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**MIRROR, MIRROR ON THE WALL:
AN UPDATE ON THE QUALITY OF AMERICAN HEALTH CARE
THROUGH THE PATIENT'S LENS**

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ABSTRACT: This report is based on two surveys of patients: the first was conducted in 2004 among a nationally representative sample of adults in Australia, Canada, New Zealand, the United Kingdom, and the United States; the second was conducted in 2005 among a sample of adults with health problems in the same five nations and Germany. It ranks patients' ratings of various dimensions of their health care, according to the Institute of Medicine's framework for quality. The U.S. system ranked first on measures of effectiveness but ranked last on other dimensions of quality. It performed particularly poorly in terms of providing care equitably, safely, efficiently, or in a patient-centered manner. For all countries, responses indicate room for improvement. Yet, the other five countries spend considerably less on health care per person and as a percent of gross domestic product than the United States.

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EXECUTIVE SUMMARY

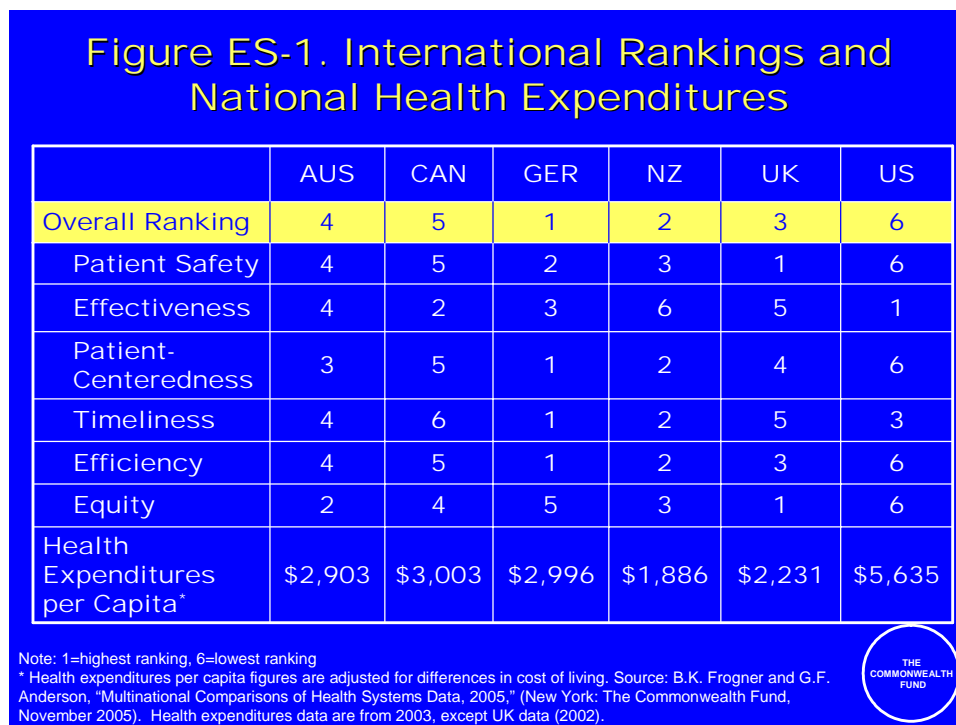
U.S. health care leaders often say that American health care is the best in the world. However, recent studies of medical outcomes and mortality and morbidity statistics suggest that, despite spending more per capita on health care and devoting to it a greater percentage of its national income than any other country, the United States is not getting commensurate value for its money. The Commonwealth Fund's cross-national surveys of patients' views and experiences of their health care systems offer opportunities to assess U.S. performance relative to other countries through the patients' perspective—a dimension often missing from international comparisons.

In 2004, we reported on U.S. performance using Commonwealth Fund international survey data from 2001 and 2002.¹ This report updates these findings using data from two recent surveys. The first survey was conducted in 2004 among a nationally representative sample of adults in five nations: Australia, Canada, New Zealand, the United Kingdom, and the United States. The second survey was conducted in 2005 among a sample of adults with health problems in the same five nations and Germany. This report ranks the countries in terms of patients' reports on care experiences and ratings on various dimensions of care.² While focusing on a limited slice of the health care quality picture—patient perceptions of care received—as well as a limited number of countries, the surveys nonetheless offer valuable insights.

We organized patients' responses according to the Institute of Medicine's (IOM) framework for quality, outlined in the six bulleted points below. We then ranked each country's score on individual items from highest to lowest. For each IOM quality domain, we calculated a summary ranking by averaging the individual ranked scores within each country and ranking these averages from highest to lowest score.

Overall, the findings indicate that the U.S. health care system often performs relatively poorly from the patient perspective. The U.S. system ranked first on effectiveness but ranked last on other dimensions of quality (Figure ES-1). It performed particularly poorly in terms of providing care equitably, safely, efficiently, or in a patient-centered manner. On measures of timeliness, the U.S. system did not score as well as some of the other countries and rarely received top scores. For all countries, responses indicate room for improvement. Yet, the other five countries spend considerably less on health care per person and as a percent of gross domestic product than the United States. These findings indicate that, from the perspective of the patients it serves, the U.S. health

care system could do much better in achieving high-quality performance for the nation’s substantial investment in health.



Key Findings

- Patient safety:** Among sicker adults, Americans had the highest rate of receiving wrong medications or doses or experiencing a medical mistake in the prior two years.³ Among sicker adults who had a lab test in the past two years, adults in the U.S. were more likely than their counterparts in the other countries to have been given incorrect results or experienced delays in notification about abnormal results, with rates double those reported in Germany or the U.K. Rates of lab errors were also relatively high in Canada.
- Effectiveness:** The indicators of effectiveness in the 2004 and 2005 surveys were grouped into four categories: prevention, chronic care, primary care, and hospital care and coordination. Compared with the other five countries, U.S. patients fared particularly well on receipt of preventive care and care for the chronically ill, although all countries had considerable room for improvement. Canada scored well on primary care, and Germany ranked first on hospital care and coordination. Across the indicators of effectiveness, the U.S. ranked first and New Zealand ranked last.

- **Patient-centeredness:** In 2004 and 2005, survey questions asked patients to rate the quality of their physician care in four areas: communication, choice and continuity, patient engagement, and responsiveness to patient preference. On measures of communication and patient engagement, New Zealand ranked highest. Germany was first on measures of choice and continuity, and Australia performed well on responsiveness to patient preference. Across the measures of patient-centeredness, Germany generally was highest, followed by New Zealand. The U.S. ranked last on nearly all aspects of patient-centeredness.
- **Timeliness:** Germany and the U.S. stand out among the six countries in terms of patients with health problems reporting the least difficulty waiting to see a specialist or have elective or non-emergency surgery. Yet Americans, along with Canadians, were more likely to say they waited six days or more for an appointment with a doctor or had trouble getting care on nights and weekends. Across all five measures of timeliness, Germany and New Zealand ranked first and second, respectively. The U.K. ranked fifth, and Canada ranked last.
- **Efficiency:** The 2005 survey included four questions on coordination of care that serve as indicators of health care system efficiency. Compared with their counterparts in other countries, sicker adults in the U.S. more often reported that they visited the emergency room for a condition that could have been treated by a regular doctor had one been available and that their medical records or test results failed to reach their doctor's office in time for appointments. About one of four U.S. sicker adults reported these concerns. U.S. sicker adults, along with their German counterparts, also were more likely to be sent for duplicate tests by different clinicians. On measures of efficiency, the U.S. ranked last among the six countries, with Germany and New Zealand ranking first and second, respectively.
- **Equity:** Nine measures from the two surveys gauged the extent to which patients' income affected their ability to access care. The U.S. scored last on seven of the nine measures of low-income patients not receiving needed care and had the greatest disparities in terms of access to care between those with below-average and above-average incomes. With low rankings on all measures, the U.S. ranked last among the six countries in terms of equity in the health care system. The U.K. ranked first, with no or negligible differences in terms of patients' access to care by income. The U.S. is the only country surveyed with large numbers of uninsured, and this contributed to its low rating for equity in the health care system. But even among above-average income respondents, the U.S. lagged considerably behind their counterparts in other countries.

Summary and Implications

These rankings summarize evidence on measures of quality as perceived or experienced by patients. They do not capture important dimensions of effectiveness or efficiency that might be obtained from medical records or administrative data. Patients' assessments might be affected by their experiences and expectations, which could differ by country and culture. Yet, reports from the World Health Organization (WHO) that compare health care system performance using measures such as life expectancy, infant mortality, or preventable years of life lost as well as health expenditures also suggest that the U.S. achieves the least for its population among these six countries.⁴ A working group—supported by The Commonwealth Fund and with experts from each of the five countries surveyed in 2004, the Organization for Economic Cooperation and Development (OECD), and WHO—developed a set of indicators that provide measures of clinical effectiveness.⁵ It found that none of the five countries included in the study—Australia, Canada, New Zealand, the U.K., and the U.S.—were systematically best or worst on measures of clinical effectiveness, confirming the mixed story reported by patients.

On four of the six domains of quality of care included in the Institute of Medicine framework, the U.S. performs relatively poorly from the patients' perspective. On timeliness, the U.S. performs about average. Effectiveness was the only measure on which the U.S. system performed slightly better than the five other countries, due largely to greater use of preventive care services and better care for the chronically ill. Notably, both of these dimensions of quality have been the focus of quality and reporting measurement in the U.S. for more than a decade.⁶

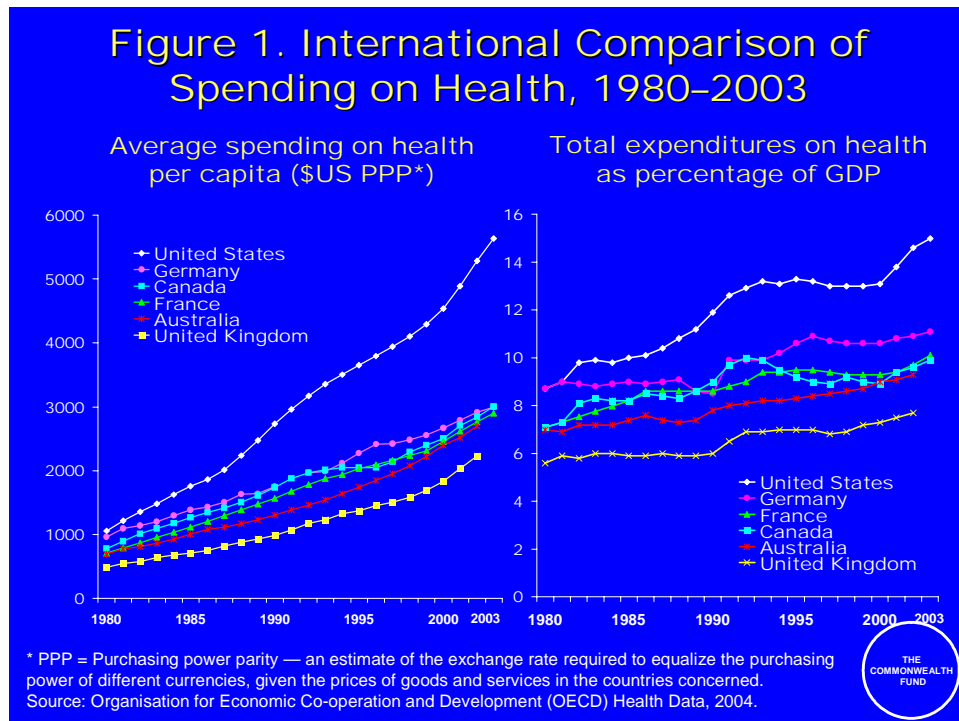
Findings from the 2004 and 2005 surveys confirm many of the findings from surveys in 2001 and 2002.⁷ In the earlier surveys, the U.S. ranked last on measures of patient safety, patient-centeredness, efficiency, and equity. However, compared with the earlier surveys, the U.S. has improved on measures of effectiveness, from being tied for last place with Australia to ranking first among the six countries. The earlier surveys included only limited effectiveness measures while the more recent surveys contained a broader array of measures.

The findings suggest that, if the health care system is to perform according to patients' expectations, the U.S. will need to remove financial barriers to care and improve the delivery of care. Disparities in terms of access to services signal the need to expand insurance to cover the uninsured and to ensure that the system works well for all Americans. Based on these patient reports, the U.S. should improve the delivery, coordination, and equity of the health care system.

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INTRODUCTION

Health care leaders in the United States often say that the American health care system is the best in the world, despite the absence of consistent scientific evidence on its performance. Like the queen in *Snow White*, Americans too often look only at our own reflection in the mirror—failing to include international experience in assessments of our health care system. With U.S. per capita spending on health more than double the average among Organization for Economic Cooperation and Development (OECD) industrialized nations, and with the percentage of national income devoted to health care far exceeding all other nations, Americans should expect commensurate value and superior performance (Figure 1). Cross-national studies provide an opportunity to spotlight areas where the U.S. performs poorly or well and to set goals to improve the return on the nation's substantial investment.



In the first major attempt to rank health care systems, the World Health Organization's *World Health 2000* report placed the U.S. health system 37th in the world.⁸ This calls into question the value Americans receive for their country's

investment in health care. The U.S. ranked 24th in terms of “health attainment,” even lower (32nd) in terms of “equity of health outcomes” across its population, and lower still (54th) in terms of “fairness of financial contributions” toward health care. In the same report, the U.S. ranked first in terms of “patient responsiveness.” Some experts have criticized the report’s measures, methods, and data, including the fact that the data did not include information derived directly from patients.⁹

Cross-national surveys of patients offer a unique dimension that has been missing from international studies of health care system performance, including the WHO analysis. When such surveys include a common set of questions, they can overcome differences among national data systems and definitions that frustrate cross-national comparisons. Since 1998, The Commonwealth Fund has supported surveys about patients’ experiences with their health care system in Australia, Canada, New Zealand, the United Kingdom, and the United States.¹⁰ For the first time in 2005, Germany was included in the international survey.¹¹ Focusing on access to care, costs, and quality, these surveys enable assessment of important dimensions of health system performance. However, they have their own limitations. In addition to lacking clinical data on effectiveness of care and economic data on efficiency, the surveys focus on a limited slice of the health care quality picture—patient perceptions of the care they received. They also include a limited number of countries.

Yet, because these six countries have varying health care systems that serve diverse populations, the surveys offer insights for industrialized nations that—while they might have unique national contexts—face similar cost and quality issues. Comparing patient-reported experiences in these countries can inform the ongoing debate over how to make the U.S. health care system more effective and responsive to patient needs.

Although health system evaluations can focus on a number of dimensions, including health status, coverage, financial sustainability, and political viability, this report focuses on just one dimension: quality, as it is perceived and experienced by patients.¹² To add to our understanding of overall health system performance and illustrate the utility of including patient reports in health system assessments, we summarize what has been learned from the Fund’s international surveys regarding the six dimensions of quality set forth by the Institute of Medicine (IOM) in *Crossing the Quality Chasm*.¹³ Quality itself is a multifaceted concept, taking into account measures of safety, effectiveness, efficiency, and equity and ideally looking at them from a number of different perspectives, including those of providers, purchasers, and patients. This report provides patients’ views, without which an understanding of how the U.S. performs on these dimensions of quality would not be complete.

METHODS

The IOM's six dimensions of quality are safety, effectiveness, patient-centeredness, timeliness, efficiency, and equity. Patient-reported care experiences are particularly well suited to assessing patient-centeredness, timeliness, and equity. Some patient-reported measures also lend insight into selected aspects of safety, efficiency, and effectiveness.

Data are drawn from the Commonwealth Fund 2004 International Health Policy Survey, conducted by telephone in Australia, Canada, New Zealand, the United Kingdom, and the United States, and the 2005 International Health Policy Survey of Sicker Adults, conducted in the same five countries plus Germany. The 2004 survey focuses on the primary care experiences of nationally representative samples of adults ages 18 and older in the five countries. The 2005 survey targets a representative sample of "sicker adults," defined as those who rated their health status as fair or poor, had a serious illness in the past two years, had been hospitalized for something other than a normal delivery, or had undergone major surgery in the past two years.¹⁴ Approximately 1,400 adults in Australia, Canada, New Zealand, and the U.S. and 3,000 adults in the U.K. were included in 2004. Approximately 700 to 750 sicker adults in Australia, Canada, and New Zealand and 1,500 or more in the U.K., U.S., and Germany were included in 2005. The total sample across all countries was 8,672 in 2004 and 6,958 in 2005. The 2004 survey focuses on patients' self-reported experiences getting and using health care services, as well as their opinions on health system structure and recent reforms. The 2005 survey examines sicker patients' views of the health care system, quality of care, care coordination, medical errors, patient-physician communication, waiting times, and access problems. Further details of the survey methodology are described in the Methodology Appendix and elsewhere.¹⁵

For this report, we selected and grouped measures from these two surveys according to IOM's six dimensions of quality. Safety was measured by three items, effectiveness by 15 items, patient-centeredness by 15 items, timeliness by five items, and efficiency by four items. For the measure of equity, we compared experiences of adults with incomes above or below national median incomes to examine low-income experiences across countries and differences between those with lower and higher incomes for each of nine measures.

We ranked countries by calculating means and ranking these scores from highest to lowest (where 1 equals the highest score) across the six countries. For ties in means, the tied observations were assigned the average of the ranks that would be assigned if there were no ties. For each IOM domain of quality, a summary ranking was calculated

by averaging the individual ranked scores within each country and ranking these averages from highest (value=1) to lowest (value=6) score. (For more details, see the Methodology Appendix.)


RESULTS

Figure 2, below, provides a snapshot of how the six nations ranked on the domains of patient safety, effectiveness, patient-centeredness, timeliness, efficiency, and equity.

Figure 2. International Rankings and National Health Expenditures

	AUS	CAN	GER	NZ	UK	US
Overall Ranking	4	5	1	2	3	6
Patient Safety	4	5	2	3	1	6
Effectiveness	4	2	3	6	5	1
Patient-Centeredness	3	5	1	2	4	6
Timeliness	4	6	1	2	5	3
Efficiency	4	5	1	2	3	6
Equity	2	4	5	3	1	6
Health Expenditures per Capita*	\$2,903	\$3,003	\$2,996	\$1,886	\$2,231	\$5,635

Note: 1=highest ranking, 6=lowest ranking
 * Health expenditures per capita figures are adjusted for differences in cost of living. Source: B.K. Frogner and G.F. Anderson, "Multinational Comparisons of Health Systems Data, 2005," (New York: The Commonwealth Fund, November 2005). Health expenditures data are from 2003, except UK data (2002).



Patient Safety

The IOM defines safety as “avoiding injuries to the patients from the care that is intended to help them.” The 2005 survey asked sicker adults about their perceptions of medication or medical errors by a doctor, hospital, or pharmacist.¹⁶ It also asked patients who had had a lab test ordered in the prior two years if they had been given incorrect results or experienced delays in being notified about abnormal results.

Table 1 summarizes country findings on each of these measures of safety. In each of the six countries, at least 9 percent of the surveyed population reported receiving wrong medications or doses and at least 12 percent reported experiencing a medical error in the prior two years. Sicker adults in the U.S. reported the highest rates of medical and medication errors. Among adults who had a lab test in the previous two years, adults in the U.S. were significantly more likely to have been given incorrect results or

experienced delays in being notified about abnormal results, with rates double those reported in Germany or the U.K. Rates of lab errors were also relatively high in Canada.

The U.S. ranked last on the summary score of the three safety measures, and the U.K. ranked first. Differences in education, cultural norms, and media attention, as well as the subjective nature of communication between doctors and patients, might influence patients' perceptions of error. Therefore, caution must be used in relying only on patients' perceptions to rank safety. Nevertheless, these findings indicate that Americans have serious concerns about medical errors.

Effectiveness

Effectiveness is defined by the IOM as “providing services based on scientific knowledge to all who could benefit and refraining from providing services to those not likely to benefit.” Although patients are not reliable reporters of the scientific basis of the care they have received, they can provide information on their experiences receiving care. In the analysis, we used measures of effectiveness such as patients' use of preventive care services, management of chronic conditions, primary care services, and hospital care and coordination. The effectiveness measures are drawn from the 2004 survey of the general population and the 2005 survey of sicker adults.

Prevention: Preventive care is crucial to an effective health care delivery system. When utilized appropriately, preventive care services such as Pap smears, mammograms, flu vaccinations, and reminders for preventive care visits can increase the effectiveness of care by the early diagnosis or prevention of illness.

The U.S. does especially well in providing preventive care for its population. Although the differences were not significant, among women ages 25 to 64, American respondents reported the highest rates of getting Pap smears in the last two years (85%) and, among women ages 50 to 64, the highest rate of mammograms in the last two years (84%). Respondents in the U.S. also were more likely than those in the other countries to receive preventive care reminders.

Chronic care: Carefully managing the care of patients with chronic illnesses is another sign of an effective health care system. As a measure of this, the 2005 survey asked respondents with chronic diseases if they were receiving a self-care plan. It also asked diabetic respondents whether, in the past year, they had their cholesterol checked, an eye exam, and their feet examined and whether, in the past six months, they had their

hemoglobin A1C checked. Of respondents with hypertension, it asked if their blood pressure and cholesterol were checked in the past year.

Among the six countries, Canada stands out for offering the chronically ill self-care plans. Only one of three (35%) Canadian respondents were not receiving a self-care plan, compared with nearly two of three (63%) German respondents. The proportion of diabetic patients receiving all four recommended services varied from 38 percent in Canada to 58 percent in the U.K. Fifty-six percent of respondents in the U.S. received all four services. The proportion of hypertensive patients receiving both blood pressure and cholesterol checks in the past year ranged from 72 percent in the U.K. to 91 percent in Germany, with the U.S. in the mid-range at 85 percent.

Primary Care: Primary care also plays an important role in an effective health care system. Primary care providers offer an entry point to care, deliver core medical and preventive services, and help patients coordinate and integrate their care.

The 2005 survey of sicker adults included two questions on doctors' prescription of medications: one asking if in the past two years doctors had reviewed all of their medications and the second asking how often doctors had explained the side effects of any medication prescribed in the past two years. Explaining medications is related both to effectiveness and safety. If physicians do not explain medications, patients might not know what beneficial effects to expect (e.g., hypertension drugs should produce a difference in blood pressure, an effect that patients cannot feel). This could result in decreased adherence and, consequently, a decrease in the intended effectiveness of a therapeutic plan. Further, if physicians do not explain medications, patients might discontinue a medication prematurely because they experience unexpected side effects.

On the first measure, Germany scored highest, with only 38 percent of sicker patients who were taking prescriptions regularly reporting that doctors sometimes, rarely, or never reviewed all of the different medications they were taking. One of three (33%) such patients in New Zealand reported that their doctors sometimes, rarely, or never explained the side effects of medication prescribed in the past two years. In the other countries, as many as one of two patients reported these problems. These scores highlight the need for better communication between doctors and patients across all six countries.

The 2005 survey examined the extent to which patients understood and were able to follow up on physician care recommendations. These are measures of effectiveness, given that physicians are able to make recommendations for care based on available

scientific evidence, and patient non-adherence prevents the application of that evidence. The 2005 survey included three questions about whether patients received recommended care: whether patients got a recommended test, treatment, or follow-up care; filled a prescription; or skipped doses of medications to make them last longer.

The U.S. population fared much worse than other populations surveyed in terms of going without needed care due to cost. Americans were the most likely to say they did not get a recommended test, treatment, or follow-up care; did not fill a prescription; or skipped doses of medications to make them last longer because of cost. U.K. patients were the least likely to report any one of these problems.

The one primary care measure on which the U.S. performed relatively well was whether respondents received advice from a doctor on diet and exercise. Only one of three (35%) Americans did not receive such advice, compared with 54 percent of respondents in the U.K. and Germany.

Hospital Care and Coordination: Especially among a sicker population, the care received and coordinated within hospitals is indicative of the effectiveness of the system overall. The 2005 survey asked questions regarding the effectiveness of hospital treatment, such as whether patients developed an infection while in the hospital, whether the hospital arranged a follow-up visit with a doctor or other professional when the patient was being discharged, and whether anyone discussed with the patient any other medications that he or she was using before being admitted to the hospital.

In each country surveyed except Germany, 7 to 10 percent of patients reported developing an infection while in the hospital (Table 2). Only 3 percent of German hospital patients developed an infection. Half of German respondents said, however, that they had not received a follow-up appointment, compared with one of five (19%) patients in the U.K. and one of four (27%) in the U.S. Among respondents who had been taking a medication before hospitalization and were given a new prescription when leaving the hospital, 14 percent in Germany said no one discussed with them the other medications they were taking before they were hospitalized. The rate was more than twice as high in the U.S. (33%).

In summary, the U.S. ranked higher than the other countries on measures of effectiveness, although performance varied greatly from measure to measure. The U.S. was strongest on preventive care and chronic care management, and weakest on patients

following through on physician recommendations on filling prescriptions or obtaining follow-on care because of costs.

Patient-Centeredness

The IOM defines patient-centeredness as “providing care that is respectful of and responsive to individual patient preferences, needs, and values and ensuring that patient values guide all clinical decisions.” The 2004 and 2005 surveys explored issues related to provider–patient communication, choice and continuity, patient engagement, and responsiveness to patient preferences.

Communication: Measures of communication asked whether patients had left their doctor’s office without having important questions answered and whether their physicians had not listened carefully to their health concerns. Patients who had been hospitalized were asked whether risks had been explained to them in an understandable way and whether they had received clear instructions about what to watch for or when to seek further care. U.S. respondents fared quite poorly on the first two measures and very well on the last two.

While only 15 percent of respondents in the U.K. reported leaving the doctor’s office without having all of their important questions answered, nearly one of four (24%) U.S. respondents had this problem. Fifteen percent of U.S. respondents also said that their doctor sometimes, rarely, or never listened carefully to their health concerns. On the other hand, only one of 10 (11%) U.S. respondents who had been hospitalized left the hospital without receiving clear instructions about symptoms to watch for and when to seek further care, compared with one of four (26%) patients in the U.K.

Choice and Continuity: Americans tended to fare worse than patients in other countries on measures of choice and continuity. Only one-half of U.S. respondents had been with the same doctor for five years or more, compared with more than three-quarters (78%) of respondents in Germany. The U.S. ranked in the middle in terms of satisfaction with the choice of doctor—78 percent of U.S. patients were somewhat or very satisfied, compared with 70 percent of Canadian patients and 84 percent of New Zealand patients.

Patient Engagement: The surveys measured patient engagement by asking respondents whether their regular doctor sometimes, rarely, or never tells them about their options for care and asks their opinions; makes clear the specific goals of treatment; or gives clear instructions about symptoms to watch for and when to seek treatment. A

fourth measure asked respondents' who had been hospitalized whether their doctors or nurses involved them as much as they would have liked in deciding about care, treatment, or tests. The U.S. ranked best in terms of this last measure.

Yet, overall, involvement in decision-making remains a problem for U.S. patients. As shown in Table 3, the U.S. ranked or tied for last on three of the four measures of patient engagement. Three-eighths (in New Zealand, 37%) to one-half (in U.S. and U.K., 50%) of sicker adults reported that their regular doctor sometimes, rarely, or never tells them about care options or asks for their opinions. Sixteen percent (in New Zealand) to 27 percent (in U.S. and U.K.) of sicker adults reported that their regular doctor does not make clear the specific goals for treatment. Nearly three of 10 (28%) U.S. adults reported that their doctor does not give clear instructions about symptoms to watch for and when to seek further care or treatment.

Responsiveness to Patient Preference: Measures of physicians' responsiveness to patients included percent of patients: reporting that their physician sometimes, rarely, or never spends enough time with them; who are able to e-mail their doctor; and who have access to their own medical records. U.S. respondents scored last on the first measure, with 25 percent reporting that their doctor did not spend enough time with them. Among respondents with internet access who wanted to e-mail their doctors, U.S. patients fared poorly as well. Fifty-seven percent were unable to e-mail their doctors, compared with only 37 percent in Australia. Also, three of four Americans wanted but did not have access to their medical records.

In the summary rankings across all the measures of patient-centeredness, Germany ranked first and the U.S. ranked last.

Timeliness

The IOM defines timely care as “reducing waits and sometimes harmful delays for both those who receive and those who give care.” Measures of timeliness included in the 2005 survey asked sicker patients about days waiting for appointments with a regular physician, difficulty receiving care on nights and weekends, waiting times for emergency care, waiting times for seeing specialists when needed, and waiting times for admission for elective or non-emergency surgery.

Different national patterns surface for different measures of timeliness, depending on the particular health care service. The U.S. and Germany had relatively short waiting times for seeing a specialist or obtaining elective, non-emergency surgery (Table 4).

Specialist and elective surgery waiting times were longest in the U.K., and long waits were reported in Australia, Canada, and New Zealand as well.

The U.S. and Canada scored poorly on ability to get medical attention when needed. The U.S. and Australia ranked last on obtaining care on nights or weekends.

Overall, Germany ranks a solid first on timeliness scores by type of services. The U.K. and Canada ranked last.

Efficiency

The IOM defines efficient care as “avoiding waste, including waste of equipment, supplies, ideas, and energy.” From a microeconomic point of view, efficiency means producing a given service at the lowest possible cost. Other than asking about perceptions of waste or duplication, asking patients to report on efficiency in the health care system is difficult. As a result, the surveys included only a few measures of care coordination that, taken together, can be indicators of efficiency from the patients’ perspective. In the 2005 survey of sicker adults, adults were asked whether: they visited an emergency department for a condition that could have been treated by a regular doctor had one been available; their medical records or test results did not reach a physician’s office in time for an appointment; they were sent for duplicate tests by different health care professionals; or they were rehospitalized or went to the emergency department for complications during recovery.

As shown in Table 5, the U.S. had the highest percentage (26%) of sicker adults reporting that they visited an emergency department for a condition that could have been treated by a regular doctor, had one been available. Only 6 percent of German respondents reported this problem. U.S. patients also ranked last on percent of respondents whose medical records or test results did not reach the doctor’s office in time for their appointment in the previous two years, while Germany again ranked first. About one of five U.S. as well as German respondents (18% and 20%, respectively) had duplicate tests performed by different health care providers in the past two years, compared with 6 percent in the U.K. and 9 percent in New Zealand.

American respondents reported fewer instances of rehospitalizations or going to the emergency department for complications during recovery, although Germany performed slightly better (14% vs. 10%, respectively). In the summary ranking, Germany ranked first and the U.S. ranked last.

Equity

The IOM defines equity as “providing care that does not vary in quality because of personal characteristics such as gender, ethnicity, geographic location, and socioeconomic status.” We grouped adults by two income categories: those who reported their incomes as above the country median and those who reported their incomes as below the country median. In all six countries, adults reporting below-average incomes were more likely to report chronic health problems (not shown). Thus, reports from these lower-income adults provide particularly sensitive measures for how well each country performs in terms of meeting the needs of its most vulnerable population.

In Table 6, we compare patient reports on various measures of access to care for adults reporting their incomes as below average and those reporting their incomes as above average. The table ranks responses within each income group and displays percentage-point differences within countries for the two income groups. We used survey measures expected to be sensitive to financial barriers to care, including not getting needed or recommended care, including dental care, due to costs and difficulty getting care when needed.

The U.S. had the greatest percentage-point disparities by income for each measure and, as a result, ranked a clear last on all measures of equity. Moreover, Americans with below-average incomes were much more likely than their counterparts in other countries to report not visiting a physician when sick, not getting a recommended test, treatment or follow-up care, not filling a prescription, or not seeing a dentist when needed due to costs. On all of these indicators, more than two-fifths of lower-income adults in the U.S. said they went without needed care due to costs in the past year. Americans with below-average incomes also reported receiving lower-quality care and less efficient care.

In addition, Americans with below-average incomes were significantly more likely than their counterparts in other countries to report difficulty getting care in the evenings, on weekends, or on holidays. Even among the higher-income population, U.S. respondents often were more likely than their counterparts in other countries to report difficulty obtaining needed care due to costs.

The U.K. scored highest on equity, with only small differences between lower- and higher-income adults on most measures. Differences by income in Australia, Canada, and New Zealand most often emerged for services covered least well in universal national insurance programs, namely prescription drugs and dental care.

The U.S. is the only country surveyed without a universal health insurance system. On all measures included in Table 6, uninsured adults were more likely than insured adults to report difficulties getting needed care or going without care due to costs. However, disparate experiences by income persist even after taking insurance status into account. Compared with insured Americans with above-average incomes, insured Americans with below-average incomes were more likely to report going without care due to costs and difficulties seeing a specialist when needed. Compared with their counterparts in the five other countries, low-income Americans were significantly more likely to have access problems related to cost, even after controlling for health status and insurance.

DISCUSSION

This examination provides evidence of deficiencies in terms of the quality of care in the U.S. health system, as reflected in the patients' mirror. Although the U.S. spends more on health care than any other country and has the highest rate of specialist physicians per capita, survey findings indicate that from the patients' perspective the quality of American health care is less than optimal. The nation's substantial investment in health care is not yielding returns in terms of public satisfaction with the health care system.

Based on these patients' views, the U.S. rarely outperforms the other nations included; on most measures of the quality of care, it ranked last or second-to-last. Among the six countries, the U.S. performed particularly poorly on measures of equity and meeting the health care needs of its vulnerable populations. The U.S. also ranked last on patient perceptions of safety, patient-centeredness, and efficiency. The U.S. ranked first only on measures of the effectiveness of care. In terms of timeliness, the U.S. ranked third among the six countries; Germany and New Zealand outperformed the U.S. in terms of providing prompt access to care.

There are, of course, limits to reliance on patient perspectives to assess quality of care. Patient surveys are perhaps most useful when assessing timeliness and physician–patient communication. Unlike medical records or administrative data, patient surveys typically contain few direct measures of effectiveness or efficiency since patients are not usually in positions to report on these dimensions of care. Yet, reports from the World Health Organization (WHO) that compare health care system performance using measures such as life expectancy, infant mortality, or preventable years of life lost as well as health expenditures also suggest that the U.S. achieves the least for its population among these five countries.¹⁷ A working group—supported by The Commonwealth Fund and with experts from each of the five countries surveyed in 2004, the Organization for Economic Cooperation and Development (OECD), and WHO—developed a set of

indicators that provide measures of clinical effectiveness.¹⁸ It found that none of the five countries included in the 2004 study—Australia, Canada, New Zealand, the U.K., and the U.S.—were systematically best or worst on measures of clinical effectiveness, confirming the mixed story reported by patients.

It is difficult to disentangle the effects of health insurance coverage from the quality of care experiences reported by U.S. patients. Comprehensiveness of insurance and stability of coverage are likely to play a role in patients' access to care and interactions with physicians. We found that insured Americans and higher-income Americans were more likely than their counterparts in other countries to report problems such as not getting recommended tests, treatments, or prescription drugs. This might be a reflection of the lack of comprehensive health insurance coverage and the high out-of-pocket costs for care in the U.S., even among the insured and those with above-average incomes. Fragmented insurance coverage and insurance instability undermine efforts in the U.S. to improve care coordination, including the sharing of information among providers.

Like those used in the WHO report, the measures, methods, and data used in this analysis are far from perfect. Different measures, moreover, are not weighted based on independent evidence of what patients value most highly.

One definition of “quality” care is health services that meet or exceed consumer expectations. Even if the expectations of U.S. patients were higher than patients in other countries, the U.S. health care system should be held to the standard of meeting its consumers' needs. Thus, while patient perspectives are only one lens from which to view health systems, the overall conclusion remains: the U.S. health care system is not the “fairest of them all,” at least from the viewpoint of those who use it to stay healthy, get better, or manage their chronic illnesses or who are vulnerable because of low income and poor health.

Why does the American public consistently give low ratings to our health care system? What can be done to improve this situation? Americans report that they face a number of barriers in getting high-quality care. Inadequacies of insurance coverage certainly contribute to these problems and to the inequities between insured and uninsured patients and between high-income and low-income patients reported here. The U.S. is the only country among the six—indeed, among all major industrialized countries—not to have a universal system of health coverage. In 2004, the number of uninsured Americans rose to 45.8 million, a 6 million increase over the previous two

years.¹⁹ Patients in the U.S. also pay a much higher percentage of health care expenses out of pocket than do patients in the other countries.²⁰

Improving on patient-reported dimensions of quality in the U.S. will require a sustained effort to improve coordination of care and promote the adoption of systems that support better transfer of information across multiple providers of care and assist clinicians in providing safe and effective care. The 2003 Survey of Hospital Executives found that, if given new funding to invest in a one-time capital improvement to improve quality of patient care in one area of the hospital, 62 percent of hospital executives in the U.S. would put it toward electronic medical records or information technology.²¹ Thirty-five percent of Australian hospital executives, 47 percent of Canadian hospital executives, 46 percent of New Zealand hospital executives, and 38 percent of U.K. hospital executives would do the same.²²

Other countries' experiences suggest models for the U.S. to explore in seeking to improve its health system performance. The U.K. ranked high on measures of equity and patient safety. New Zealand ranked high on measures of patient-centered care and efficiency. Germany ranked high on efficiency and timeliness. Rather than focus solely on best practices within its borders, the U.S. would benefit from analysis of promising innovations in other countries and greater investment in cross-national research.

In addition to looking at models of care from other countries, we need to find better ways to diffuse models that have been shown to be effective locally, or within the context of demonstration projects. For example, there is evidence that an advanced access approach to scheduling office visits can enable patients to make appointments—even walk-in or same-day appointments—that match their needs.²³ But this practice has not been widely implemented. Wennberg and colleagues have developed a shared decision-making process that has been proven to raise patients' levels of satisfaction with the communication process, which the surveys identify as a major source of problems.²⁴ In this case, the benefits apply to many dimensions of quality, including patient-centeredness, effectiveness, and safety. Yet, such approaches and tools are not widely used by physicians and their patients, pointing to the need for more effective diffusion strategies.

These results indicate a consistent relationship between how a country performs in terms of equity and how patients then rate performance on other dimensions of quality: the lower the performance score for equity, the lower the performance on other measures. This suggests that, when a country fails to meet the needs of the most vulnerable, it will

be judged most harshly by its citizens. Rather than disregarding its performance on equity as a separate and lesser concern, the U.S. should devote far greater attention to seeing that the health system works well for all Americans. These findings raise fundamental questions about the current trend in the U.S. to increase patients' out-of-pocket costs, and about the lack of action on the growing numbers of uninsured and underinsured. The U.S. needs to make a major commitment to improving health insurance coverage and quality of care. If it fails to act, not only will the U.S. standing among the world's health systems continue to erode, but there will be a predictable rise in public dissatisfaction and significant economic and human costs.

Table 1. Patient Safety Measures: Frequency and Country Rankings, Sicker Adults 2005**

	YEAR	AUS	CAN	GER	NZ	UK	US
Overall Ranking		4	5	2	3	1	6
Given the wrong medication or wrong dose by a doctor, nurse, hospital, or pharmacist in past 2 years	2005	10% (3.5)	10% (3.5)	10% (3.5)	9%* (1)	10% (3.5)	13% (6)
Believed a medical mistake was made in your treatment or care in past 2 years	2005	13 (2.5)	15 (5.5)	13 (2.5)	14 (4)	12* (1)	15 (5.5)
Either been given incorrect results for a diagnostic or lab test or experienced delays in being notified about abnormal test results in past 2 years (base: had a lab test ordered in past 2 years)	2005	14 (3.5)	18 (5)	9* (1)	14 (3.5)	11 (2)	23 (6)

Note: Country ranking for each item indicated in parentheses.

* Best country is significantly different from worst country at $p \leq 0.05$.

** Average rankings are assigned to tied observations; "1" equals highest positive score.

Table 2. Effectiveness Measures: Frequency and Country Rankings, 2004 and Sicker Adults 2005**

	YEAR	AUS	CAN	GER	NZ	UK	US
Overall Ranking		4	2	3	6	5	1
<i>PREVENTION</i>		3	5		2	4	1
Women ages 25–64 who had Pap test in past 2 years	2004	68% (4)	70% (2)	--	69% (3)	58% (5)	85% (1)
Women ages 50–64 who had mammogram in past 2 years	2004	71 (3.5)	71 (3.5)	--	77 (2)	63 (5)	84 (1)
Adults age 65 and older who had a flu shot in past year	2004	77* (1)	66 (5)	--	67 (4)	74 (2)	72 (3)
Receive reminders for preventive care	2004	37 (5)	38 (4)	--	44 (3)	49 (2)	50* (1)
<i>CHRONIC CARE</i>		4.5	2	3	6	4.5	1
Chronically ill not receiving self-care plan***	2005	49% (4)	35%* (1)	63% (6)	43% (3)	53% (5)	41% (2)
Diabetics receiving all four recommended services†	2005	41 (4)	38 (6)	55 (3)	40 (5)	58* (1)	56 (2)
Hypertensive patients receiving blood pressure and cholesterol check	2005	78 (4)	85 (2.5)	91* (1)	77 (5)	72 (6)	85 (2.5)
<i>PRIMARY CARE</i>		3	1	4	5	6	2
Doctor sometimes, rarely, or never reviewed all medications, including those prescribed by other doctors (base: taking prescriptions regularly)	2005	46% (5.5)	39% (2)	38%* (1)	46% (5.5)	44% (4)	40% (3)
Doctor sometimes, rarely, or never explained the side effect of medications (base: taking prescriptions regularly)	2005	37 (2)	41 (3)	50 (6)	33* (1)	48 (5)	47 (4)
Did not receive advice from doctor on diet and exercise	2005	41 (3)	40 (2)	54 (5.5)	47 (4)	54 (5.5)	35* (1)
Doctor did not ask if emotional issues were affecting health	2004	67 (3)	62* (1)	--	71 (4)	72 (5)	63 (2)
Did not fill a prescription; skipped recommended medical test, treatment, or follow-up; or had a medical problem but did not visit doctor or clinic in the past 2 years, due to cost	2005	34 (4)	26 (2)	28 (3)	38 (5)	13* (1)	51 (6)
<i>HOSPITAL CARE AND COORDINATION</i>		2	4	1	6	3	5
Hospitalized patients reporting infection in hospital	2005	8% (4)	7% (2.5)	3%* (1)	10% (5.5)	10% (5.5)	7% (2.5)
Hospital did not make arrangements for follow-up visits with a doctor or other health care professional when leaving the hospital	2005	23 (2.5)	30 (5)	50 (6)	23 (2.5)	19* (1)	27 (4)
No one discussed other medications you were using before you were hospitalized (base: taking prescription before hospitalization and given a new prescription when leaving the hospital)	2005	23 (2)	28 (4)	14* (1)	31 (5)	27 (3)	33 (6)

Note: Country ranking for each item indicated in parentheses.

* Best country is significantly different from worst country at $p \leq 0.05$.

** Average rankings are assigned to tied observations; “1” equals highest positive score.

*** Chronic conditions include diabetes, high blood pressure, or high cholesterol

† Recommended services include hemoglobin A1C checked in past six months and feet examined, eye exam, and cholesterol checked in past year

Table 3. Patient-Centeredness Measures: Frequency and Country Rankings, 2004 and Sicker Adults 2005

	YEAR	AUS	CAN	GER	NZ	UK	US
Overall Ranking		3	5	1	2	4	6
<i>COMMUNICATION</i>		5	6	2	1	3	4
Left a doctor's appointment without getting important questions answered in the past 2 years	2005	20% (4)	21% (5)	17% (2.5)	17% (2.5)	15%* (1)	24% (6)
Doctor sometimes, rarely, or never listens carefully to patient's health concerns	2004	9 (2)	12 (4)	--	7* (1)	11 (3)	15 (5)
Before receiving a treatment or procedure while hospitalized, risks were not explained in an understandable way (among those who had been hospitalized)	2005	18 (5)	21 (6)	12* (1)	17 (4)	16 (3)	14 (2)
Did not receive clear instructions about symptoms to watch for and when to seek further care when leaving the hospital (among those who had been hospitalized)	2005	18 (4)	17 (3)	23 (5)	14 (2)	26 (6)	11* (1)
<i>CHOICE AND CONTINUITY</i>		4	5	1	3	2	6
With same doctor 5 years or more	2005	61% (4.5)	65% (3)	78%* (1)	61% (4.5)	69% (2)	50% (6)
Somewhat or very satisfied with choice of doctor	2004	80 (2.5)	70 (5)	--	84* (1)	80 (2.5)	78 (4)
<i>PATIENT ENGAGEMENT</i>		2.5	4	2.5	1	5	6
Regular doctor sometimes, rarely, or never tells you about care, treatment choices and asks opinions	2005	46% (4)	40% (2)	42% (3)	37%* (1)	50% (5.5)	50% (5.5)
Regular doctor sometimes, rarely, or never makes clear the specific goals for care or treatment	2005	21 (2)	22 (3.5)	22 (3.5)	16* (1)	27 (5.5)	27 (5.5)
Regular doctor sometimes, rarely, or never gives clear instructions about symptoms, when to seek further care	2005	19 (2)	24 (4)	21 (3)	16* (1)	27 (5)	28 (6)
Doctors or nurses did not involve patient as much as he/she wanted to be in deciding about care, treatment, or tests (among those who had been hospitalized)	2005	22 (4.5)	27 (6)	21 (3)	19 (2)	22 (4.5)	16* (1)
<i>RESPONSIVENESS TO PATIENT PREFERENCE</i>		1	4	2	3	5	6
Doctor sometimes, rarely, or never spends enough time with patient	2004	14% (2)	17% (3.5)	--	12%* (1)	17% (3.5)	25% (5)
Hospital staff sometimes, rarely, or never did everything they could to help control pain (base: those who had been hospitalized and experienced pain)	2005	17* (1)	19 (3)	18 (2)	21 (4.5)	21 (4.5)	26 (6)
Hospital staff did not do everything they could to control patient's pain in ER	2004	30 (2)	34 (4)	--	33 (3)	24* (1)	36 (5)
Not able to e-mail with MD and wants to (base: have access to internet)	2004	37* (1)	50 (2)	--	51 (3)	60 (5)	57 (4)
Does not have and wants access to own medical record	2004	67 (2)	73 (4)	--	64* (1)	59 (3)	75 (5)

Note: Country ranking for each item indicated in parentheses.

* Best country is significantly different from worst country at $p \leq 0.05$.

Table 4. Timeliness Measures: Frequency and Country Rankings, Sicker Adults 2005

	YEAR	AUS	CAN	GER	NZ	UK	US
Overall Ranking		4	6	1	2	5	3
Last time needed medical attention had to wait 6 or more days for an appointment	2005	10% (2)	36% (6)	13% (3)	3%* (1)	15% (4)	23% (5)
Somewhat or very difficult to get care on nights or weekends (base: sought care)	2005	59 (5)	54 (4)	25* (1)	28 (2)	39 (3)	61 (6)
Waiting time for emergency care was greater than 2 hours (base: used an emergency room in past 2 years)	2005	33 (5)	42 (6)	15* (1)	26 (2)	30 (4)	29 (3)
Waiting time to see a specialist was longer than 4 weeks	2005	46 (4)	57 (5)	22* (1)	40 (3)	60 (6)	23 (2)
Waiting time of 4 months or more for elective/ non-emergency surgery (base: those needing elective surgery in past year)	2005	19 (3)	33 (5)	6* (1)	20 (4)	41 (6)	8 (2)

Note: Country ranking for each item indicated in parentheses.

* Best country is significantly different from worst country at $p \leq 0.05$.

Table 5. Efficiency Measures: Frequency and Country Rankings, Sicker Adults 2005

	YEAR	AUS	CAN	GER	NZ	UK	US
Overall Ranking		4	5	1	2	3	6
Visited ED for a condition that could have been treated by a regular doctor, had he/she been available	2005	15% (4)	21% (5)	6%* (1)	9% (2)	12% (3)	26% (6)
Medical records/test results did not reach MD office in time for appointment, in past 2 years	2005	12 (2)	19 (5)	11* (1)	16 (3.5)	16 (3.5)	23 (6)
Sent for duplicate tests by different health care professionals, in past 2 years	2005	11 (4)	10 (3)	20 (6)	9 (2)	6* (1)	18 (5)
Hospitalized patients went to ER or re-hospitalized for complication after discharge	2005	20 (6)	16 (4)	10* (1)	15 (3)	17 (5)	14 (2)

Note: Country ranking for each item indicated in parentheses.

* Best country is significantly different from worst country at $p \leq 0.05$.

Table 6. Equity Measures: Frequency and Country Rankings, 2004 and Sicker Adults 2005**

	YEAR	Below-Average Income						Above-Average Income						Percentage-Point Difference Between Below-Average and Above-Average Income					
		AUS	CAN	GER	NZ	UK	US	AUS	CAN	GER	NZ	UK	US	AUS	CAN	GER	NZ	UK	US
Overall Ranking		4	5	2	3	1	6	6	3	1	4	2	5	2	4	5	3	1	6
Had medical problem but did not visit doctor due to cost in the past year	2005	18% (3)	10% (2)	20% (4)	32% (5)	5%* (1)	44% (6)	19% (5)	4% (2)	10% (3)	25% (6)	2%* (1)	17% (4)	-1 (1)	6 (3)	10 (5)	7 (4)	3 (2)	27 (6)
Did not get recommended test, treatment, or follow-up due to cost in the past year	2005	23 (4)	15 (2)	17 (3)	24 (5)	5* (1)	44 (6)	20 (6)	7 (2)	12 (3)	19 (4.5)	6* (1)	19 (4.5)	3 (2)	8 (5)	5 (3.5)	5 (3.5)	-1 (1)	25 (6)
Did not fill prescription or skipped doses due to cost in the past year	2005	22 (3.5)	26 (5)	15 (2)	22 (3.5)	9* (1)	51 (6)	19 (5)	10 (2)	11 (3)	16 (4)	9* (1)	25 (6)	3 (2)	16 (5)	4 (3)	6 (4)	0 (1)	26 (6)
Needed dental care but did not see dentist due to cost in past year	2004	43 (4)	39 (2)	--	41 (3)	24* (1)	52 (5)	29 (4)	19 (2)	--	34 (5)	17* (1)	25 (3)	14 (3)	20 (4)	--	7 (1.5)	7 (1.5)	27 (5)
Rated doctor fair/poor	2004	9* (1.5)	11 (3)	--	9* (1.5)	12 (4)	22 (5)	7 (2.5)	8 (4)	--	4* (1)	11 (5)	7 (2.5)	2 (2)	3 (3)	--	5 (4)	1 (1)	15 (5)
Unnecessary duplication of medical tests in past 2 years	2004	6 (2)	8 (4)	--	7 (3)	5* (1)	17 (5)	7 (3)	5 (2)	--	8 (4)	4* (1)	9 (5)	-1 (1.5)	3 (4)	--	-1 (1.5)	1 (3)	8 (5)
% waiting 2 hours or more in ER (base: those going to ER)	2005	38 (5)	45 (6)	15* (1)	26 (2)	29 (3)	32 (4)	35 (5)	45 (6)	14* (1)	28 (3)	30 (4)	27 (2)	3 (5)	0 (3)	1 (4)	-2 (1)	-1 (2)	5 (6)
Last time need medical attention had to wait 6 or more days for an appointment	2005	15 (3)	35 (6)	14 (2)	4* (1)	17 (4)	27 (5)	7 (2)	35 (6)	10 (3)	1* (1)	15 (5)	14 (4)	8 (5)	0 (1)	4 (4)	3 (3)	2 (2)	13 (6)
Somewhat or very difficult to get care in the evenings, on weekends, or holidays	2005	44 (4.5)	44 (4.5)	16* (1)	24 (2)	30 (3)	55 (6)	48 (5.5)	46 (4)	14* (1)	18 (2)	26 (3)	48 (5.5)	-4 (1)	-2 (2)	2 (3)	6 (5)	4 (4)	7 (6)

Note: Country ranking for each item indicated in parentheses.

* Best country is significantly different from worst country at $p \leq 0.05$. ** Average rankings are assigned to tied observations; "1" equals highest positive score.

NOTES

¹ K. Davis, C. Schoen, S. C. Schoenbaum, A. J. Audet, M. M. Doty, and K. Tenney, *Mirror, Mirror on the Wall: Looking at the Quality of American Health Care Through the Patient's Lens*, The Commonwealth Fund, January 2004.

² In each of the past eight years, The Commonwealth Fund has performed a survey in these five countries, and last year the Fund added Germany to the survey. In each year the ministers of health have met to review the findings.

³ The 2005 survey of “sicker” adults included those who rated their health as fair or poor or who in the past two years had a serious illness, been hospitalized for care other than a normal delivery, or had major surgery.

⁴ World Health Organization, *The World Health Report 2000, Health Systems: Improving Performance*, 2000). Available at <http://www.who.int/whr2001/2001/archives/2000/en/contents.htm>.

⁵ P. S. Hussey, G. F. Anderson, R. Osborn, C. Feek, V. McLaughlin, J. Millar, and A. Epstein, “How Does the Quality of Care Compare in Five Countries?” *Health Affairs* 23 (May/June 2004): 89–99.

⁶ National Committee for Quality Assurance, *The State of Health Care Quality 2005*, 2005.

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METHODOLOGY APPENDIX

Data come from two surveys, the Commonwealth Fund 2004 International Health Policy Survey, which explores primary care experiences among nationally representative samples of adults, and the 2005 International Health Policy Survey of Sicker Adults, which focuses on the experiences of adults with a high incidence of chronic disease and recent, intensive use of the medical care system.

The 2004 survey was conducted between March 29 and May 17 by telephone among a random representative sample of adults ages 18 and older in Australia, Canada, New Zealand, the United Kingdom, and the United States. Except for minor wording changes to reflect terminology differences, the same instrument was used in each country. The survey was conducted in English, with a French option in Canada and a Spanish option in the United States. The final sample included 1,400 in Australia, 1,410 in Canada, 1,400 in New Zealand, 3,061 in the United Kingdom, and 1,401 in the United States. Data are weighted in each country to adjust for variations between the sample demographics and known population parameters. The margin of sampling error is approximately plus or minus three percentage points for differences between countries and plus or minus two percentage points for country averages at the 95 percent confidence level.

The 2005 survey screened random samples of adults ages 18 and older in order to identify those who met at least one of four criteria: rated their health status as fair or poor; reported having a serious illness, injury, or disability that required intensive medical care in the previous two years; reported that in the past two years they had undergone major surgery; or reported that they had been hospitalized for something other than a normal delivery. The survey was conducted by telephone between March 17 and May 9 in Australia, Canada, New Zealand, the United Kingdom, and the United States and between May 9 and June 12 in Germany. The survey was conducted in German in Germany and in English in the five other countries, with the option of French in Canada and Spanish in the United States. The final sample included 702 in Australia, 751 in Canada, 704 in New Zealand, 1,503 in Germany, 1,770 in the United Kingdom, and 1,527 in the United States.

After the survey data were collected, items from each survey were grouped into one of the following six dimensions of the Institute of Medicine's (IOM) framework for quality: safety, effectiveness, patient-centeredness, timeliness, efficiency, and equity. Due

to the limitations of the patient surveys, some dimensions of quality were measured with a greater number of items, and some dimensions of quality were measured more robustly.

After grouping survey items under one of these six domains of quality, we ranked each country's score on individual items from highest to lowest (where 1 equals the highest score). Next, we calculated a summary ranking for each domain of quality by averaging the individual ranked scores within each country and ranking these averages from highest to lowest score. For ties in means, the tied observations were assigned the average of the ranks that would be assigned if there were no ties.

Our analysis also includes chi-square tests of significance for the highest and lowest comparisons. Text, figures, and tables indicate where differences are significant at the .05 level between the highest- and lowest-ranked countries. We also looked at other methodologies used to rank countries, including an index used by the United Nations Human Development Index and the Fraser Institute Index of Human Progress to rank countries' performances: $\text{Index}_{\text{Max}} = W = [(\text{country value} - \text{maximum value}) / (\text{minimum value} - \text{maximum value})] \times 100$. We found that the simple ranking method used in this report and the above method produced comparable results across these six countries and indicators.

