

## Lessons for Health Care Could Be Found Abroad

The U.S. health care system is among the best in the world. It has achieved a 5-year breast cancer survival rate that is at least a few percentage points higher than that in almost all other industrialized countries, the highest rate of screening for cervical cancer, better hypertension control, and a sharply reduced smoking rate. Patients rarely have to wait long for needed procedures and medicines. Physicians receive intensive training and keep current with continuous education. Hospitals are well-equipped and fully staffed to meet health needs. This country also spends more on health care than any other country in the world. But contrary to popular belief, the health care here isn't always the best. Many other industrialized countries provide health care that is just as good and sometimes better. For instance, 30-day acute myocardial infarction case-fatality rates are below 7% in Denmark, Iceland, and Switzerland, compared with almost 15% in the United States. Incidence of major amputations among diabetic patients in Finland, Australia, and Canada is less than 10 per 10 000 compared with 56 per 10 000 in the United States. And Australia, Canada, England, and New Zealand all have a better 5-year kidney transplantation survival rate than the United States.

No one country's health care system is necessarily better or worse across all measures of success, and research has shown that quality does not necessarily vary with financing mechanisms or with the amount spent on health care; this suggests that the United States and other industrialized countries could learn from one another. "There obviously are many opportunities for all of us to learn from each other in implementing health policies effectively. We are all facing the same kinds of challenges. We are dealing with them in different ways and that creates opportunities for learning," said Mark

McClellan, MD, the former administrator for the U.S. Centers for Medicare & Medicaid Services, at an international health policy symposium in Washington, DC, late last year.

The opportunities for learning are only just being realized. In recent years, researchers have begun studying the different ways in which various industrialized countries deliver medicine. Meanwhile, efforts are being made to formalize data collection and reporting across many countries to allow for meaningful comparisons.

The foremost effort in international health care benchmarking, the Health Care Quality Indicator (HCQI) Project, was launched in 2001 and involves 23 participating countries, including the United Kingdom, the United States, Australia, Canada, Denmark, France, Germany, Japan, Mexico, and the Netherlands. The Organisation for Economic Co-operation and Development (OECD) launched this collaboration to measure and compare quality across countries in a meaningful way. So far, the project's most noteworthy success is achieving consensus in data availability, definitions, collection strategies, and measurement priorities. In the coming years, the project will track a wide range of indicators for quality medicine in participating countries. Indicators already being measured include cancer screening rates and survival; mortality rates for asthma, heart attack, and stroke; waiting times for hip fracture surgery; and diabetes control and adverse outcome rates. More measurements are planned in cardiac care, diabetes, mental health, primary care, prevention and health promotion, and patient safety.

This project is significant because it collects and compiles data in a way that allows countries to track their own quality of care or performance relative to other countries

with comparable spending on health. Countries with problem areas can learn from other countries that excel in those areas. According to Soeren Mattke, MD, MPH, DSc, a scientist at RAND Corporation and former head of the HCQI Project, "The international indicators that people used up to this point, like life expectancy and infant mortality, were more indicators of broader societal achievement like nutrition, environment, and wealth than indicators of the quality of medical care. Once this OECD project is ready, you will actually be able to compare what health care produces across countries and which industrialized countries get a better deal for health care resources."

The OECD project may engender better understanding of why differences in health care exist and what can be done to reduce them. For example, the growing body of knowledge on international differences in health care delivery may help explain why the United States has such a high 5-year cancer survival rate but lags in its 5-year kidney transplantation survival rate. Or it might reveal different outcomes from focusing health care dollars on preventive medicine, chronic care, or emergency medicine. Reforms in various countries that dictate caps on malpractice litigation or on pharmaceutical spending may affect outcomes in meaningful ways, too. Ultimately, this emerging international research could provide countries a new perspective on health care delivery.

### IMPROVING QUALITY ELECTRONICALLY

Research on international differences in health care delivery has already uncovered differences that might impact quality. Researchers at the Commonwealth Fund have found that industrialized countries have widely different levels of acceptance of health information technol-

ogy. According to a 2006 survey by the Commonwealth Fund, electronic medical record (EMR) use by U.S. primary care physicians is just 28%, compared with 79% in Australia, 89% in the United Kingdom, 92% in New Zealand, and 98% in the Netherlands (1). Use is even higher in Denmark, whose highly evolved national system has nearly 100% participation by primary care providers. Launched in 1994, the Danish system handles more than 90% of the country's primary sector clinical communications, according to Ib Johansen, deputy manager at the Danish Centre for Health Telematics, the organization that coordinates the Danish healthcare network. Danish physicians use the system to access medication databases and issue electronic prescriptions; order laboratory tests and track results; send referrals to specialists, physical therapists, or any hospital in the country; and chart consultation notes and hospital discharge summaries. Patients can access their health records and check not only their personal health information but also who else has viewed their records.

Although Danish physicians themselves paid to install the EMR system in their practices, the Danish government funded the Centre for Health Telematics with €2 million (approximately \$2.6 million) annually to accomplish widespread use of EMRs. The Center's purpose is to develop and disseminate medical communication standards and software and to offer technical advice free of charge to primary care physicians and their software suppliers. Peer pressure and the strong support of medical societies also spurred a high rate of participation, according to Johansen. Now that the system is in place, its demonstrated benefits are a selling point. These include better communication and efficiency and even higher revenues—Danish physicians now receive reimbursement for patient consults via e-mail.

Of note, EMRs caught on in Denmark even though the Danish

government provided a relatively small amount of funding, demonstrating that vast governmental funding is not necessary for widespread EMR implementation. This might be good news for the United States government, which has publicly supported the idea of EMRs but provided scarce funding. However, in many countries, health insurers have paid most of the costs of EMR adoption (2).

Other countries have projected far greater costs for EMR implementation. In the most ambitious health information technology effort yet, the National Health Service of the United Kingdom is providing all funding for a system that includes creating an electronic care record for all patients and connecting 30 000 general practitioners to 300 hospitals. The undertaking is estimated to cost at least £10 billion (about \$13 billion) but may cost as much 2 to 3 times more.

In the United States, the overall costs of an EMR system are expected to be enormous, whether it is paid for by the individual physicians, government, or health insurers. Health systems that have made the transition to EMRs, most notably the Department of Veterans Affairs and Kaiser Permanente, have reported overall success; however, the size of the U.S. population, the diverse quality of U.S. health care financing, and the need to address privacy concerns raised by the prospect of a national database of medical records make the implementation of a nationwide EMR system challenging.

Although no research has demonstrated clearly documented savings from EMR adoption, the investment might lead to lower-cost health care. One U.S. study estimated that effective EMR implementation and networking could save the country more than \$81 billion annually by improving efficiency and safety, and information technology-enabled prevention and management of chronic disease could double those savings while increasing health and providing

other social benefits (3). Whether such savings would ever be realized is a point of some controversy. Last year, *Annals of Internal Medicine* published a systematic review of the impact of health information technology that found limited and inconclusive evidence of any cost savings (4). However, it did find that health information technology improved quality by increasing adherence to guidelines, enhancing disease surveillance, and decreasing medication errors. Most experts agree that effective EMR implementation is likely to improve at least some aspects of health care. In Denmark, early evidence for cost savings has accompanied early evidence for improved outcomes, according to Johansen. Increased use of lower-cost medications has lowered pharmaceutical costs in recent years, and higher rates of cervical cancer screening have contributed to a halving of deaths from the disease between 1988 and 2004 in counties using an information technology-supported cervical smear program.

The OECD's international benchmarking project will provide indicators for such countries as Denmark of how EMR systems affect health care quality over the coming years. It will also help track the impact of other major changes to health care delivery, such as efforts by some countries to act on research indicating that improved care comes from placing more value on primary care delivery.

## VALUING PRIMARY CARE

Some industrialized countries have historically valued primary care more than the United States. According to a 2005 Commonwealth Fund patient survey, patients in Australia, Canada, Germany, or New Zealand are more likely than those in the United States to have 1 physician who provides most of their care and are more likely to stay with their doctor for more than 5 years (5). Primary care physicians in the Netherlands, New Zealand, and the United

Kingdom are more likely than their U.S. counterparts to have arrangements for patients to see a physician or nurse after hours without going to an emergency department, according to a 2006 Commonwealth Fund survey (1).

Interrupted primary care relationships may have a significant impact on health care quality. Certainly, they reduce the ability of the U.S. physician to manage the long-term health of their patients. "If care can be centralized so that more care is provided in primary care, a good outcome is more likely. All the evidence shows that when patients see lots of physicians, care is poorly coordinated and outcomes are worse," said Barbara Starfield, MD, MPH, a professor of health policy and management at Johns Hopkins University. Her research has demonstrated that more primary care physicians, not more specialists, lead to better overall health care.

However, the current system in the United States offers little incentive for primary care physicians to provide the kind of care coordination that is known to improve health care quality. Physicians are reimbursed for event-based treatment, not for how well they prevent or minimize the complications of diseases by tracking tests and procedures, reviewing medications, or communicating with the patient and various caregivers.

One way to spur primary care physicians to provide more coordinated and comprehensive care might be to provide more equitable salaries relative to specialists; Starfield notes that in many countries other than the United States, there is less disparity between primary care and specialty care physician salaries. Some countries are trying financial incentives for primary care, although there is no evidence that paying for performance improves health. In a recent survey, only 30% of U.S. physicians reported receiving or being eligible to receive financial incentives for achieving clinical targets, enhancing preventive care, managing chronic disease, or

other quality improvement activities—the lowest rate in a study that included 6 other countries (1). Comparatively, the United Kingdom had the most extensive pay-for-performance system, with 95% of primary care physicians being eligible for financial incentives for improved performance.

The U.K. incentive system came as part of a larger effort to improve U.K. health care. British citizens had long believed, based on life expectancy data, that they were receiving quality health care for relatively less money than their European counterparts. In the 1990s, however, data began showing lagging cancer survival rates and significantly higher mortality rates from heart disease relative to comparable countries. These and other health outcome indicators suggested that the U.K. health care system was actually underfunded.

Today, primary care practice in the United Kingdom is evaluated on the basis of 146 evidence-based quality indicators of clinical care for 10 chronic diseases, practice organization, and patient experience; the majority pertain to clinical care, including heart disease, asthma, diabetes, and stroke treatment. Practices accrue points by achieving certain levels on each indicator and receive payments based on their score. In 2004, the first year of the program, participating practices achieved a median score of 1003 points out of 1050 available points, with 2.8% of practices achieving a perfect score (6). This was a far higher achievement than the government expected, according to Martin Marshall, CBE, MD, deputy chief medical officer in the U.K. Department for Health.

Up to 20% of primary practice income in the United Kingdom now comes from incentives paid from this program. As a result, primary care physicians have received a significant boost in their annual incomes—a 30% increase in fiscal year 2004–2005—and now earn more than U.K. specialists. Primary care physicians also report being happier

practicing medicine since the incentives started. Whether patients are experiencing better health care and clinical outcomes is not clear yet, although according to Marshall, the data suggest improved outcomes in diabetes and heart disease.

The incentive program has contributed to changes in practice organization that may improve efficiency without hindering quality. Many practices merged in recent years because large practices can more easily achieve high scores than small practices. Practices now employ more staff to handle paperwork and perform routine medical tasks. For example, nurse practitioners now provide most routine chronic disease care and most of the care for self-limiting acute conditions, whereas nurse assistants now perform many tasks once performed by nurses, such as taking blood pressure and collecting blood samples.

However, the incentive system is also having some undesired consequences. For example, the incentives encourage primary care practices to provide patients with access to care within 48 hours. Changes made by practices to achieve this make it difficult for some patients to book appointments in advance. Trouble has also arisen with exception reporting, a clause that allows practices to exclude data from patients with particularly difficult problems from the reporting process. A few practices have used exception reporting to exclude up to one third of their patients for some major indicators, Marshall reported.

Incentives based on meeting evidenced-based indicators do not affect health care in straightforward ways. Just as many countries will be alert to the impact of EMRs on health care quality measures in the coming years, many will also be paying attention to how incentive programs like the one in the United Kingdom affect health care quality. Over time, the findings of the OECD's HCQI Project might help reveal the success or failure of these efforts and help other countries

decide whether to adopt similar approaches to health care delivery.

### LEARNING FROM INTERNATIONAL BENCHMARKING

The lessons that emerge from studying international health care benchmarks are likely to be valuable in guiding health care reform across the range of participating countries. Depending on what is learned, the lessons may sometimes apply to health care in developing countries as well as in industrialized countries. “International benchmarking is intriguing,” said Arnold Epstein, MD, a professor of health policy and management at Harvard University who chaired the OECD HCQI International Expert Panel. “The goal is to

have translational learning: to identify who is doing really well, identify the ways they got there, and see if those ways are applicable across a range of other countries.”

—Jennifer Fisher Wilson  
Science Reporter, *Annals of Internal Medicine*

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