely than whites to have a regular primary care provider who is easily accessible and/or acts as a medical home, and the gap has been growing. Disparities in the timeliness and

EQUITY Exhibit 25

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 Scorecard	2008 Scorecard	2011 Scorecard	2006 Scorecard	2008 Scorecard	2011 Scorecard	2006 Scorecard	2008 Scorecard	2011 Scorecard	2006 Scorecard	2008 Scorecard	2011 Scorecard
SCORE BY EQUITY GROUP (Average of Dimension Scores)	**65**	**67**	**64**	**60**	**60**	**58**	**75**	**76**	**74**	**77**	**82**	**80**
(Number of indicators)			(18)			(24)			(25)			(25)
DIMENSION SCORES												
Healthy Lives	—	—	—	46	47	47	76	76	74	97	97	97
Quality												
Effective Care	59	57	57	67	70	68	79	79	78	73	73	72
Safe Care	96	97	95	96	95	94	75	76	82	93	93	93
Patient-Centered, Timely Care	56	56	49	55	55	52	71	62	63	54	64	67
Coordinated and Efficient Care	59	61	57	65	62	58	65	76	68	61	76	70
Access	57	62	62	30	32	31	86	86	78	82	87	78

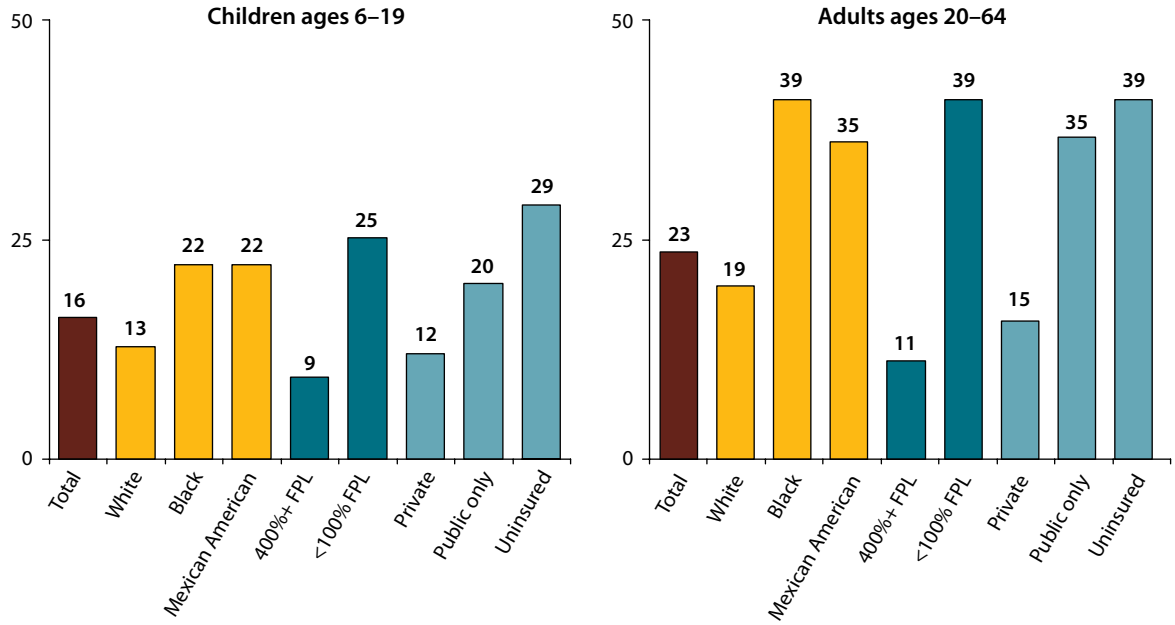
* Generally income compares either poor/near poor (less than 100% or 200% of federal poverty level) to those with incomes of 400% of poverty or higher or compares individuals with annual incomes in the highest quartile to those with incomes in the lowest quartile. For mortality, income uses education level.
— Indicates no data available; not scored.
Note: See Appendix B for information on data and sources.

Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2011.

EQUITY: EFFECTIVE CARE Exhibit 26

Untreated Dental Caries, by Age, Race/Ethnicity, Family Income, and Insurance Status, 2005–2008

Percent of persons with untreated dental caries



Data: Race/ethnicity—National Health and Nutrition Examination Survey (NCHS 2011); Total, income, and insurance—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, 2011.

patient-centeredness of care further exacerbate the risk of adverse outcomes for minority populations. Minority patients are at higher risk than whites to experience delays in getting doctor's appointments when needed, and the occurrence of such delays has increased among blacks. One of three black adults reports long waits (six or more days) for appointments or never getting an appointment when needed. Black and Hispanic patients are also more likely than whites to report that they have poor communication with their physicians.

Inequitable access to quality health services, especially among the chronically ill, contributes to disparate short- and long-term health outcomes between whites and minorities. For example, the proportion of blacks and Hispanics with diabetes who have uncontrolled blood sugar (hemoglobin A1c level equal to or greater than 9%) is more than twice the proportion of whites with the disease; moreover, the disparity has grown as white rates have fallen faster than black and Hispanic rates. Approximately 20 percent of blacks with diabetes and 25 percent of Hispanics with diabetes did not have their blood glucose levels under control. With appropriate and timely care, it may be possible to prevent complications and related hospitalizations. Yet among white, black, and Hispanic adults age 40 and over with diagnosed diabetes, there were increases in the percentage of adults not receiving routine monitoring of blood glucose levels, dilated eye exams, and foot exams. Black and Hispanic diabetics remain at highest risk of lacking adequate disease management, with 70 percent, on average,

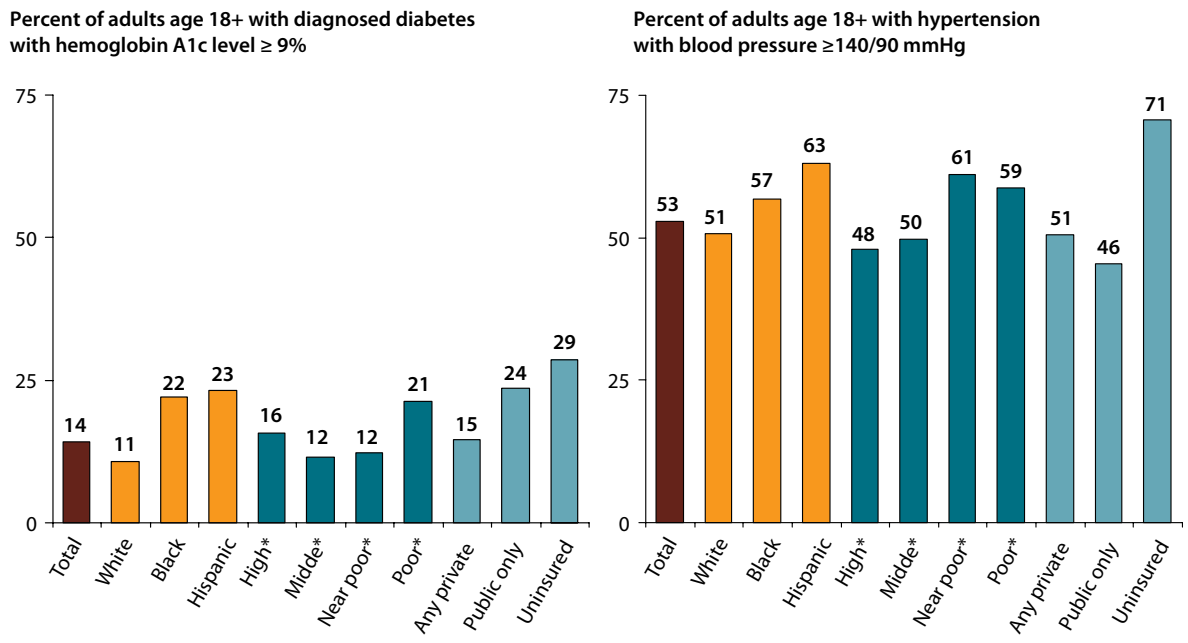
not receiving all three clinical preventive services, compared with 58 percent of white diabetics.

Gaps in care are even greater when the Scorecard results are analyzed by income level and insurance coverage rather than by race and ethnicity, particularly for indicators of health care access and efficiency. For example, more than 60 percent of uninsured adults and children are not connected to a source of primary care or a medical home, compared with about 35 percent of insured adults and children. The likelihood of waiting six or more days for an appointment when needed, or never receiving one at all, is two times greater for the uninsured than the insured (30% vs. 15%), as is reporting poor communication with their health providers (17% vs. 8%). With the gap between insured and uninsured worsening on all these measures of timely and coordinated care, Americans without coverage are at heightened risk for poor health outcomes and the need for more costly care.

The relative gap between the insured and uninsured is also widening with respect to preventive care and chronic disease management. Receipt of recommended cancer screenings and immunizations has improved for those with health coverage but not for those without. Only a quarter of uninsured adults ages 50 to 64 received all recommended preventive clinical services, unchanged since the baseline year. Likewise, about half of uninsured children have had an annual preventive medical and dental care visit, compared with three-quarters of children with either public or private insurance. Meanwhile, more than

EQUITY: EFFECTIVE CARE Exhibit 27

Adults with Poorly Controlled Chronic Diseases, by Race/Ethnicity, Family Income, and Insurance Status, 2005–2008



* High refers to household incomes ≥400% of federal poverty level (FPL); middle to 200%–399% FPL; near poor to 100%–199% FPL; and poor to <100% FPL.
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, 2011.

70 percent of uninsured adults with hypertension continue to have high blood pressure, and almost 30 percent of uninsured diabetics have blood glucose levels that are not considered under control (Exhibit 27).

The uninsured are also at significantly higher risk of having untreated dental caries than those with health coverage. According to reports by parents, nearly 30 percent of uninsured children ages 6 to 19 have untreated tooth decay, compared with only 12 percent of children covered by private insurance. Though they are improving, rates of dental caries are also high among children covered by public insurance: one of six has untreated tooth decay. A very similar pattern exists among nonelderly adults, though rates of untreated dental caries for the publicly insured population are the same as among the uninsured. Unfortunately, children with public coverage often do not receive needed dental care, largely because of the low participation of dentists in Medicaid and the Children's Health Insurance Program. At the same time, in most states dental coverage for Medicaid-covered adults is limited or nonexistent.

Overall, individuals with low incomes experience many of the same problems as the uninsured. This is not surprising, as 42 percent of nonelderly individuals with incomes below 200 percent of the federal poverty level lack health insurance at some point during the year—more than three times the rate for those at 400 percent of poverty or greater. And while both high-income and low-income Americans are finding it more difficult to pay for their medical care, the proportion who forgo care because of the cost is expanding much faster among those below 200 percent of poverty.

As a result, low-income groups often miss opportunities to prevent health problems early on, get treatment when needed, and manage their chronic illness. For instance, low-income adults age 50 and older are much less likely to receive age-appropriate preventive care than their high-income counterparts. The relative disparity by income has widened as preventive care rates have improved for those with high incomes and stayed the same for those with low incomes.

As with uninsured patients, the majority of low-income patients do not have access to a regular provider with whom they can develop a relationship to facilitate and coordinate their care. This can lead to a greater likelihood of encountering delays and development of complications that require emergent attention. Low-income patients are more than two times as likely as higher-income patients to go to an emergency department for care that a primary care doctor could have provided (23% vs. 11%). Moreover, hospitalizations for preventable conditions are two times higher in low-income communities than they are in more affluent areas, and gaps are increasing (Exhibit 28). Differences in underlying disease prevalence could also explain some of the differences in rates of potentially avoidable hospitalizations. Data from the Agency for Healthcare Research and Quality indicate that eliminating this income-related disparity would prevent about 1 million hospitalizations and save $6.7 billion in health care costs each year.[73]

As for health outcomes, there has been no improvement in relative gaps by income or race and ethnicity. Individuals with low levels of education (used as a proxy for low socioeconomic status) continue to be at significantly greater risk of death from heart disease and diabetes. Further, disparities in mortality rates are widening, owing to an increase in those among the least educated and to a substantial reduction among better-educated groups.[74] Although adequate data are not available to track and measure health outcomes by insurance

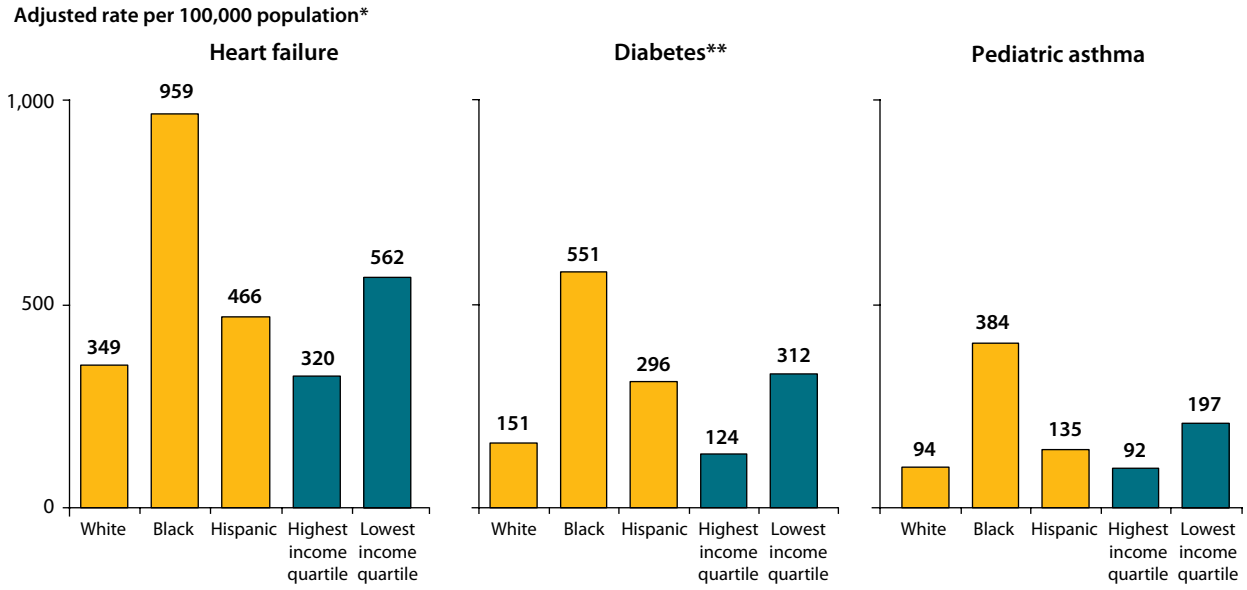
coverage, a growing body of research documents a strong relationship between being uninsured and having a greater risk of dying.[75]

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 help ensure long, healthy, and productive lives.

Appendix A6 presents scores for each of the vulnerable groups (i.e., black, Hispanic, uninsured, and low-income populations) for indicators in the equity dimension; see the methodology box on page 22 for a description of how equity ratio scores were calculated.

EQUITY: COORDINATED AND EFFICIENT CARE Exhibit 28

Hospital Admissions for Select Ambulatory Care–Sensitive Conditions, by Race/Ethnicity and Patient Income Area, 2007



* Rates are adjusted by age and gender using the total U.S. population for 2000 as the standard population.
** Combines three diabetes admission measures: uncontrolled diabetes without complications, diabetes with short-term complications, and diabetes with long-term complications.
Patient Income Area = median income of patient zip code.
Data: Healthcare Cost and Utilization Project, State Inpatient Databases (AHRQ 2010).

Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2011.

Summary and Implications

Overall, the *National Scorecard on U.S. Health System Performance, 2011,* finds that the United States is losing ground in ensuring access to affordable health care. The Scorecard also finds broad evidence of inefficiency and inequity in the delivery of care. Other advanced countries are outpacing the U.S. in terms of providing timely access to primary care, reducing premature mortality, and extending healthy life expectancy, all the while spending considerably less than the U.S. on health care and administration.

In contrast, improvement on key quality metrics demonstrates that significant progress is possible when the country sets specific goals and targets linked to performance and accountability for results. This approach is urgently needed to improve performance across all domains and care settings. Average U.S. health system performance would have to improve by 40 percent or more just to reach the benchmark levels attained by leading nations, states, regions, health plans, and health care providers.

Potential for Improvement: The 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. The nation can learn from and apply lessons about what works in the best-performing states, regions, health plans, and care systems.

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 the lowest rate internationally, up to 91,000 premature deaths—more than two times the number of people who die in motor vehicle accidents in the U.S. each year[76]—could be prevented annually. The National Committee for Quality Assurance (NCQA) estimates that improving national rates of hypertension and diabetes control to those achieved by the top group of health plans could save up to 89,000 lives each year.[77] (Note that some of the potential improvements may affect the same individuals.)

In addition to reducing mortality, health performance improvement has the potential to improve quality of life through the prevention of disease, disability, and health complications. By increasing the proportion of U.S. adults who receive recommended preventive care to 80 percent, about 66 million more people would reap the benefits of disease prevention and early detection. Likewise, 38 million additional adults would have a regular provider for primary care and specialty referrals.

Closing the gaps between average performance and achieved benchmarks across quality and access indicators also has the potential to reduce costs. Achieving benchmark levels for control of diabetes and blood pressure would prevent disease development and reduce complications, saving $1.6 billion to $3.1 billion per year in medical costs, according to the NCQA.[78] Reducing Medicare hospitalizations for preventable conditions to benchmark levels would save $4.2 billion, with additional savings from reductions in such hospitalizations in the under-65 population. The Medicare program could potentially save up to $12 billion by reducing preventable hospital readmissions, based on a cost estimate by the Medicare Payment Advisory Commission.[79] And over $1 billion could be saved annually by improving

care and preventing unnecessary transfers of frail nursing home residents to the hospital.[80]

Further savings are possible by lowering the administrative costs of insurance in the U.S. If these costs represented the same average share of health spending as in three European countries that similarly rely on a mix of private–public insurance, the U.S. could save up to $55 billion each year—more than half the amount that would be needed to cover the nation's entire uninsured population.[81] Lowering administrative costs to the benchmark level could save up to $114 billion.

The wide variation in health care costs in the U.S. points to opportunities for the country to gain from the provision of more efficient care. If, for example, annual per-person costs for Medicare in higher-cost states came down to median rates, or those achieved by the lowest quartile of states, the nation would save $20 billion to $37 billion per year.[82]

Estimated savings from the selected improvements highlighted above may represent only a fraction of the more than $2.4 trillion in health spending in 2009. But they are all attainable targets that would result in reduced costs and better value. Moreover, the nation would gain from the improved productivity of the U.S. workforce: an updated analysis originally conducted by the Institute of Medicine estimates national economic gains of up to $204 billion per year just from covering the uninsured.[83]

The Scorecard points to the need for a multifaceted approach of mutually supporting policies addressing access, quality, and efficiency simultaneously. Many of the gaps in performance identified by the Scorecard are the targets of reforms included in the Patient Protection and Affordable Care Act of 2010 and the American Recovery and Reinvestment Act of 2009, including payment reforms and incentives for the adoption of health information technology to stimulate and reward more effective and efficient delivery of care. A recent study by The Commonwealth Fund and the Center for American Progress estimated that a combination of provisions in the health reform legislation will reduce health care spending by $590 billion over 10 years and lower premiums by nearly $2,000 per family, by slowing the annual growth rate in national health expenditures from 6.3 percent to 5.7 percent.[84] Successful implementation of these reforms, together with local community efforts to build on this new foundation, offer the potential for improved population health and more positive care experiences, as well as more affordable care.

Reaching benchmarks that have already been achieved would yield significant national gains in health and the value of health care. And as health system innovations spread more widely, there is the potential to raise the bar even higher.

Aiming Higher to Achieve the Potential of Reform

Access: Essential Foundation for Improvement

The 2011 National Scorecard documents the human and economic costs of failing to address the problems in our health system. Changing direction starts with the recognition that access to care, health care quality, and efficiency are interrelated. The Affordable Care Act will for the first time ensure that coverage is accessible and affordable for families across the nation, thereby laying a strong foundation for improvement throughout the health system.

The new insurance expansions will particularly benefit adults (Exhibit 29). Based on projections of coverage once the reforms are fully implemented, adults in the vast majority of states will be insured at rates rivaling those achieved by the leading states today. Coverage rates for children will also improve, as whole families will gain access to more affordable

insurance plans that include essential benefits.[85] New federal survey data reveal that the early provisions of the Affordable Care Act are already having a positive impact among young adults ages 19 to 25.[86] Beginning in September 2010, all health plans were required to allow young adults under age 26 to stay on or join their parents' health plan. Since then, nearly 1 million more young adults have become insured, reversing a decade-long increase in the number of young adults without any health insurance.

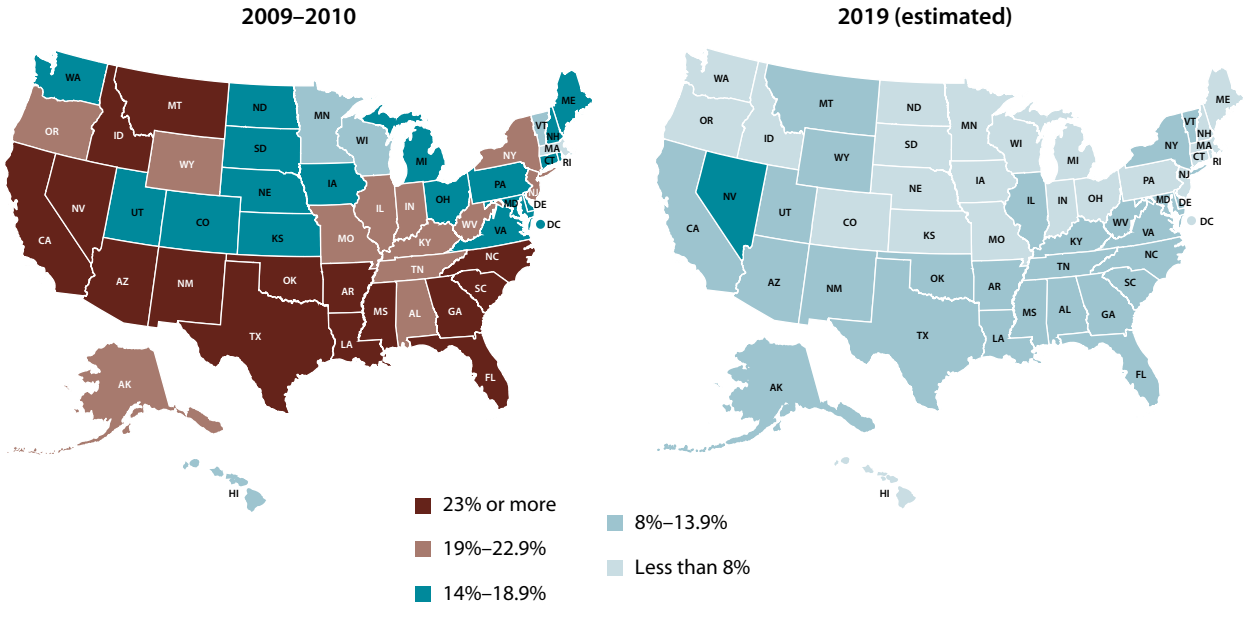
Better Primary Care and Care Coordination: Potential for Improved Outcomes at Lower Costs

Multiple Scorecard indicators attest to the nation's weak primary care foundation. Investing in primary care systems that provide patients with round-the-clock access, manage chronic care, and coordinate patient services will be integral to achieving more accessible, patient-centered, organized care for all Americans. The health reform law seeks to improve primary care by: 1) enhancing Medicaid and Medicare payments for primary care services, which are undervalued relative to specialty care; 2) providing new payment arrangements to support team-based care delivery; and 3) building on existing private sector efforts to encourage and support physician practices to serve as patient-centered medical homes.[87]

Better primary care, along with better care coordination, is also essential for lowering the total costs of treating the chronically ill and for reducing the nation's continuing high rates of hospital readmissions and admissions for conditions treatable in ambulatory care settings. Studies

Exhibit 29

Post-Reform: Projected Percent of Adults Ages 19–64 Uninsured by State



Data: U.S. Census Bureau, 2010–11 Current Population Survey ASEC Supplement; estimates for 2019 by Jonathan Gruber and Ian Perry of MIT using the Gruber Microsimulation Model for The Commonwealth Fund.

Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2011.

indicate that it is possible to prevent hospitalizations or rehospitalizations with better primary care, discharge planning, and transitional and follow-up care[88]—all elements of an integrated, systems approach to care.

The Affordable Care Act creates incentives for hospitals to reduce readmissions and to collaborate with postacute care providers and physicians to improve care transitions and coordination. Demonstration and pilot programs, meanwhile, will develop and test innovative payment and care delivery approaches to improve outcomes for patients and use health resources more efficiently. For example, a shared-savings program to support the development of accountable care organizations is intended to promote innovative, integrated care models designed to achieve better health, better care experiences, and slower cost growth. And the federal Beacon Community program is funding demonstrations in communities where there is a coalition of stakeholders committed to building health information technology and exchange capabilities that support improved care management.[89]

Measurement and Accountability: What Receives Attention Gets Improved

Notably, those areas of health care in which the Scorecard has found significant improvement since the first National Scorecard in 2006 have been the targets of national, collaborative quality improvement efforts driven by data and informed by measurable benchmarks and indicators established through consensus. For example, hospital quality indicators have been endorsed by a broad alliance of hospitals and by Medicare, whose payment updates for hospitals are contingent on the provision of data for public reporting. Widespread improvements in hospital performance demonstrate that change can take place rapidly when there is leadership and accountability.

Conversely, in those areas that saw little or no improvement—including mental health care, primary care, hospital readmissions, and medication safety—there is often a lack of standardized metrics for performance measurement and comparison at the local or provider level, or a lack of effective coordination or teamwork across sites of care and between providers. Performance will likely benefit once there are agreement and widespread reporting on common metrics, an alignment of incentives, and better coordination and integration of care. In one promising development, the federal government recently added readmission rates to an expanded set of publicly reported hospital quality indicators.

Promoting healthy behaviors will be a key strategy for preventing unnecessary deaths and chronic conditions among both children and adults. Provisions in the Affordable Care Act that support prevention, such as expanded preventive benefits under Medicare, and the creation of community care teams, such as those operating in Vermont, can help health care providers and local communities take up this challenge.

Federal incentives and supports to spur the adoption and meaningful use of health information technology will, over time, increase the nation's capacity to generate the information necessary to monitor performance and support improvement efforts. In addition, participation by the federal government, along with states and communities, in all-payer databases of hospital and ambulatory care data will enable the aggregation and reporting of information needed for improvement.

Strengthening the Nation's Capacity to Improve

Strengthening the nation's capacity to innovate and improve is fundamental to a high performance health care system. This requires: 1) support for a skilled and motivated health care workforce, with an emphasis on primary care and population health; 2) payment and insurance benefit designs that support system transformation and primary care medical homes, ensure accountability among providers for population-level results, and activate consumers to use the care system wisely and to optimize their personal health behaviors; 3) a culture of quality improvement and continuous learning that promotes and rewards recognition of opportunities to reduce errors and improve outcomes; and 4) investment in public health initiatives, research, and information necessary to inform, guide, and drive health care decisions and improvement. Historically, the U.S. has underinvested in all these areas.

Several provisions of the Affordable Care Act will begin to address these needs, such as incentives to encourage young physicians to choose and maintain primary care careers. The law also calls for investment in prevention and in strengthening the public health infrastructure. Two new entities—the Patient-Centered Outcomes Research Institute and the Center for Medicare and Medicaid Innovation—offer the promise of generating better information to guide practice on what works and under what circumstances. The innovation center, for example, will sponsor pilots of new payment approaches and care delivery models to spur and spread innovation.

In some of the policy areas addressed by the reform law, such as access to care, the nation will see near-term benefits—for example, from the insurance coverage expansions starting in 2014. In other areas, however, such as efficiency, the impact will take longer to achieve, as the nation learns from pilots and demonstrations about the best way to reform payment and organize health care delivery. And while the reform legislation has the potential to stimulate and support broader transformation of health care delivery, ultimately such fundamental change will require greater action at the community and health system levels to realize the promise of reform.

Importance of Tracking Change and Sentinel Indicators

Moving from federal legislation to successful implementation of reforms will depend on the combined efforts of all health system stakeholders and a commitment to collaborate to improve. Together with high unemployment rates and slow economic growth, rising health care costs put millions of families at risk and strain federal and state public program budgets. Looking to the future, it is thus critical to track key indicators of access, quality, and cost performance over time. As changes are implemented, it will be necessary to monitor intended and potentially unintended consequences as health care delivery system leaders and markets respond to new incentives. By monitoring the effects of initiatives as they unfold, we will be able to inform policymakers of the need for adjustments or even new policies to achieve the goals of health reform.

Key policy targets that should be monitored include:

- Coverage expansions and benefit design: rates of uninsured and underinsured adults; unmet needs for care because of cost.
- Primary care: connections to a regular provider that delivers high-quality, patient-centered care; availability of rapid appointments for urgent care; timely preventive care; and

chronic disease management to reduce unnecessary use of hospitals and emergency departments.

- Prevention and disease management: delivery of preventive care; control of chronic conditions; hospitalizations for ambulatory care–sensitive conditions; health outcomes.
- Care coordination and transitions: improvement of outcomes and reduction of hospital readmissions.
- Health information technology: adoption and meaningful use of electronic medical records.

The Case for a Systems Approach to Change

In summary, the U.S. health system continues to underperform relative to what should be achievable and to the enormous resources invested. The 2011 National Scorecard documents the significant human and economic costs of failing to address the problems in our health system. It also demonstrates that health care access, quality, and efficiency are interrelated. With the threat of health care expenditures doubling to $4 trillion, or 20 percent of national income, over the next decade and the prospect of additional millions of Americans becoming uninsured or underinsured, there is an urgent need to realize the potential of the new national reforms and to implement them creatively.

As mandated by the Affordable Care Act, the federal government released the National Strategy for Quality Improvement in Health Care, which sets three targets for public- and private-sector improvement efforts.[90] These are:

1. **Better Care:** Improve the overall quality of health care by making care more patient-centered, reliable, accessible, and safe.
2. **Healthy People/Healthy Communities:** Improve the health of the U.S. population by supporting proven interventions to address the behavioral, social, and environmental determinants of health, in addition to delivering higher-quality care.
3. **Affordable Care:** Reduce the cost of quality health care for individuals, families, employers, and government.

Access to affordable care is foundational to achieving this "triple aim" for health system improvement.[91] As rising costs put family, business, and public budgets under stress, access to care and financial protection are eroding for middle-income and low-income families alike.

Successful implementation of reforms will require stakeholders at all levels to adopt a coherent, whole-system approach in which goals and policies are coordinated to achieve the best results for the entire population. By integrating all components of the health system to ensure better access, higher quality, and greater value, we would be far more able to safeguard the health and economic security of current and future generations.

Notes

[1] K. Davis, C. Schoen, and K. Stremikis, *Mirror, Mirror on the Wall: How the Performance of the U.S. Health Care System Compares Internationally, 2010 Update* (New York: The Commonwealth Fund, June 2010).

[2] S. R. Collins, M. M. Doty, R. Robertson, and T. Garber, *Help on the Horizon: How the Recession Has Left Millions of Workers Without Health Insurance, and How Health Reform Will Bring Relief—Findings from the Commonwealth Fund Biennial Health Insurance Survey of 2010* (New York: The Commonwealth Fund, March 2011); C. Schoen, R. Osborn, S. K. H. How, M. M. Doty, and J. Peugh, "In Chronic Condition: Experiences of Patients with Complex Health Care Needs, in Eight Countries, 2008," *Health Affairs* Web Exclusive, Nov. 13, 2008, w1–w16; C. Schoen, R. Osborn, M. M. Doty, D. Squires, J. Peugh, and S. Applebaum, "A Survey of Primary Care Physicians in 11 Countries, 2009: Perspectives on Care, Costs, and Experiences," *Health Affairs* Web Exclusive, Nov. 5, 2009, w1171–w1183; C. Schoen, R. Osborn, D. Squires, M. M. Doty, R. Pierson, and S. Applebaum, "How Health Insurance Design Affects Access to Care and Costs, by Income, in Eleven Countries," *Health Affairs* Web First, Nov. 18, 2010; and Davis, Schoen, and Stremikis, *Mirror, Mirror,* 2010.

[3] A. Martin, D. Lassman, L. Whittle et al., "Recession Contributes to Slowest Annual Rate of Increase in Health Spending in Five Decades," *Health Affairs*, Jan. 2011, 30(1):11–22.

[4] D. McCarthy, S. K. H. How, C. Schoen, J. C. Cantor, and D. Belloff, *Aiming Higher: Results from a State Scorecard on Health System Performance, 2009* (New York: The Commonwealth Fund, Oct. 2009); and S. K. H. How, A. Fryer, D. McCarthy, C. Schoen, and E. L. Schor, *Securing a Healthy Future: The Commonwealth Fund State Scorecard on Child Health System Performance, 2011* (New York: The Commonwealth Fund, Feb. 2011).

[5] C. Schoen, K. Stremikis, and A. Fryer, *A Call for Change: The 2011 Commonwealth Fund Survey of Public Views of the U.S. Health System* (New York: The Commonwealth Fund, April 2011); S. K. H. How, A. Shih, J. Lau, and C. Schoen, *Public Views on U.S. Health System Organization: A Call for New Directions* (New York: The Commonwealth Fund, Aug. 2008); and K. Stremikis, S. Guterman, and K. Davis, *Health Care Opinion Leaders' Views on Congressional Priorities* (New York: The Commonwealth Fund, Feb. 2011).

[6] The Commonwealth Fund Commission on a High Performance Health System, *Why Not the Best? Results from a National Scorecard on U.S. Health System Performance* (New York: The Commonwealth Fund, Sept. 2006).

[7] E. Nolte and M. McKee, "Variations in Amenable Mortality—Trends in 16 High-Income Nations," *Health Policy,* published online Sept. 12, 2011.

[8] McCarthy, How, Schoen et al., *Aiming Higher,* 2009.

[9] M. F. MacDorman and T. J. Mathews, National Center for Health Statistics, Centers for Disease Control and Prevention, "Infant Deaths—United States, 2000–2007," *Morbidity and Mortality Weekly Report Surveillance Summaries,* Jan. 14, 2011 60(Suppl.):49–50.

[10] M. F. MacDorman and T. J. Mathews, *Behind International Rankings of Infant Mortality: How the United States Compares with Europe,* NCHS Data Brief No. 23 (Atlanta: Centers for Disease Control and Prevention, Nov. 2009).

[11] S. Silow-Carroll, *Building Quality into RIte Care: How Rhode Island Is Improving Health Care for Its Low-Income Populations* (New York: The Commonwealth Fund, Jan. 2003); and *Reducing Inappropriate Induction of Labor: Case Study of Intermountain Health Care* (New York: The Commonwealth Fund, Nov. 2004).

[12] Organization for Economic Cooperation and Development, "OECD Health Data: Health Status" OECD Health Statistics (database), 2011, doi: 10.1787/data-00540-en.

[13] K. D. Kochanek, J. Xu, S. L. Murphy et al., "Deaths: Preliminary Data for 2009," *National Vital Statistics Report,* Mar. 16, 2011 59(4):1–51, available at http://www.cdc.gov/nchs/data/nvsr/nvsr59/nvsr59_04.pdf.

[14] K. E. Thorpe, D. H. Howard, and K. Galactionova, "Differences in Disease Prevalence as a Source of the U.S.–European Health Care Spending Gap," *Health Affairs* Web Exclusive, Oct. 2, 2007, w678–w686; and J. M. McWilliams, E. Meara, A. M. Zaslavsky et al., "Use of Health Services by Previously Uninsured Medicare Beneficiaries," *New England Journal of Medicine,* July 12, 2007 357(2):143–53.

[15] J. Bhattacharya, K. Choudry, and D. Lakdawalla, "Chronic Disease and Severe Disability Among Working-Age Populations," *Medical Care*, Jan. 2008 46(1):92–100.

[16] A. B. Geier, G. D. Foster, L. G. Womble et al., "The Relationship Between Relative Weight and School Attendance Among Elementary School Children," *Obesity,* Aug. 2007 15(8):2157–61; and R. A. Hammond and R. Levine, "The Economic Impact of Obesity in the United States," *Diabetes, Metabolic Syndrome and Obesity: Targets and Therapy*, Aug. 30, 2010 3:285–95.

[17] U.S. Department of Health and Human Services, *Healthy People 2010* (Washington, D.C.: DHHS, 2002); and B. Adhikari, J. Kahende, A. Malarcher et al., "Smoking-Attributable Mortality, Years of Potential Life Lost, and Productivity Losses—United States, 2000–2004," *Morbidity and Mortality Weekly Report Recommendations and Reports,* Nov. 14, 2008 57(45):1226–28.

[18] Institute of Medicine, *Ending the Tobacco Problem: A Blueprint for the Nation*, ed. R. J. Bonnie, K. Stratton, and R. B. Wallace (Washington, D.C.: National Academies Press, 2007).

[19] Centers for Disease Control and Prevention, *Tobacco Use: Targeting the Nation's Leading Killer* (Atlanta: CDC, Feb. 2011), available at http://www.cdc.gov/chronicdisease/resources/publications/aag/osh.htm.

[20] Projection as of Dec. 13, 2010, by the Campaign for Tobacco-Free Kids, *A Win-Win-Win for Cash-Strapped States* (Washington, D.C.: Campaign for Tobacco-Free Kids, 2010), available at http://www.tobaccofreekids.org/what_we_do/state_local/taxes/.

[21] A. M. Hadley, E. C. Hair, and N. Dreisbach, *What Works for the Prevention and Treatment of Obesity Among Children: Lessons from Experimental Evaluations of Programs and Interventions,* Publication #2010-07 (Washington, D.C.: Child Trends, March 2010).

[22] L. K. Khan, K. Sobush, D. Keener et al., "Recommended Community Strategies and Measurements to Prevent Obesity in the United States," *Morbidity and Mortality Weekly Report,* July 24, 2009 58(RR-7):1–26.

[23] L. Trasande, Y. Liu, G. Fryer et al., "Effects of Childhood Obesity on Hospital Care and Costs, 1999–2005," *Health Affairs* Web Exclusive, July 9, 2009, w751–w760.

[24] S. T. Stewart, D. M. Cutler, and A. B. Rosen, "Forecasting the Effects of Obesity and Smoking on U.S. Life Expectancy," *New England Journal of Medicine,* Dec. 3, 2009 361(23): 2252–60.

[25] E. G. Stone, S. C. Morton, M. E. Hulscher et al., "Interventions that Increase Use of Adult Immunization and Cancer Screening Services: A Meta-Analysis," *Annals of Internal Medicine,* May 7, 2002 136(9):641–51; N. Breen, D. K. Wagener, M. L. Brown et al., "Progress in Cancer Screening Over a Decade: Results of Cancer Screening from the 1987, 1992, and 1998 National Health Interview Surveys," *Journal of the National Cancer Institute,* Nov. 21, 2001 93(22):1704–13; and S. T. Hawley, J. A. Earp, M. O'Malley et al., "The Role of Physician Recommendation in Women's Mammography Use: Is It a 2-Stage Process?" *Medical Care,* April 2000 38(4):392–403.

[26] Centers for Disease Control and Prevention, "National and State Vaccination Coverage Among Children Aged 19–35 Months—United States, 2010," *Morbidity and Mortality Weekly Report,* Sept. 2, 2011 60(34):1157–63.

[27] Centers for Disease Control and Prevention, "Vaccinations to Prevent Diseases: Universally Recommended Vaccinations," *Guide to Community Preventive Services* (Atlanta: CDC, Jan. 3, 2011), available at www.thecommunityguide.org.

[28] M. Butler, R. L. Kane, D. McAlpine et al., *Integration of Mental Health/Substance Abuse and Primary Care,* Evidence Report/Technology Assessment No. 173 (Rockville, Md.: Agency for Healthcare Research and Quality, Oct. 2008).

[29] National Committee for Quality Assurance, *The State of Health Care Quality 2007* (Washington, D.C.: NCQA, 2007).

[30] Ibid., pp. 20–21.

[31] S. S. Yoon, Y. Ostchega, and T. Louis, "Recent Trends in the Prevalence of High Blood Pressure and Its Treatment and Control, 1999–2008," NCHS Data Brief No. 48 (Hyattsville, Md.: National Center for Health Statistics, Oct. 2010).

[32] A. Shih and S. C. Schoenbaum, *Measuring Hospital Performance: The Importance of Process Measures* (New York: The Commonwealth Fund Commission on a High Performance Health System, July 2007).

[33] Case studies of high-performing hospitals can be found at www.WhyNotTheBest.org.

[34] B. Starfield, *Primary Care: Balancing Health Needs, Services, and Technology* (New York: Oxford University Press, 1998).

[35] An accessible primary care provider was defined as a usual source of care who provided preventive care as well as care for new and ongoing health problems and referrals, and who was easy to get to and easy to contact by phone during regular office hours, based on responses to the Medical Expenditure Panel Survey.

[36] A primary care medical home was defined by the Children and Adolescent Health Measurement Initiative to mean that the child (according to parent report) had one or more preventive visits in the past year, access to specialty care, and a personal doctor or nurse who usually or always spent enough time and communicated clearly, provided telephone advice or urgent care, and followed up after the child's specialty care visits. This definition, which applied to the 2007 National Survey of Children's Health, differed from that used for the 2003 survey.

[37] W. D. Klinkenberg and R. J. Calsyn, "Predictors of Psychiatric Hospitalization: A Multivariate Analysis," *Administration and Policy in Mental Health,* March 1998 25(4):403–10; W. D. Klinkenberg and R. J. Calsyn, "Predictors of Receipt of Aftercare and Recidivism Among Persons with Severe Mental Illness: A Review," *Psychiatric Services,* May 1996 47(5):487–96; and S. C. Schoenbaum, D. Cookson, and S. Stelovich, "Postdischarge Follow-Up of Psychiatric Inpatients and Readmission in an HMO Setting," *Psychiatric Services,* Sept. 1995 46(9):943–45.

[38] R. T. Konetzka, W. Spector, and M. R. Limcangco, "Reducing Hospitalizations from Long-Term Care Settings," *Medical Care Research and Review,* Feb. 2008 65(1):40–66; and V. Mor, O. Intrator, Z. Feng et al., "The Revolving Door of Rehospitalization from Skilled Nursing Facilities," *Health Affairs,* Jan. 2010 29(1):57–64.

[39] See: http://www.homehealthquality.org/hh/default.aspx.

[40] Medicare Payment Advisory Commission, "Skilled Nursing Facility Services," in *Report to the Congress: Medicare Payment Policy* (Washington, D.C.: MedPAC, 2007).

[41] D. C. Grabowski, "Medicare and Medicaid: Conflicting Incentives for Long-Term Care," *Milbank Quarterly,* Dec. 2007 85(4):579–610.

[42] A. E. Boutwell, M. B. Johnson, P. Rutherford et al., "An Early Look at a Four-State Initiative to Reduce Avoidable Hospital Readmissions," *Health Affairs,* July 2011 30(7):1272–80.

[43] Centers for Disease Control and Prevention, "Vital Signs: Central Line–Associated Blood Stream Infections—United States, 2001, 2008, and 2009," *Morbidity and Mortality Weekly Report,* Mar. 4, 2011 60(8):243–48.

[44] C. P. Landrigan, G. J. Parry, C. B. Bones et al., "Temporal Trends in Rates of Patient Harm Resulting from Medical Care," *New England Journal of Medicine*, Nov. 25, 2010 363(22):2124–34.

[45] Schoen, Osborn, How et al., "In Chronic Condition," 2008.

[46] D. S. Budnitz, D. A. Pollock, K. N. Weidenbach et al., "National Surveillance of Emergency Department Visits for Outpatient Adverse Drug Events," *Journal of the American Medical Association,* Oct. 18, 2006 296(15):1858–66.

[47] Y. Zhang, K. Baicker, and J. P. Newhouse, "Geographic Variation in the Quality of Prescribing," *New England Journal of Medicine,* Nov. 18, 2010 363(21):1985–88.

[48] The Advancing Excellence Web site is http://www.nhqualitycampaign.org/.

[49] B. Jarman, A. Bottle, P. Aylin et al., "Monitoring Changes in Hospital Standardised Mortality Ratios," *BMJ,* Feb. 12, 2005 330(7487):329.

[50] L. A. Curry, E. Spatz, E. Cherlin et al., "What Distinguishes Top-Performing Hospitals in Acute Myocardial Infarction Mortality Rates? A Qualitative Study," *Annals of Internal Medicine,* March 15, 2011 154(6):384–90.

[51] M. Stewart, L. Meredith, J. B. Brown et al., "The Influence of Older Patient–Physician Communication on Health and Health-Related Outcomes," *Clinics in Geriatric Medicine,* Feb. 2000 16(1):25–36; and M. A. Stewart, "Effective Physician–Patient Communication and Health Outcomes: A Review," *Canadian Medical Association Journal,* May 1, 1995 152(9):1423–33.

[52] Schoen, Osborn, How et al., "In Chronic Condition," 2008.

[53] R. A. Lowe, A. R. Localio, D. F. Schwarz et al., "Association Between Primary Care Practice Characteristics and Emergency Department Use in a Medicaid Managed Care Organization," *Medical Care,* Aug. 2005 43(8):792–800.

[54] G. Makoul and R. H. Curry, "The Value of Assessing and Addressing Communication Skills," *Journal of the American Medical Association,* Sept. 5, 2007 298(9):1057–59; L. L. Berry, K. Seiders, and S. S. Wilder, "Innovations in Access to Care: A Patient-Centered Approach," *Annals of Internal Medicine,* Oct. 7, 2003 139(7):568–74; and D. M. Post, D. J. Cegala, and W. F. Miser, "The Other Half of the Whole: Teaching Patients to Communicate with Physicians," *Family Medicine,* May 2002 34(5):344–52.

[55] E. Emanuel, "The Cost–Coverage Trade-Off: 'It's Health Care Costs, Stupid,'" *Journal of the American Medical Association,* Feb. 27, 2008 299(8):947–49.

[56] Collins, Doty, Robertson et al., *Help on the Horizon,* 2011.

[57] C. Schoen, S. R. Collins, J. L. Kriss, and M. M. Doty, "How Many Are Underinsured? Trends Among U.S. Adults, 2003 and 2007," *Health Affairs* Web Exclusive, June 10, 2008, w298–w309; and C. Schoen, M. M. Doty, R. H. Robertson, and S. R. Collins, "Affordable Care Act Reforms Could Reduce the Number of Underinsured U.S. Adults by 70 Percent," *Health Affairs,* Sept. 2011 30(9):1762–71.

[58] According to the National Bureau of Economic Research's Business Cycle Dating Committee, the recession officially began in December 2007 and ended in June 2009. For more information, see the following announcement: http://www.nber.org/cycles/sept2010.pdf.

[59] Schoen, Doty, Robertson et al., "Affordable Care Act Reforms," 2011.

[60] C. Schoen, K. Stremikis, S. K. H. How, and S. R. Collins, *State Trends in Premiums and Deductibles, 2003–2009: How Building on the Affordable Care Act Will Help Stem the Tide of Rising Costs and Eroding Benefits* (New York: The Commonwealth Fund, Dec. 2010).

[61] High out-of-pocket costs were defined as having combined out-of-pocket expenses for services and premiums greater than 5 percent for persons in families with incomes less than 200 percent of poverty, and out-of-pocket expenses greater than 10 percent for person in families with incomes of 200 percent of poverty or more.

[62] Collins, Doty, Robertson et al., *Help on the Horizon,* 2011.

[63] Commonwealth Fund International Health Policy Survey, 2010.

[64] J. C. Cantor, C. Schoen, D. Belloff, S. K. H. How, and D. McCarthy, *Aiming Higher: Results from a State Scorecard on Health System Performance* (New York: The Commonwealth Fund Commission on a High Performance Health System, June 2007); and How, Fryer, McCarthy et al., *Securing a Healthy Future,* 2011.

[65] How, Fryer, McCarthy et al., *Securing a Healthy Future,* 2011; and K. K. Shea, K. Davis, and E. L. Schor, *U.S. Variations in Child Health System Performance: A State Scorecard* (New York: The Commonwealth Fund, May 2008).

[66] E. S. Fisher and H. G. Welch, "Avoiding the Unintended Consequences of Growth in Medical Care: How Might More Be Worse?" *Journal of the American Medical Association,* Feb. 3, 1999 281(5):446–53.

[67] A. Tynan, R. A. Berenson, and J. B. Christianson, *Health Plans Target Advanced Imaging Services,* Issue Brief No. 118 (Washington D.C: Center for Studying Health System Change, Feb. 2008), available at http://hschange.org/CONTENT/968/; the Medicare Improvements for Patients and Providers Act (MIPPA) of 2008 included several provisions to control utilization of and spending for advanced imaging services.

[68] Medicare Payment Advisory Commission, "Payment Policy for Inpatient Readmissions," in *Report to the Congress: Promoting Greater Efficiency in Medicare* (Washington, D.C.: MedPAC, June 2007).

[69] Organization for Economic Cooperation and Development (2011), "OECD Health Data: Health Expenditure and Financing," *OECD Health Statistics*, 2011, available at http://stats.oecd.org/Index.aspx?DataSetCode=SHA.

[70] Schoen, Osborn, Doty et al., "Survey of Primary Care Physicians in 11 Countries," 2009.

[71] U.S. Department of Health and Human Services, "News Release: Accelerating Electronic Health Records Adoption and Meaningful Use," Aug. 5, 2010, available at http://www.hhs.gov/news/press/2010pres/08/20100805c.html.

[72] Basic electronic health record functionality was defined using A. K. Jha, C. M. DesRoches, E. G. Campbell et al.'s methodology in "Use of Electronic Health Records in U.S. Hospitals," *New England Journal of Medicine,* April 16, 2009 360(16):1628–38. Authors convened an expert panel to define comprehensive and basic electronic-records systems in the hospital setting. The panel reached a consensus on 24 functions that should be present in all major clinical units of a hospital to conclude that it had a comprehensive electronic-records system. Similarly, the panel reached a consensus on eight functionalities that should be present in at least one major clinical unit in order for the hospital to be classified as having a basic electronic-records system. Basic functions span clinical documentation capacity, test and imaging results capacity, and computerized provider-order entry capacity.

[73] E. Moy, M. Barrett, and K. Ho, "Potentially Preventable Hospitalizations—United States, 2004–2007," *Morbidity and Mortality Weekly Report Surveillance Summaries,* Jan. 14, 2011 60(Suppl.): 80–83.

[74] A. Jemal, E. Ward, R. N. Anderson et al., "Widening of Socioeconomic Inequalities in U.S. Death Rates, 1993–2001," *PLoS ONE*, May 2008 3(5):e2181, available at http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0002181.

[75] S. Dorn, *Uninsured and Dying Because of It: Updating the Institute of Medicine Analysis on the Impact of Uninsurance on Mortality* (Washington, D.C.: The Urban Institute, Jan. 2008).

[76] According to the National Center for Health Statistics, 42,000 deaths in 2007 were caused by motor vehicle accidents. See: J. Q. Xu, K. D. Kochanek, S. L. Murray et al., *Deaths: Final Data for 2007*. *National Vital Statistics Reports,* 2010 58(19).

[77] National Committee for Quality Assurance, *The State of Health Care Quality 2010* (Washington, D.C.: NCQA, 2010).

[78] Ibid.

[79] MedPAC, "Payment Policy for Inpatient Readmissions," 2007.

[80] J. Ouslanger and A. Bonner, "Reducing Potentially Avoidable Hospitalizations of Nursing Home Residents," Long Term Care Medicine, 2010 (formerly named AMDA Annual Symposium), Long Beach, Calif., March 13, 2010.

[81] Commonwealth Fund Commission on a High Performance Health System, *The Path to a High Performance U.S. Health System: A 2020 Vision and the Policies to Pave the Way* (New York: The Commonwealth Fund, Feb. 2009).

[82] McCarthy, How, Schoen et al., *Aiming Higher, 2009,* 2009.

[83] S. Axeen and E. Carpenter, *Cost of Failure: The Economic Losses of the Uninsured* (Washington, D.C.: New America Foundation, Mar. 2008).

[84] D. M. Cutler, K. Davis, and K. Stremikis, *The Impact of Health Reform on Health System Spending* (New York: The Commonwealth Fund, May 2010).

[85] S. R. Collins and J. L. Nicholson, *Realizing Health Reform's Potential: Young Adults and the Affordable Care Act of 2010* (New York: The Commonwealth Fund, Oct. 2010).

[86] R. Cohen and M. Martinez, "Health Insurance Coverage: Early Release of Estimates from the National Health Interview Survey, January–March 2011" (Hyattsville, Md.: National Center for Health Statistics, Sept. 2011), available at http://www.cdc.gov/nchs/nhis/releases.htm.

[87] M. K. Abrams, R. Nuzum, S. Mika, and G. Lawlor, *Realizing Health Reform's Potential: How the Affordable Care Act Will Strengthen Primary Care and Benefit Patients, Providers, and Payers* (New York: The Commonwealth Fund, Jan. 2011).

[88] A. E. Boutwell and S. Hwu, *Effective Interventions to Reduce Rehospitalizations: A Survey of Published Evidence* (Cambridge, Mass.: Institute for Healthcare Improvement, 2009).

[89] E. R. Maxson, S. H. Jain, A. N. McKethan et al., "Beacon Communities Aim to Use Health Information Technology to Transform the Delivery of Care," *Health Affairs,* Sept. 2010 29(9):1671–77.

[90] See: http://www.healthcare.gov/center/reports/quality03212011a.html.

[91] D. M. Berwick, T. W. Nolan, and J. Whittington, "The Triple Aim: Care, Health, and Cost," *Health Affairs,* May/June 2008 27(3):759–69.

Appendix A1. Changes in Indicator Scores and Rates, 2011 Scorecard Compared with 2006 Scorecard

	Total		Healthy Lives		Quality		Access		Efficiency	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
INDICATOR RATIO SCORES	**42**	**100%**	**7**	**100%**	**22**	**100%**	**5**	**100%**	**8**	**100%**
Score improved	18	43%	1	14%	13	59%	1	20%	3	38%
Score worsened	18	43%	5	71%	7	32%	4	80%	2	25%
No change	2	5%	1	14%	0	0%	0	0%	1	13%
Data not available[a]	4	10%	0	0%	2	9%	0	0%	2	25%
UPDATED MEASURES[b]	**57**	**100%**	**8**	**100%**	**29**	**100%**	**5**	**100%**	**15**	**100%**
National average improved (>5%)	24	42%	3	38%	15	52%	1	20%	5	33%
National average worsened (>5%)	15	26%	2	25%	4	14%	3	60%	6	40%
Little or no change	18	32%	3	38%	10	34%	1	20%	4	27%

Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2011.
[a] It is not possible to assess the change in the ratio scores for four of the 42 indicators. Three indicators are made up of new measures without any historical data to include in the 2006 Scorecard analysis, and one indicator did not have data available to be updated in the 2011 Scorecard analysis.
[b] The 42 indicators comprise of a total of 70 individual measures. Of the 70 individual measures, 57 measures have updated national data with which to assess change. Five measures are not comparable over time and eight measures do not have data available to assess trends and are therefore not included in the count.

Appendix A2. Performance Indicators for the U.S. Health Care System: Healthy Lives

	2006 Scorecard		2008 Scorecard		2011 Scorecard		Score: Ratio of National Rate to Benchmark Rate		
Dimension and Indicator	National rate	Range (bottom group–top group)	National rate	Range (bottom group–top group)	National rate	Range (bottom group–top group)	2006 Scorecard	2008 Scorecard	2011 Scorecard
Mortality amenable to health care, deaths per 100,000 population[a]	120	130–80	110	106–69	96	86–57	**67**	**63**	**60**
Infant mortality, deaths per 1,000 live births[b]	7.0	9.9–4.8	6.8	10.1–4.7	6.8	9.9–5.0	**69**	**69**	**69**
Healthy life expectancy at age 60, years (average of two ratios):							**87**	**87***	**88**
Men[c]	15.3	14.4–17.4	n.d.	n.d.	16.1	15.5–18.1	88	88*	89
Women[c]	17.9	17.2–20.8	n.d.	n.d.	18.5	18.1–21.4	86	86*	86
Adults ages 18–64 limited in any activities because of physical, mental, or emotional problems[b]	14.9	20.1–11.5	17.5	23.4–13.2	18.4	24.2–14.4	**77**	**66**	**63**
Children ages 6–17 missed 11 or more school days because of illness or injury[b]	5.2	8.1–3.8	n.d.	n.d.	5.8	8.3–3.9	**73**	**73***	**66**
Adults who currently smoke[b]	20.8	26.4–15.8	19.6	25.7–15.1	17.0	24.2–12.2	**76**	**77**	**72**
Children ages 10–17 who are overweight or obese[b]	31	37–23	n.d.	n.d.	32	39–24	**75**	**75***	**72**
HEALTHY LIVES DIMENSION SCORE							**75**	**73**	**70**

Sources: See Appendix B.
Notes: All figures represent percents unless the indicator is labeled otherwise. Range is the rates for the bottom (worst-performing) and top (best-performing) group as footnoted. The benchmark is the best rate achieved by the top group from any period; exceptions are footnoted. Indicator scores used to determine the dimension score are underlined.
n.d. Indicates no data available. * Indicates score was not updated from previous scorecard edition.
[a] In 2006 and 2008 Scorecards, average bottom or top three of 19 countries; in 2011, average bottom or top three of 16 countries.
[b] Average bottom or top 10 percent of states.
[c] Average bottom or top three of 23 countries.

Appendix A3. Performance Indicators for the U.S. Health Care System: Quality

Dimension and Indicator	2006 Scorecard National rate	2006 Scorecard Range (bottom group–top group)	2008 Scorecard National rate	2008 Scorecard Range (bottom group–top group)	2011 Scorecard National rate	2011 Scorecard Range (bottom group–top group)	Score: Ratio of National Rate to Benchmark Rate 2006 Scorecard	2008 Scorecard	2011 Scorecard
EFFECTIVE CARE SCORE							**73**	**79**	**83**
Adults received recommended screening and preventive care[a]	49	31–52	50	32–54	51	32–56	**61**	**62**	**64**
Children received recommended immunizations and preventive care (average of two ratios):							**85**	**87**	**88**
Children ages 19–35 months received all recommended doses of six key vaccines[b]	73	59–82	77	65–82	75	65–84	88	93	90
Children received both preventive medical and dental care visits[b]	59	48–73	n.d.	n.d.	72	62–83	81	81*	87
Adults and children needed mental health care and received treatment (average of two ratios):							**76**	**76**	**75**
Adults with major depressive episode who received treatment[c]	65	41–83	69	50–87	64	48–79	79	80	74
Children needed mental health care and received treatment[b]	59	47–74	n.d.	n.d.	60	47–78	73	73*	75
Chronic disease under control (average of two ratios):							**65**	**76**	**81**
Adults with diagnosed diabetes whose hemoglobin A1c level <9.0%[d]	79	23–89	88	30–88	86	37–89	89	98	96
Adults with hypertension whose blood pressure <140/90 mmHg[d]	31	48–75	41	39–68	50	42–73	41	54	66
Hospitalized patients received recommended care for heart attack, heart failure, and pneumonia[e]	84	74–91	89	80–94	96	91–98	**84**	**89**	**96**
Surgical patients received appropriate care to prevent complications[e]	71	49–87	83	66–93	96	90–98	**71**	**83**	**96**
COORDINATED CARE SCORE							**71**	**71**	**72**
Adults ages 19–64 with an accessible primary care provider[f]	55	31–71	55	31–72	56	31–77	**77**	**77**	**73**
Children with a medical home[b]	46	36–60	n.d.	n.d.	58	49–68	**77**	**77***	**85**
Care coordination at hospital discharge (average of three ratios):							**71**	**76**	**80**
Hospitalized patients discharged with new medications and had someone review prior medications they were using[g]	67	67–86	n.d.	n.d.	67	54–77	78	78*	78
Heart failure patients received written instructions at discharge[h]	53	9–87	72	36–94	90	68–99	61	77	91
Health plan members age 6 and older received follow-up within 30 days after hospitalization for mental health disorder[i] (average of three ratios):							74	72	73
Private plans[j]	76	65–86	76	63–88	77	63–88	88	87	87
Medicare plans[j]	61	39–80	56	29–81	55	26–80	70	64	62
Medicaid plans[j]	55	22–81	58	17–80	60	32–84	64	66	68
Nursing homes: hospital admissions and readmissions among residents (average of two ratios):							**68**	**63**	**61**
Six-month hospital admissions among long-stay nursing home residents[k]	18.3	26.2–11.2	19.6	28.0–12.1	20.0	28.3–11.9	61	57	56
Readmissions within 30 days of hospital discharge to nursing home among first-time nursing home residents [k]	18.1	23.5–13.4	19.6	25.2–14.5	20.5	25.7–15.8	74	68	65
Home health care: hospital admissions among home health care patients[l]	28	47–17	28	48–19	29	45–19	**62**	**62**	**60**

Sources: See Appendix B.

Notes: All figures represent percents unless the indicator is labeled otherwise. Range is the rates for the bottom (worst-performing) and top (best-performing) group as footnoted. The benchmark is the best rate achieved by the top group from any period; exceptions are footnoted. Indicator scores used to determine the dimension score are underlined.

n.d. Indicates no data available. * Indicates score was not updated from previous scorecard edition.

[a] Uninsured all year 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 ages 19–64 or high-income elderly.

[g] In 2006 Scorecard, worst or best of six countries; in 2011, eight countries.

[h] 10th or 90th percentile hospitals.

[i] Based on National Committee for Quality Assurance health plans; no national data available.

[j] 10th or 90th percentile health plans. Benchmark is 90th percentile private plans.

[k] 90th or 10th percentile hospital referral regions.

[l] Average bottom or top 25 percent of agencies.

Appendix A3. Performance Indicators for the U.S. Health Care System: Quality (continued)

Dimension and Indicator	2006 Scorecard National rate	2006 Scorecard Range (bottom group–top group)	2008 Scorecard National rate	2008 Scorecard Range (bottom group–top group)	2011 Scorecard National rate	2011 Scorecard Range (bottom group–top group)	Score: Ratio of National Rate to Benchmark Rate 2006 Scorecard	2008 Scorecard	2011 Scorecard
SAFE CARE SCORE							**62**	**62**	**72**
Sicker adults reported medical, medication, or lab test error in past two years[a]	34	34–22	32	32–19	32	32–16	**65**	**59**	**50**
Unsafe drug use (average of three ratios):							**34**	**34**	**62**
Children ages 2–18 prescribed antibiotics for throat infection without a "strep" test[b] (average of two ratios):							34	34	38
Private plans[c]	27	45–12	27	43–14	23	37–11	42	42	47
Medicaid plans[c]	46	75–23	44	74–23	38	60–19	25	26	28
Medicare beneficiaries received at least one drug that should be avoided in the elderly[d]	n.d.	n.d.	n.d.	n.d.	25	36–18	n.d.	n.d.	72
Medicare beneficiaries with dementia, hip/pelvic fracture, or chronic renal failure received prescription in an ambulatory care setting that is contraindicated for that condition[d]	n.d.	n.d.	n.d.	n.d.	20	26–15	n.d.	n.d.	78
Nursing home residents with pressure sores (average of two ratios):							**67**	**66**	**68**
High-risk residents[e]	13.4	17.7–8.1	12.5	16.8–7.4	11.6	15.6–7.2	60	59	62
Short-stay residents[e]	18.8	24.3–13.7	16.8	22.8–12.2	14.1	18.5–10.3	73	73	73
Hospital-standardized mortality ratios, actual to expected deaths[f]	101	115–85	82	89–74	73	77–68	**85**	**90**	**94**
Risk-adjusted 30-day hospital mortality rates (average of three ratios):							**n.d.**	**n.d.**	**85**
All-cause 30-day mortality among Medicare patients hospitalized with heart attack[g]	n.d.	n.d.	n.d.	n.d.	16.1	18.9–14.1	n.d.	n.d.	88
All-cause 30-day mortality among Medicare patients hospitalized with heart failure[g]	n.d.	n.d.	n.d.	n.d.	11.2	13.2–9.4	n.d.	n.d.	84
All-cause 30-day mortality among Medicare patients hospitalized with pneumonia[g]	n.d.	n.d.	n.d.	n.d.	11.5	14.1–9.5	n.d.	n.d.	83
PATIENT-CENTERED, TIMELY CARE SCORE							**73**	**70**	**75**
Sicker adults able to see doctor on same or next day when sick or needed medical attention[a]	47	36–81	46	32–74	43	36–80	**58**	**57**	**53**
Sicker adults reported very or somewhat easy to get care after hours without going to the emergency room[a]	38	38–72	25	25–49	37	37–70	**53**	**35**	**51**
Adults whose health providers always listened carefully, explained things clearly, respected what they had to say, and spent enough time with them[h]	54	55–74	57	59–75	57	62–77	**74**	**75**	**75**
Sicker adults with chronic conditions received self-management plan[a]	58	37–65	n.d.	n.d.	66	31–66	**89**	**89***	**100**
Patient-centered hospital care (average of three ratios):							**87**	**87**	**88**
Staff always managed pain well[i]	70	61–79	67	60–75	69	62–75	88	90	92
Staff always responded when needed help to get to the bathroom or pressed call button[i]	63	52–74	60	48–72	63	52–75	86	83	84
Staff always explained medicines and side effects[i]	60	49–70	58	49–66	59	52–68	86	87	87
Home health care patients whose ability to walk or move around improved[j]	37	25–47	42	26–54	47	32–58	**78**	**77**	**81**
QUALITY DIMENSION SCORE							**70**	**71**	**75**

Sources: See Appendix B.

Notes: All figures represent percents unless the indicator is labeled otherwise. Range is the rates for the bottom (worst-performing) and top (best-performing) group as footnoted. The benchmark is the best rate achieved by the top group from any period; exceptions are footnoted. Indicator scores used to determine the dimension score are underlined.

n.d. Indicates no data available. * Indicates score was not updated from previous scorecard edition.

[a] In 2006 Scorecard, worst or best of six countries; in 2008, seven countries; in 2011, eight countries.

[b] Based on National Committee for Quality Assurance health plans; no national data available.

[c] 90th or 10th percentile health plans. Benchmark is 10th percentile private plans.

[d] 90th to 10th percentile hospital referral regions.

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

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

[g] 90th or 10th percentile hospitals.

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

[i] 10th or 90th percentile hospitals. Benchmark is best rate achieved by top group from 2008 or 2011 Scorecard.

[j] Average bottom or top 25 percent of agencies.

Appendix A4. Performance Indicators for the U.S. Health Care System: Access

Dimension and Indicator	2006 Scorecard National rate	2006 Scorecard Range (bottom group–top group)	2008 Scorecard National rate	2008 Scorecard Range (bottom group–top group)	2011 Scorecard National rate	2011 Scorecard Range (bottom group–top group)	Score: Ratio of National Rate to Benchmark Rate 2006 Scorecard	2008 Scorecard	2011 Scorecard
PARTICIPATION SCORE							**65**	**62**	**63**
Adults ages 19–64 insured all year, not underinsured[a]	65	32–83	58	28–73	56	26–75	**65**	**58**	**56**
Adults with no access problems because of costs[b]	60	60–91	63	63–95	67	67–95	**66**	**66**	**71**
AFFORDABLE CARE SCORE							**68**	**53**	**47**
Persons under age 65 in families that spend 10 percent or less of income (or 5 percent or less, if in low-income family) on out-of-pocket medical expenses and premiums[c]	81	56–95	77	56–92	78	57–93	**81**	**77**	**78**
Persons under age 65 living in states where premiums for employer-sponsored health coverage are less than 15 percent of under-65 median household income	57	na	21	na	4	na	**57**	**21**	**4**
Adults ages 19–64 with no medical bill problems or medical debt[d]	66	53–84	59	44–79	60	45–81	**66**	**59**	**60**
ACCESS DIMENSION SCORE							**67**	**57**	**55**

Sources: See Appendix B.
Notes: All figures represent percents unless the indicator is labeled otherwise. Range is the rates for the bottom (worst-performing) and top (best-performing) group as footnoted. The benchmark is 100 percent of the U.S. population meeting each threshold; exceptions are footnoted. Indicator scores used to determine the dimension score are underlined.
na Indicates not applicable.
[a] Less than 200 percent of the federal poverty level or 200 percent or more of poverty.
[b] In 2006 Scorecard, worst or best of five countries; in 2008, seven countries; in 2011, 11 countries. The benchmark is the best rate achieved by the top group from any period.
[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 A5. Performance Indicators for the U.S. Health Care System: Efficiency

Dimension and Indicator	2006 Scorecard National rate	2006 Scorecard Range (bottom group–top group)	2008 Scorecard National rate	2008 Scorecard Range (bottom group–top group)	2011 Scorecard National rate	2011 Scorecard Range (bottom group–top group)	Score: Ratio of National Rate to Benchmark Rate 2006 Scorecard	2008 Scorecard	2011 Scorecard
Potential overuse or waste (average of three ratios):							**48**	**41**	**40**
Duplicate medical tests: sicker adults reported doctor ordered test that had already been done in past two years[a]	18	20–6	20	20–4	19	19–4	33	20	21
Sicker adults reported tests results or records not available at time of appointment in past two years[a]	23	23–11	22	22–9	23	23–9	48	41	39
Inappropriate imaging: health plan members received imaging study for acute low-back pain[b] (average of health plans):							62	62	59
Private plans[c]	25	33–18	26	35–19	26	34–19	58	56	56
Medicaid plans[c]	22	28–15	22	29–15	24	31–16	66	67	61
Sicker adults went to emergency room in past two years for condition that could have been treated by regular doctor if available[a]	26	26–6	21	21–6	21	25–7	**23**	**29**	**29**
Potentially preventable hospital admissions for ambulatory care–sensitive conditions (average of two ratios):							**55**	**56**	**56**
Hospital admissions for select ambulatory care–sensitive conditions, per 100,000 population (average of three ratios):							45	45	46
Heart failure admissions among adults[d]	476	634–246	446	581–222	416	545–211	52	50	51
Diabetes-related admissions among adults (sum of three diabetes admission measures)[d]	202	251–104	208	242–108	205	251–108	51	50	51
Pediatric asthma admissions among children ages 2–17[d]	156	230–49	144	206–50	135	209–49	31	34	36
Hospital admissions among Medicare beneficiaries for one of 11 ambulatory care–sensitive conditions, per 10,000 beneficiaries[e]	741	1007–480	690	903–464	618	792–405	65	67	66
Readmissions within 30 days of hospital discharge among Medicare beneficiaries initially admitted for one of 45 medical conditions or surgical procedures[e]	20	23–15	20	23–15	20	24–16	**75**	**74**	**72**
Medicare annual costs of care and mortality for heart attack, hip fracture, or colon cancer (average of two ratios):							**88**	**89**	**89***
Annual resource costs, Part A and Part B $[e]	$26,829	$29,047–$23,314	$28,011	$30,263–$24,906	n.d.	n.d.	87	89	89*
1-year mortality rate[e]	30	32–27	30	33–27	n.d.	n.d.	90	89	89*
Medicare annual costs of care for beneficiaries with multiple chronic diseases, Part A and Part B $ (average of four ratios):							**68**	**71**	**69**
All three conditions[e]	$34,498	$47,309–$23,909	$39,314	$51,708–$27,106	$48,107	$67,000–$33,087	69	69	69
Diabetes + heart failure[e]	$21,710	$28,752–$14,192	$24,561	$31,770–$17,347	$30,804	$39,443–$21,117	65	71	69
Diabetes + chronic obstructive pulmonary disease[e]	$14,954	$19,902–$10,345	$16,355	$20,311–$11,676	$18,977	$23,600–$13,203	69	71	70
Heart failure + chronic obstructive pulmonary disease[e]	$25,199	$34,840–$17,366	$28,348	$36,018–$20,661	$34,162	$44,648–$23,951	69	73	70
Spending on health insurance administration as percent of national health expenditures[f]	7.6	7.0–2.6	7.5	6.6–2.4	7.0	6.5–2.8	**34**	**32**	**34**
Use of electronic medical records (average of two ratios):							**21**	**29**	**34**
Primary care physicians using electronic medical records[g]	17	14–80	28	23–98	46	37–99	21	29	46
Hospitalized patients received care in a hospital with basic or comprehensive electronic health records[h]	n.d.	n.d.	n.d.	n.d.	18.6	n.d.	n.d.	n.d.	21
EFFICIENCY DIMENSION SCORE							**52**	**53**	**53**

Sources: See Appendix B.

Notes: All figures represent percents unless the measure is labeled otherwise. Range is the rates for the bottom (worst-performing) and top (best-performing) group as footnoted. The benchmark is the best rate achieved by the top group from any period; exceptions are footnoted. Indicator scores used to determine the dimension score are underlined.

n.d. Indicates no data available. * Indicates score was not updated from previous scorecard edition.

[a] In 2006 Scorecard, worst or best of six countries; in 2008, seven countries; in 2011, eight countries.

[b] Based on National Committee for Quality Assurance health plans; no national data available.

[c] 90th or 10th percentile health plans. Benchmark is 10th percentile Medicaid plans.

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

[e] 90th or 10th percentile hospital referral regions. For cost measures, the benchmark is the top group rate from the corresponding period.

[f] Average bottom or top three of 10 countries.

[g] In 2006, average bottom or top three of 19 countries; in 2008, worst or best of seven countries; in 2011, worst or best of 11 countries.

[h] National rate available only. Benchmark is target rate at 90.

Appendix A6. Performance Indicators for the U.S. Health Care System: 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	2011 Scorecard	2006 Scorecard	2008 Scorecard	2011 Scorecard	2006 Scorecard	2008 Scorecard	2011 Scorecard	2006 Scorecard	2008 Scorecard	2011 Scorecard
HEALTHY LIVES SCORE	—	—	—	**46**	**47**	**47**	**76**	**76**	**74**	**97**	**97**	**97**
Infant mortality	—	—	—	63	67	66	42	42	42	100	100	100
Adults ages 18–64 limited in any activities because of physical, mental, or emotional problems	—	—	—	46	45	43	100	100	91	100	100	100
Children ages 6–17 missed 11 or more school days because of illness or injury in the past year	—	—	—	46	46*	52	100	100*	100	100	100*	100
Age-adjusted coronary heart disease deaths and diabetes-related deaths (average of two ratios)	—	—	—	29	29	27	64	64	64	86	88	90
EFFECTIVE CARE SCORE	**59**	**57**	**57**	**67**	**70**	**68**	**79**	**79**	**78**	**73**	**73**	**72**
Older adults age 50+ did not receive recommended screening and preventive care	76	71	65	80	75	71	85	84	86	77	80	76
Children did not receive recommended vaccines and preventive care visits	57	57*	49	73	71	76	86	87	100	82	85	90
Adults and children needed mental health care and did not receive treatment (average of two ratios)	43	41	55	73	85	86	77	70	73	69	58	68
Untreated dental caries among persons ages 6–64 (average of two ratios)	45	43	41	26	31	32	53	60	53	53	59	56
Chronic disease not under control: diabetes and hypertension (average of two ratios)	63	62	58	74	91	78	75	77	69	73	69	63
Adults age 40+ with diagnosed diabetes did not receive all three recommended services for diabetes	71	71*	74	78	67	63	96	97	85	83	85	81
SAFE CARE SCORE	**96**	**97**	**95**	**96**	**95**	**94**	**75**	**76**	**82**	**93**	**93**	**93**
Sicker adults ages 18–64 reported medical mistake, medication error, or lab error in past two years	100	100*	94	54	62*	46	67	67*	87	100	100*	100
AHRQ patient safety indicators (average of five ratios)	93	95	95	57	48	57	78	81	81	93	94	95
Nursing home residents who have pressure sores (average of two ratios)	—	—	—	—	—	—	79	79	78	87	86	84
PATIENT-CENTERED, TIMELY CARE SCORE	**56**	**56**	**49**	**55**	**55**	**52**	**71**	**62**	**63**	**54**	**64**	**67**
Adults ages 18–64 waited six or more days for an appointment or never able to get an appointment when sick or needed medical attention	62	59	57	81	79	72	58	44	44	46	57	61
Adults age 18+ whose health providers sometimes or never listened carefully, explained things clearly, respected what they had to say, and spent enough time with them	62	62	52	63	63	51	85	79	82	63	71	73
COORDINATED AND EFFICIENT CARE SCORE	**59**	**61**	**57**	**65**	**62**	**58**	**65**	**76**	**68**	**61**	**76**	**70**
Adults age 19+ without an accessible primary care provider (average of two ratios)	62	59	57	81	79	72	90	90	91	72	76	80
Children without a medical home	62	62*	52	63	63*	51	78	78*	57	68	68*	52
Adults ages 18–64 reported doctor ordered test that had already been done in past two years	44	58	54	53	65	63	50	100	80	44	87	64
Adults ages 18–64 reported test result or records were not available at appointment in past two years	58	61	58	74	52	62	62	75	65	46	75	88
Adults ages 18–64 went to emergency room in past two years for a condition that could have been treated by regular doctor if available	67	65	67	58	50	48	41	68	70	65	100	78
Potentially avoidable hospital admissions for ambulatory care–sensitive conditions (average of three ratios)	—	—	—	47	47	48	30	30*	29	57	57*	66
ACCESS SCORE	**57**	**62**	**62**	**30**	**32**	**31**	**86**	**86**	**78**	**82**	**87**	**78**
Persons under age 65 with any period of uninsurance during the year	—	—	—	28	29	30	76	73	79	47	48	50
Adults ages 19–64 with access problems because of costs	48	49	48	46	43	43	100	100	74	88	100	79
Persons under age 65 in families with high out-of-pocket medical expenses and premiums relative to income	82	95	100	11	19	18	95	90	95	92	100	100
Adults ages 19–64 with medical bill problems or debt	49	54	52	34	38	35	75	80	64	100	100	84
SCORE BY EQUITY GROUP	**65**	**67**	**64**	**60**	**60**	**58**	**75**	**76**	**74**	**77**	**82**	**80**

Sources: See Appendix B.
— Indicates not scored.
* Indicates no updated data available; score was not updated from previous scorecard edition.
Note: AHRQ = Agency for Healthcare Research and Quality.

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, 2008, and 2011 editions of the national scorecard; 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	Year for 2011 Scorecard	Database	Source Notes
HEALTHY LIVES						
1.	Mortality amenable to health care, deaths per 100,000 population*	1997–1998	2002–2003	2006–2007	WHO mortality files; CDC NVSS-M	Analysis by E. Nolte, RAND Europe, and M. McKee, London School of Hygiene and Tropical Medicine. For more information, see E. Nolte and M. McKee, "Variations in Amenable Mortality—Trends in 16 High-Income Nations," *Health Policy,* 2011.
2.	Infant mortality, deaths per 1,000 live births	2002	2004	2007	NVSS-I	AHRQ, *National Healthcare Quality Report: Data Tables Appendix* (2005, 2007); T. J. Mathews and M. F. MacDorman, *Infant Mortality Statistics from the 2007 Period Linked Birth–Infant Death Data Set,* National Vital Statistics Report, vol. 59, no. 6 (Hyattsville, Md.: National Center for Health Statistics, June 29, 2011).
3.	Healthy life expectancy at age 60, years					
3.1	Men	2002	No update	2007	WHO	World Health Organization, *The World Health Report 2003: Shaping the Future* (Geneva: WHO: 2003); C. Mathers of the World Health Organization provided unpublished 2007 data set consistent with HALE estimates published in *World Health Statistics 2009*.
3.2	Women	2002	No update	2007	Same as above.	Same as above.
4.	Adults ages 18–64 limited in any activities because of physical, mental, or emotional problems	2004	2006	2010	BRFSS	Analysis by D. Belloff, Rutgers Center for State Health Policy, and D. Radley.
5.	Children ages 6–17 missed 11 or more school days because of illness or injury	2003	No update	2007	NSCH	Retrieved from the Data Resource Center for Child and Adolescent Health Web site at http://www.nschdata.org.
6.	Adults who currently smoke	2004	2006	2010	BRFSS	Analysis by D. Belloff, Rutgers Center for State Health Policy, and D. Radley.
7.	Children ages 10–17 who are overweight or obese	2003	No update	2007	NSCH	Retrieved from the Data Resource Center for Child and Adolescent Health Web site at http://www.nschdata.org.
QUALITY						
8.	Adults received recommended screening and preventive care*	2002	2005	2008	MEPS	Analysis by N. Tilipman, Columbia University Mailman School of Public Health.
9.	Children received recommended immunizations and preventive care					
9.1	Children ages 19–35 months received all recommended doses of six key vaccines	2003	2006	2010	NIS	Retrieved from CDC National Center for Immunization and Respiratory Diseases NIS estimates Web site at: http://www.cdc.gov/vaccines/stats-surv/default.htm.
9.2	Children received both preventive medical and dental care visits	2003	No update	2007	NSCH	2007 data are not comparable with 2003 data because of changes in survey design. Retrieved from the Data Resource Center for Child and Adolescent Health Web site at http://www.nschdata.org.
10.	Adults and children needed mental health care and received treatment					
10.1	Adults with major depressive episode who received treatment	2004	2006	2009	NSDUH	2009 data are not comparable with 2004 or 2006 data because of changes in survey design. SAMHSA, *Results from the National Survey on Drug Use and Health: National Findings* (2006, 2007); SAMHSA, *Results from the 2009 National Survey on Drug Use and Health: Mental Health Findings* (2010).
10.2	Children needed mental health care and received treatment	2003	No update	2007	NSCH	Retrieved from the Data Resource Center for Child and Adolescent Health Web site at http://www.nschdata.org.

		Year for 2006 Scorecard	Year for 2008 Scorecard	Year for 2011 Scorecard	Database	Source Notes
11.	Chronic disease under control					
11.1	Adults with diagnosed diabetes whose hemoglobin A1c level <9.0%: national data	1999–2000	2003–2004	2007–2008	NHANES	Analysis by J. M. McWilliams, Harvard Medical School.
	Adults with diagnosed diabetes whose hemoglobin A1c level <9%: benchmark data	2004	2006	2009	HEDIS	NCQA, *The State of Health Care Quality: Reform, The Quality Agenda and Resource Use* (2010).
11.2	Adults with hypertension whose blood pressure <140/90 mmHg: national data	1999–2000	2003–2004	2007–2008	NHANES	Analysis by J. M. McWilliams, Harvard Medical School.
	Adults with hypertension whose blood pressure <140/90 mmHg: benchmark data	2004	2006	2009	HEDIS	NCQA, *The State of Health Care Quality: Reform, The Quality Agenda and Resource Use* (2010).
12.	Hospitalized patients received recommended care for heart attack, heart failure, and pneumonia*	2004	2006	2009	CMS Hospital Compare	Analysis by IPRO.
13.	Surgical patients received appropriate care to prevent complications*	2004	2006	2009	CMS Hospital Compare	Analysis by IPRO.
14.	Adults ages 19–64 with an accessible primary care provider*	2002	2005	2008	MEPS	Analysis by N. Tilipman, Columbia University Mailman School of Public Health.
15.	Children with a medical home*	2003	No update	2007	NSCH	2007 data are not comparable with 2003 data because of changes in survey design. Retrieved from the Data Resource Center for Child and Adolescent Health Web site at http://www.nschdata.org.
16.	Care coordination at hospital discharge					
16.1	Hospitalized patients discharged with new medications and had someone review prior medications they were using	2005	No update	2008	Commonwealth Fund IHP Survey	Analysis by authors using survey sample of adults with health problems.
16.2	Heart failure patients received written instructions at discharge	2004	2006	2009	CMS Hospital Compare	Analysis by IPRO.
16.3	Health plan members age 6 and older received follow-up within 30 days after hospitalization for mental health disorder: private plans, Medicare, Medicaid	2004	2006	2009	HEDIS	NCQA, *The State of Health Care Quality: Reform, The Quality Agenda and Resource Use* (2010).
17.	Nursing homes: hospital admissions and readmissions among residents					
17.1	6-month hospital admissions among long-stay nursing home residents	2000	2004	2008	MEDPAR, MDS	Analysis by V. Mor and Z. Feng, Brown University.
17.2	Readmissions within 30 days of hospital discharge to nursing home among first-time nursing home residents	2000	2004	2008	Same as above.	Same as above.
18.	Home health care: hospital admissions among home health care patients	2004	2006–2007	2009	OASIS	Retrieved from CMS Home Health Compare database at http://www.medicare.gov/HHCompare.
19.	Sicker adults reported medical, medication, or lab test error in past two years	2005	2007	2008	Commonwealth Fund IHP Survey	Analysis by authors using survey sample of adults with health problems.

		Year for 2006 Scorecard	Year for 2008 Scorecard	Year for 2011 Scorecard	Database	Source Notes
20.	Unsafe drug use					
20.1	Children ages 2–18 prescribed antibiotics for throat infection without a "strep" test: private plans, Medicaid	2004	2006	2009	HEDIS	NCQA, *The State of Health Care Quality: Reform, The Quality Agenda and Resource Use* (2010).
20.2	Medicare beneficiaries received at least one drug that should be avoided in the elderly	No data	No data	2007	5% sample of Medicare beneficiaries enrolled in Part D	Analysis by Y. Zhang, University of Pittsburgh. For more information, see: Y. Zhang, K. Baicker, and J. P. Newhouse, "Geographic Variation in the Quality of Prescribing," *New England Journal of Medicine,* Nov. 18, 2010 363(21):1985–88.
20.3	Medicare beneficiaries with dementia, hip/pelvic fracture, or chronic renal failure received prescription in an ambulatory care setting that is contraindicated for that condition	No data	No data	2007	Same as above.	Same as above.
21.	Nursing home residents with pressure sores					
21.1	High-risk residents	2004	2006	2008	MDS	AHRQ, *National Healthcare Quality Report*, *Data Tables Appendix* (2005, 2007, 2009).
21.2	Short-stay residents	2004	2006	2008	Same as above.	Same as above.
22.	Hospital-standardized mortality ratios*	2000–2002	2004–2006	2006–2008	Medicare data	Analysis by Sir Brian Jarman, Imperial College London, United Kingdom.
23.	Risk-adjusted 30-day hospital mortality rates					
23.1	All-cause 30-day mortality rate among Medicare patients hospitalized with heart attack	No data	No data	2006–2009	CMS Hospital Compare	Analysis by IPRO.
23.2	All-cause 30-day mortality rate among Medicare patients hospitalized with heart failure	No data	No data	2006–2009	Same as above.	Same as above.
23.3	All-cause 30-day mortality rate among Medicare patients hospitalized with pneumonia	No data	No data	2006–2009	Same as above.	Same as above.
24.	Sicker adults able to see doctor on same or next day when sick or needed medical attention	2005	2007	2008	Commonwealth Fund IHP Survey	Analysis by authors using survey sample of adults with health problems.
25.	Sicker adults reported very or somewhat easy to get care after hours without going to the emergency room	2005	2007	2008	Commonwealth Fund IHP Survey	Analysis by authors using survey sample of adults with health problems.
26.	Adults whose health providers always listened carefully, explained things clearly, respected what they had to say, and spent enough time with them: national data	2002	2004	2007	MEPS	AHRQ, *National Healthcare Quality & Disparities Reports: Data Tables Appendix* (2010). AHRQ provided data tables to authors by special request.
	Adults whose health providers always listened carefully, explained things clearly, respected what they had to say, and spent enough time with them: benchmark data	2004	2006	2009	CAHPS Benchmarking Database	NCQA provided data to authors by special request.
27.	Sicker adults with chronic conditions received self-management plan	2005	No update	2008	Commonwealth Fund IHP Survey	2008 data are not comparable with 2005 data because of changes in survey design. Analysis by authors using survey sample of adults with health problems.
28.	Patient-centered hospital care					
28.1	Staff always managed pain well	2005	2007	2009	HCAHPS	Analysis by IPRO.
28.2	Staff always responded when needed help to get to the bathroom or pressed call button	2005	2007	2009	Same as above.	Same as above.
28.3	Staff always explained medicines and side effects	2005	2007	2009	Same as above.	Same as above.

		Year for 2006 Scorecard	Year for 2008 Scorecard	Year for 2011 Scorecard	Database	Source Notes
29.	Home health care patients whose ability to walk or move around improved	2004	2006–2007	2009	OASIS	Retrieved from CMS Home Health Compare database at http://www.medicare.gov/HHCompare.
ACCESS						
30.	Adults ages 19–64 insured all year, not underinsured*	2003	2007	2010	Commonwealth Fund Biennial Health Insurance Survey	Analysis by authors.
31.	Adults with no access problems because of costs	2004	2007	2010	Commonwealth Fund IHP Survey	Analysis by authors.
32.	Persons under age 65 in families that spend 10 percent or less of income (or 5 percent or less, if in low-income family) on out-of-pocket medical expenses and premiums	2001	2005	2007	MEPS	Analysis by P. Cunningham, Center for Studying Health System Change.
33.	Persons under age 65 living in states where premiums for employer-sponsored health coverage are less than 15 percent of under-65 median household income	2003	2005	2009	MEPS (premiums), CPS (household income)	Analysis of CPS by N. Tilipman, Columbia University Mailman School of Public Health. Complete analysis by authors.
34.	Adults ages 19–64 with no medical bill problems or medical debt	2005	2007	2010	Commonwealth Fund Biennial Health Insurance Survey	Analysis by authors.
EFFICIENCY						
35.	Potential overuse or waste					
35.1	Duplicate medical tests: sicker adults reported doctor ordered test that had already been done in past two years	2005	2007	2008	Commonwealth Fund IHP Survey	Analysis by authors using survey sample of adults with health problems.
35.2	Sicker adults reported tests results or records not available at time of appointment in past two years	2005	2007	2008	Same as above.	Same as above.
35.3	Inappropriate imaging: health plan members received imaging study for acute low back pain: Private plans, Medicaid	2004	2006	2009	HEDIS	NCQA, *The State of Health Care Quality: Reform, The Quality Agenda and Resource Use* (2010).
36.	Sicker adults went to emergency room in past two years for condition that could have been treated by regular doctor if available	2005	2007	2008	Commonwealth Fund IHP Survey	Analysis by authors using survey sample of adults with health problems.
37.	Potentially preventable hospital admissions for ambulatory care–sensitive conditions					
37.1	Hospital admissions for select ambulatory care–sensitive conditions, per 100,000 population					
37.1a	Heart failure admissions among adults	2004	2006	2007	HCUP	AHRQ, *National Healthcare Quality & Disparities Reports: Data Tables Appendix* (2010). AHRQ provided data tables to authors by special request.
37.1b	Diabetes-related admissions among adults (sum of three diabetes admission measures)	2004	2006	2007	Same as above.	Same as above.
37.1c	Pediatric asthma admissions among children ages 2–17	2004	2006	2007	Same as above.	Same as above.
37.2	Hospital admissions among Medicare beneficiaries for one of 11 ambulatory care–sensitive conditions, per 10,000 beneficiaries*	2003	2005	2009	Medicare SAF 5% Inpatient Data from CCW	2009 data are not comparable with 2003 or 2005 data because of changes in coding for diagnosis-related groups. Analysis by G. Anderson and R. Herbert, Johns Hopkins Bloomberg School of Public Health.

		Year for 2006 Scorecard	Year for 2008 Scorecard	Year for 2011 Scorecard	Database	Source Notes
38.	Readmissions within 30 days of hospital discharge among Medicare beneficiaries initially admitted for one of 45 medical conditions or surgical procedures*	2003	2005	2009	Medicare SAF 5% Inpatient Data from CCW	Analysis by G. Anderson and R. Herbert, Johns Hopkins Bloomberg School of Public Health.
39.	Medicare annual costs of care and mortality for heart attack, hip fracture, or colon cancer					
39.1	Resource costs, annual Part A and Part B	2000–2002	2004	No update	20% national sample of Medicare beneficiaries	Analysis by E. Fisher, J. Sutherland, and D. Radley, Dartmouth Institute for Health Policy and Clinical Practice.
39.2	1-year mortality rate	2000–2002	2004	No update	Same as above.	Same as above.
40.	Medicare annual costs of care for beneficiaries with multiple chronic diseases					
40.1	All three conditions	2003	2005	2009	Medicare SAF 5% Inpatient Data from CCW	Analysis by G. Anderson and R. Herbert, Johns Hopkins Bloomberg School of Public Health.
40.2	Diabetes + heart failure	2003	2005	2009	Same as above.	Same as above.
40.3	Diabetes + chronic obstructive pulmonary disease	2003	2005	2009	Same as above.	Same as above.
40.4	Heart failure + chronic obstructive pulmonary disease	2003	2005	2009	Same as above.	Same as above.
41.	Spending on health insurance administration as percent of national health expenditures	2003	2005	2009	OECD Health Data 2011	
42.	Use of electronic medical records					
42.1	Primary care physicians using electronic medical records	2000	2006	2009	Commonwealth Fund International Survey of Physicians	Analysis by authors.
42.2	Hospitalized patients received care in a hospital with basic or comprehensive electronic health records*	No data	No data	2009	AHA HIT	Analysis by A. K. Jha, Harvard School of Public Health. For more information, see: A. K. Jha, C. M. DesRoches, E. G. Campbell et al., "Use of Electronic Health Records in U.S. Hospitals," *New England Journal of Medicine,* April 16, 2009 360(16):1628–38.
EQUITY						
1.	Infant mortality, deaths per 1,000 live births	2002	2004	2007 (2005 by mother's education)	NVSS-I	T. J. Mathews and M. F. MacDorman, *Infant Mortality Statistics from the 2007 Period Linked Birth–Infant Death Data Set,* National Vital Statistics Report, vol. 59, no. 6 (Hyattsville, Md.: National Center for Health Statistics, June 29, 2011). Data by mother's education—AHRQ provided data tables to authors by special request.
2.	Adults ages 18–64 limited in any activities because of physical, mental, or emotional problems	2004	2006	2010	BRFSS	Analysis by D. Belloff, Rutgers Center for State Health Policy, and D. Radley.
3.	Children ages 6–17 missed 11 or more school days because of illness or injury	2003	No update	2007	NSCH	Retrieved from the Data Resource Center for Child and Adolescent Health website at http://www.nschdata.org.
4.	Age-adjusted coronary heart disease deaths and diabetes-related deaths					
4.1	Coronary heart disease deaths per 100,000 population	2003	2004	2006	NVSS-M	Retrieved from DATA2010 [a CDC online analysis tool] at http://wonder.cdc.gov/data2010.
4.2	Diabetes-related deaths per 100,000 population	2003	2004	2006	NVSS-M	Same as above.
5.	Older adults ages 50 and older did not receive recommended screening and preventive care*	2002	2005	2008	MEPS	Analysis by N. Tilipman, Columbia University Mailman School of Public Health.

		Year for 2006 Scorecard	Year for 2008 Scorecard	Year for 2011 Scorecard	Database	Source Notes
6.	Children did not receive recommended immunizations and preventive care					
6.1	Children ages 19–35 months did not receive all recommended doses of six key vaccines	2003	2006	2010	NIS	Retrieved from CDC National Center for Immunization and Respiratory Diseases NIS estimates Web site at: http://www.cdc.gov/vaccines/stats-surv/default.htm.
6.2	Children did not receive both preventive medical and dental care visits	2003	No update	2007	NSCH	Retrieved from the Data Resource Center for Child and Adolescent Health Web site at http://www.nschdata.org.
7.	Adults and children needed mental health care and did not receive treatment					
7.1	Adults with major depressive episode who did not receive treatment	2004	2006	2009	NSDUH	SAMHSA, *Results from the National Survey on Drug Use and Health: National Findings* (2006, 2007). SAMHSA, *Results from the 2009 National Survey on Drug Use and Health: Mental Health Findings* (2010).
7.2	Children needed mental health care and did not receive treatment	2003	No update	2007	NSCH	Retrieved from the Data Resource Center for Child and Adolescent Health Web site at http://www.nschdata.org.
8.	Untreated dental caries among persons ages 6–64					
8.1	Untreated dental caries among children ages 6–19	1999–2002	2001–2004	2005–2008	NHANES	Data by income and insurance—Analysis by J. M. McWilliams, Harvard Medical School. Data by race/ethnicity—NCHS, *Health, United States, 2010: With Special Feature on Death and Dying* (Hyattsville, Md.: Centers for Disease Control and Prevention, 2011).
8.2	Untreated dental caries among nonelderly adults ages 20–64	1999–2002	2001–2004	2005–2008	Same as above.	Same as above.
9.	Chronic disease not under control					
9.1	Adults with diagnosed diabetes whose hemoglobin A1c level ≥9%	1999–2002	2001–2004	2005–2008	NHANES	Analysis by J. M. McWilliams, Harvard Medical School.
9.2	Adults with hypertension whose blood pressure ≥140/90 mmHg	1999–2002	2001–2004	2005–2008	Same as above.	Same as above.
10.	Adults age 40 and older with diagnosed diabetes did not receive hemoglobin A1c measurement, dilated eye examination, and foot examination	2002	2004	2007	MEPS	AHRQ, *National Healthcare Quality & Disparities Reports: Data Tables Appendix* (2010). AHRQ provided data tables to authors by special request.
11.	Sicker adults ages 18–64 reported medical, medication, or lab test error	2005	No update	2008	Commonwealth Fund IHP Survey	Analysis by authors using survey sample of adults with health problems.
12.	AHRQ patient safety indicators (PSI)					
12.1	Failure to rescue or deaths per 1,000 discharges having developed specified complications of care during hospitalization, ages 18–74 (PSI 4)	2001	2004	2007	HCUP	AHRQ, *National Healthcare Quality & Disparities Reports: Data Tables Appendix* (2010). AHRQ provided data tables to authors by special request.
12.2	Decubitus ulcers per 1,000 discharges of length 5 or more days, age 18 and older (PSI 3)	2001	2004	2007	Same as above.	Same as above.
12.3	Selected infections due to medical care per 1,000 medical and surgical discharges, age 18 and older, or obstetric admissions (PSI 7)	2001	2004	2007	Same as above.	Same as above.
12.4	Postoperative pulmonary embolism or deep vein thrombosis per 1,000 surgical discharges, age 18 and older (PSI 12)	2001	2004	2007	Same as above.	Same as above.
12.5	Postoperative sepsis per 1,000 elective-surgery discharges with an operating room procedure, age 18 and older (PSI 13)	2001	2004	2007	Same as above.	Same as above.

		Year for 2006 Scorecard	Year for 2008 Scorecard	Year for 2011 Scorecard	Database	Source Notes
13.	Nursing home residents with pressure sores					
13.1	High-risk residents	2003	2005	2008	MDS	AHRQ, *National Healthcare Quality Report: Data Tables Appendix* (2005, 2007). AHRQ, *National Healthcare Quality & Disparities Reports: Data Tables Appendix* (2010). AHRQ provided data tables to authors by special request.
13.2	Short-stay residents	2003	2005	2008	Same as above.	Same as above.
14.	Adults ages 18–64 waited six or more days for an appointment or never received appointment when sick or needed medical attention	2005	2007	2010	Commonwealth Fund IHP Survey	Analysis by authors using survey sample of general adult population.
15.	Adults whose health providers sometimes or never listened carefully, explained things clearly, respected what they had to say, and spent enough time with them	2002	2004	2007	MEPS	AHRQ, *National Healthcare Quality & Disparities Reports: Data Tables Appendix* (2010). AHRQ provided data tables to authors by special request.
16.	Adults age 19 and older without an accessible primary care provider					
16.1	Adults ages 19–64 without an accessible primary care provider	2002	2005	2008	MEPS	Analysis by N. Tilipman, Columbia University Mailman School of Public Health.
16.2	Adults age 65 and older without an accessible primary care provider	2002	2005	2008	Same as above.	Same as above.
17.	Children without a medical home*	2003	No update	2007	NSCH	Retrieved from the Data Resource Center for Child and Adolescent Health Web site at http://www.nschdata.org.
18.	Adults ages 18–64 reported doctor ordered test that had already been done in past two years	2004	2007	2010	Commonwealth Fund IHP Survey	Analysis by authors using survey sample of general adult population.
19.	Adults ages 18–64 reported test result or records were not available at appointment in past two years	2004	2007	2010	Commonwealth Fund IHP Survey	Analysis by authors using survey sample of general adult population.
20.	Adults ages 18–64 went to emergency room in past two years for a condition that could have been treated by regular doctor if available	2004	2007	2010	Commonwealth Fund IHP Survey	Analysis by authors using survey sample of general adult population.
21.	Potentially avoidable hospital admissions for ambulatory care–sensitive conditions					
21.1	Admissions for congestive heart failure among adults, per 100,000 population	2004	2006	2007	HCUP	AHRQ, *National Healthcare Quality & Disparities Reports: Data Tables Appendix* (2010). AHRQ provided data tables to authors by special request.
21.2	Admissions for diabetes-related conditions among adults, per 100,000 population (sum of three diabetes admission measures)	2004	2006	2007	Same as above.	Same as above.
21.3	Pediatric asthma admissions among children ages 2–17, per 100,000 population	2004	2006	2007	Same as above.	Same as above.
22.	Persons under age 65 with any period of uninsurance during the year	2002	2004	2007	MEPS	AHRQ, *National Healthcare Quality & Disparities Reports: Data Tables Appendix* (2010). AHRQ provided data tables to authors by special request.
23.	Adults ages 19–64 with access problems because of costs	2005	2007	2010	Commonwealth Fund Biennial Health Insurance Survey	Analysis by authors.
24.	Persons under age 65 in families with high out-of-pocket medical expenses and premiums relative to income	2001	2005	2007	MEPS	Analysis by P. Cunningham, Center for Studying Health System Change.
25.	Adults ages 19–64 with medical bill problems or medical debt	2005	2007	2010	Commonwealth Fund Biennial Health Insurance Survey	Analysis by authors.

Acronym Definitions

AHA HIT = American Hospital Association Annual Survey with Health Information Technology Supplement
AHRQ = Agency for Healthcare Research and Quality
BRFSS = Behavioral Risk Factor Surveillance System
CAHPS = Consumer Assessment of Healthcare Providers and Systems
CCW = Chronic Condition Data Warehouse
CDC = Centers for Disease Control and Prevention
CMS = Centers for Medicare and Medicaid Services
CPS = Current Population Survey
HALE = Health-Adjusted Life Expectancy
HCAHPS = Consumer Assessment of Healthcare Providers and Systems Hospital Survey
HCUP = Healthcare Cost and Utilization Project
HEDIS = Health Plan Employer 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
NCHS = National Center for Health Statistics
NCQA = National Committee for Quality Assurance
NHANES = National Health and Nutrition Examination 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–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). For more information, see E. Nolte and M. McKee, "Variations in Amenable Mortality—Trends in 16 High-Income Nations," *Health Policy,* 2011.

Cause of deaths	Age
Intestinal infections	0–14
Tuberculosis	0–74
Other infections (diphtheria, tetanus, septicemia, 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
Leukemia	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
Ischemic heart disease: 50% of mortality rates included	0–74

Adults received recommended screening and preventive care: Percent of adults age 18 and older who received six key screening or preventive services within the time intervals appropriate for his/her age and sex as recommended by the U.S. Preventive Services Task Force, including: blood pressure screening within two years; cholesterol screening within five years; Pap test within three years (for women only); mammogram within two years (for women age 40 and older only); either a fecal occult blood testing (FOBT) within two years or colonoscopy/sigmoidoscopy ever (for adults age 50 and older only); and influenza vaccination within past year (for adults age 65 and older only).

Hospitalized patients received recommended care for heart attack, heart failure, and pneumonia: Proportion of cases where a hospital provided the recommended process of care for patients with heart attack (acute myocardial infarction), heart failure, and pneumonia. The hospital quality measures used to create the indicator were the most current measures listed on the CMS Hospital Compare Web site for each condition during that time. The latest data for 2009 are a composite of 17 process measures: seven for heart attack (aspirin at arrival, aspirin at discharge, angiotensin-converting enzyme inhibitor or angiotensin receptor blocker for left ventricular systolic dysfunction, smoking cessation advice/counseling, beta blocker at discharge, thrombolytic medication within 30 minutes of arrival, and primary percutaneous coronary intervention within 90/120 minutes of arrival); four for heart failure (discharge instructions, evaluation of left ventricular systolic dysfunction, angiotensin-converting enzyme inhibitor or angiotensin receptor blocker for left ventricular systolic dysfunction, and smoking cessation advice/counseling); and six for pneumonia (pneumococcal vaccination, blood culture performed in emergency department prior to initial antibiotic received in hospital, smoking cessation advice/counseling, initial antibiotic(s) received within six hours of arrival, initial antibiotic(s) selection, and influenza vaccination).

Surgical patients received appropriate care to prevent complications: Proportion of cases where a hospital provided recommended processes of care to prevent complications among surgical patients. The hospital quality measures used to create the indicator were the most current measures listed on the CMS Hospital Compare Web site for improving surgical care/preventing surgical infections during that time. The latest data for 2009 are a composite of eight process measures: surgery patients on a beta blocker prior to arrival who received a beta blocker during the perioperative period, prophylactic antibiotics within 1 hour prior to surgery, prophylactic antibiotic selection, prophylactic antibiotics discontinued within 24 hours after surgery, cardiac surgery patients with controlled 6 a.m. postoperative blood glucose, surgery patients with appropriate hair removal, surgery patients with recommended venous thromboembolism prophylaxis ordered, and surgery patients received appropriate venous thromboembolism prophylaxis within 24 hours prior to surgery to 24 hours after surgery.

Adults ages 19–64 with an accessible primary care provider: Percent of adults ages 19 to 64 with 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 and easy to contact by phone during regular office hours.

Children with a medical home: Percent of children ages 0 to 17 who received health care that meets criteria of having a medical home. 2007 data are not comparable with 2003 data because of changes in survey design. For 2003, the indicator measured whether the child had at least one preventive medical care visit in the past year; had a personal doctor/nurse who: provided family-centered care, telephone advice and urgent care when needed, and follow-up after specialty care when needed; and had no problems getting specialty care when needed. For 2007, the indicator measured whether the child had a personal doctor/nurse; had a usual source for sick care; received family-centered care from all health care providers; had no problems getting needed referrals; and received effective care coordination when needed. For more information, see www.nschdata.org.

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.

Adults ages 19–64 insured all year, not underinsured: Percent of adults ages 19 to 64 who were insured all year and adequately protected from high medical expenses. Adults are classified as underinsured if they reported at least one of three indicators of financial exposure relative to income: 1) spending 10 percent or more of their income on out-of-pocket health costs, excluding premiums; 2) spending 5 percent or more of their income, if their incomes were under 200 percent of the federal poverty level; or 2) deductibles that amounted to 5 percent or more of their income.

Hospital admissions among Medicare beneficiaries for one of 11 ambulatory care–sensitive conditions: Hospital admissions of fee-for-service Medicare beneficiaries age 65 and older for one of the following 11 ambulatory care–sensitive conditions: 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. 2009 data are not comparable with 2003 or 2005 data because of changes in coding for diagnosis-related groups. Results calculated using AHRQ Prevention Quality Indicators, Version 4.1.

Readmissions within 30 days of hospital discharge among Medicare beneficiaries initially admitted for one of 45 conditions or surgical procedures: Fee-for-service Medicare beneficiaries age 65 and older with initial admissions because of one of 45 medical conditions or surgical procedures (see list) who are readmitted within 30 days following discharge for the initial admission.

1. Abnormal heartbeat
2. Chronic obstructive pulmonary disease
3. Congestive heart failure
4. Diabetes with amputation
5. Diabetes—medical management
6. Kidney failure—acute
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. Septicemia
13. Stomach and intestinal bleeding
14. Stroke—hemorrhagic
15. Stroke—nonhemorrhagic
16. Abdominal aortic aneurysm repair—endovascular
17. Abdominal aortic aneurysm repair—open
18. Colorectal procedures
19. Gallbladder removal—laparoscopic
20. Gallbladder removal—open
21. Heart attack—angioplasty/stent
22. Hip fracture—surgical repair
23. Hysterectomy—abdominal
24. Hysterectomy—vaginal
25. Prostatectomy—radical
26. Prostatectomy—transurethral
27. Removal of blockage of neck vessels
28. Brain surgery
29. Bronchitis and asthma
30. Chest pain
31. Cirrhosis and alcoholic hepatitis
32. Hypotension and fainting
33. Infectious and parasitic diseases with surgery
34. Liver, gallbladder, or pancreatic cancer
35. Liver disease except cancer, cirrhosis, or alcoholic hepatitis
36. Major lung surgery
37. Medical back problems
38. Miscellaneous lung surgery
39. Miscellaneous vascular surgery
40. Noncancerous pancreatic disorders
41. Postoperative and posttraumatic infections with surgery
42. Postoperative and posttraumatic infections without surgery
43. Stomach and intestinal complications and disorders
44. Stomach and intestinal infections and disorders
45. Stomach and small intestine surgery

Hospitalized patients received care in a hospital with basic or comprehensive electronic health records: Percent of hospitalized patients who received care at a hospital classified as having at least a basic electronic records system. Hospitals were classified as having a basic electronic records system if 10 electronic functionalities were fully implemented in at least one major clinical unit. Based on panel consensus, the 10 functionalities include: having a computerized system for clinical documentation of patient demographics, physicians' notes, nursing assessments, problem lists, medication lists, and discharge summaries; viewing results of lab reports, radiology reports, and diagnostic tests; and entering orders for medication (i.e., computerized provider-order entry). To be classified as having a comprehensive electronic records systems, hospitals needed to implement 24 electronic functionalities in all major clinical units, including the 10 basic functionalities listed above. For more information, see: A. K. Jha, C. M. DesRoches, E. G. Campbell et al., "Use of Electronic Health Records in U.S. Hospitals," *New England Journal of Medicine,* April 16, 2009 360(16):1628–38.

Further Reading

Publications listed below can be found on The Commonwealth Fund's Web site at www.commonwealthfund.org.

Raising Expectations: A State Scorecard on Long-Term Services and Supports for Older Adults, People with Physical Disabilities, and Family Caregivers (Sept. 2011). Susan C. Reinhard, Enid Kassner, Ari Houser, and Robert Mollica, AARP, The Commonwealth Fund, and the SCAN Foundation.

High Performance Accountable Care: Building on Success and Learning from Experience (April 2011). Stuart Guterman, Stephen C. Schoenbaum, Karen Davis, Cathy Schoen, Anne-Marie J. Audet, Kristof Stremikis, and Mark A. Zezza.

Help on the Horizon: How the Recession Has Left Millions of Workers Without Health Insurance, and How Health Reform Will Bring Relief—Findings from The Commonwealth Fund Biennial Health Insurance Survey of 2010 (March 2011). Sara R. Collins, Michelle M. Doty, Ruth Robertson, and Tracy Garber.

Securing a Healthy Future: The Commonwealth Fund State Scorecard on Child Health System Performance, 2011 (Feb. 2011). Sabrina K. H. How, Ashley-Kay Fryer, Douglas McCarthy, Cathy Schoen, and Edward L. Schor.

Starting on the Path to a High Performance Health System: Analysis of the Payment and System Reform Provisions in the Patient Protection and Affordable Care Act of 2010 (Sept. 2010). Karen Davis, Stuart Guterman, Sara R. Collins, Kristof Stremikis, Sheila Rustgi, and Rachel Nuzum.

Mirror, Mirror on the Wall: How the Performance of the U.S. Health Care System Compares Internationally, 2010 Update (June 2010). Karen Davis, Cathy Schoen, and Kristof Stremikis.

Keeping Both Eyes on the Prize: Expanding Coverage and Changing the Way We Pay for Care Are Essential to Make Health Reform Work for Families and Businesses (November 2009). The Commonwealth Fund Commission on a High Performance Health System.

Aiming Higher: Results from a State Scorecard on Health System Performance, 2009 (Oct. 2009). Douglas McCarthy, Sabrina K. H. How, Cathy Schoen, Joel C. Cantor, and Dina Belloff.

The Path to a High Performance U.S. Health System: A 2020 Vision and the Policies to Pave the Way (Feb. 2009). The Commonwealth Fund Commission on a High Performance Health System.

Organizing the U.S. Health Care Delivery System for High Performance (Aug. 2008). Anthony Shih, Karen Davis, Stephen C. Schoenbaum, Anne Gauthier, Rachel Nuzum, and Douglas McCarthy.

Why Not the Best? Results from the National Scorecard on U.S. Health System Performance, 2008 (July 2008). The Commonwealth Fund Commission on a High Performance Health System.

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.

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

One East 75th Street
New York, NY 10021
Tel 212.606.3800

1150 17th Street NW
Suite 600
Washington, DC 20036
Tel 202.292.6700

www.commonwealthfund.org