

The quality conundrum: A global perspective on healthcare quality*

PricewaterhouseCoopers' Health Research Institute



*connectedthinking

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co.nun.drums (k-nun'drums)

n. A paradoxical, insoluble, or difficult problem; a dilemma.

Executive summary

Quality healthcare is undeniably important to sustainability. Yet, many health industry leaders would go so far to say that it is in a state of crisis. What makes it a conundrum? In short, it is a universal but complex issue with no easy solutions.

In our global report *HealthCast 2020: Creating a Sustainable Future*, PricewaterhouseCoopers identified quality and safety standards as one of seven features needed for sustainability. In fact, transparency of quality and pricing information was selected as the most important aspect of a sustainable system by health leaders in Europe and Canada, according to the *HealthCast 2020* survey.¹

While quality improvement is a global dilemma, new approaches are finding success across the world. PricewaterhouseCoopers' Health Research Institute examined quality improvement efforts in more than 10 countries, interviewing more than 50 industry leaders. Out of this research emerged a common set of issues for health industry stakeholders to review in their quality initiatives:

Responsibilities and accountability

Patients, providers and purchasers all bear varying degrees of responsibility, but the lines of accountability and responsibility often blur. Some governments in Europe have taken a hybrid approach to influencing providers by mandating attention to quality while being non-prescriptive in the mechanisms.

Measurement

Responsibility and accountability depend on measuring the right things, and that hinges on the availability of accurate, reliable, and valid performance measures. Despite the critical importance of having valid information, development of standard quality measures remains a work in progress.

Cross-border assessment models

Cross-border care is no longer limited to a few wealthy individuals with specialised needs. This is prompting the need for quality assessment models that have some degree of standardisation, comparability, and results evaluation. In the absence of global health standards, many health systems are embracing models used by other industries.

Purchasing

Strategic purchasing adopts methodologies that improve quality and patient satisfaction through payment incentives. Where purchasing is executed at the level of local or regional government, pay-for-performance schemes are often applied selectively, giving rise to geographic variations and effectively encouraging improvement in some medical specialities while neglecting others.

Information technology

Personal health records have been accepted by the European Union as a standard to be achieved in all European countries regardless of their funding model or infrastructure. Most countries are seeking to achieve this goal in their own way. However, advanced information technology is not a panacea and can expose other problems.

Introduction

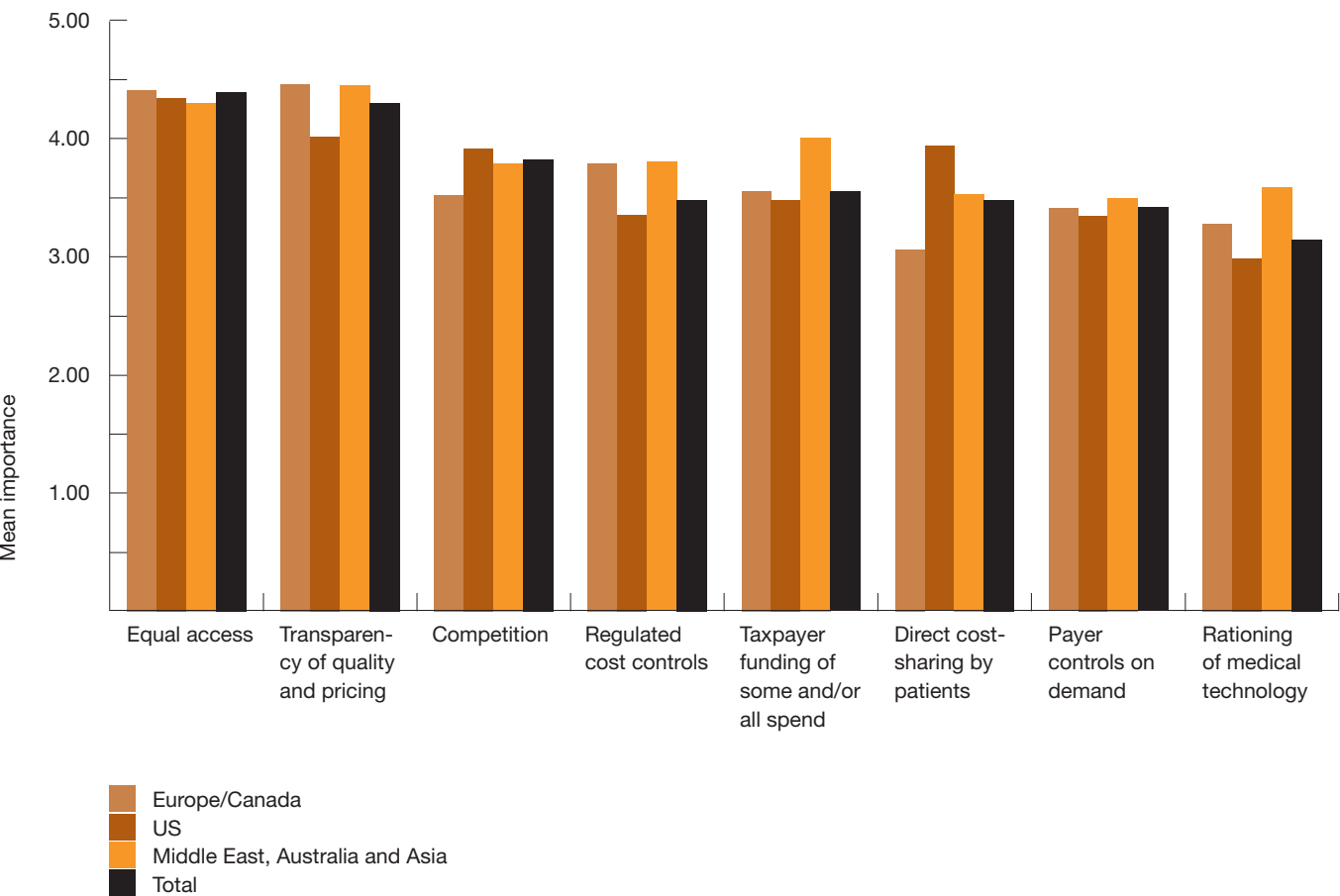
Quality healthcare is undeniably important to sustainability. Yet, many health industry leaders would go so far to say that it is in a state of crisis. What makes it a conundrum? In short, it is a universal but complex issue with no easy solutions.

In our global report *HealthCast 2020: Creating a Sustainable Future*, PricewaterhouseCoopers identified quality and safety standards as one of seven features needed for sustainability. In fact, transparency of quality and pricing information was selected as the most important aspect of a sustainable system by health leaders in Europe and Canada, according to the *HealthCast 2020* survey. (See Exhibit 1).²

Embedding quality into health services, treatments and processes presents a challenge and dilemma at multiple levels. First, quality is difficult to define. Each country's unique combination of cultural, political, economic, and historic factors shape its definition of quality. When the Commonwealth Fund International Working Group on Quality Indicators looked at how quality was defined in different countries, it found more than 1,000 potential indicators that could be measured across different health systems. The Commonwealth researchers compressed this data into 40 common quality indicators, but still found relatively little consistency in the way these health systems measure quality and performance.³

Secondly, addressing gaps in quality can be even more difficult. Solving such problems triggers a complex set of interactions among patients and health organisations – insurers, physicians, hospitals, and pharmaceutical and life science companies. Look at the concerns cited in another Commonwealth Fund survey of patients in Australia, Canada, New Zealand, the U.K., and the U.S. The survey highlighted problems such as access to a doctor when sick, delays in receiving lab test results, and physicians' failure to engage patients or promote health.⁴ Solving each of those quality issues requires addressing processes and incentives, and those cascade down into repercussions on purchasing, clinical care management, operations, and technology development and integration.

Exhibit 1: On a scale of 1 to 5, how would you rate these factors as important to a sustainable health system?



Common issues are emerging for addressing quality

Despite such difficult dilemmas, quality is being addressed through new approaches across the world. PricewaterhouseCoopers' Health Research Institute examined quality improvement efforts in more than 10 countries, interviewing more than 50 industry leaders. Out of this research emerged a common set of issues for health industry stakeholders to review in their quality initiatives:

- Responsibilities and accountability
- Measurement
- Cross-border assessment models
- Purchasing
- Information technology

Responsibilities and accountability

The question of who or what is responsible for quality is important, but it can also be divisive. Patients, providers and purchasers all bear varying degrees of responsibility, but the lines of accountability

and responsibility often blur. As quality standards emerge, the interdependencies of this responsibility become starkly apparent. For example, when tax-funded hospitals fail to deliver sufficient quality, the public seizes responsibility by putting pressure on governments to intervene.⁵

The 1990s saw a cultural shift away from professional self-monitoring and toward government-driven quality agendas. This was triggered in part by high-profile media scandals and reports in Australia, the United Kingdom, and United States that exposed medical error rates and unethical practices by individuals. A need for public reassurance led to an increase in centrally driven agendas: the government pressured providers to reform their practices and voters pressured the government to monitor quality. The Institute of Medicine's landmark report, "To Err is Human"⁶, highlighted the size and scope of medical errors in the U.S.

The report increased pressure on providers and created an important role for independent accreditation organisations rather than sole reliance on government regulation.⁷

When assessing responsibility and accountability, it's important to discuss not only who should do something about it, but who is most likely to succeed. On that aspect, the *HealthCast 2020* research casts an interesting light. Health executives in 27 countries were asked which stakeholder had been most successful in improving quality. In the U.S., patient advocacy groups rated first. In Europe and Canada, physicians ranked highest. In the Middle East, Australia and Asia, government was viewed as making the most progress. (See Exhibit 2)⁸

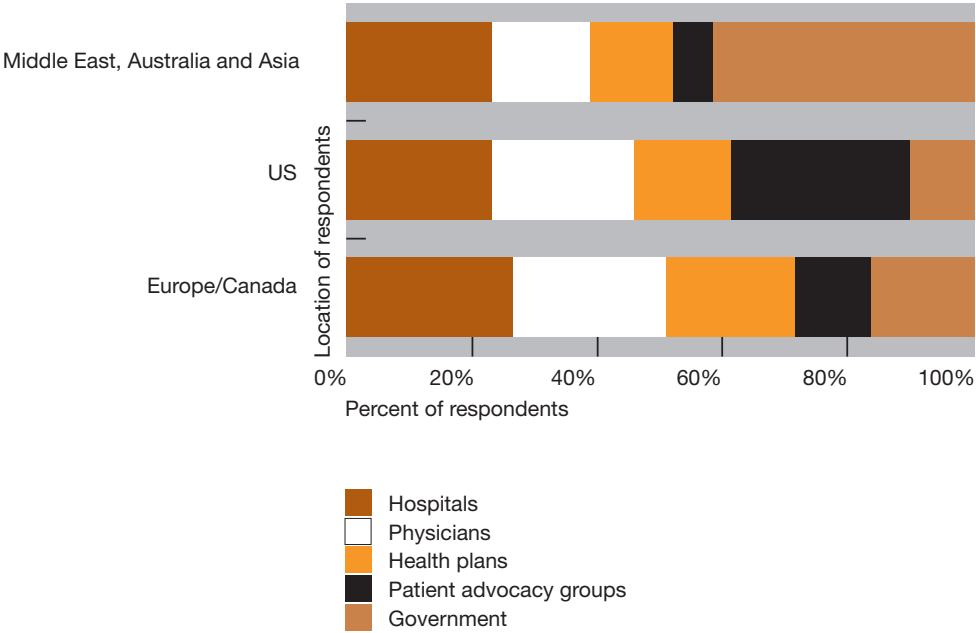
The role of governments

The varying success of governments must be considered across the spectrum of their roles as regulators,

providers and purchasers. In these different roles, governments both police and influence quality, and their success hinges on the effectiveness of both efforts. For example, some governments in Europe have taken a hybrid approach to influencing providers by mandating attention to quality while being non-prescriptive in the mechanisms. A good example of this is in Germany, where the government requires hospitals to have outcomes-based quality assurance systems, but doesn't strictly define these systems. In this way, government policy forces attention on a quality agenda, but allows managers and policy makers to consider local needs and interests in designing the most appropriate means.

In Italy, quality indicators are developed at a national level and implemented locally, based upon specific regional needs. Every hospital has a quality office and healthcare director responsible for quality. Similarly,

Exhibit 2: Who do you think has done the most to improve quality?



in Spain, each of 17 autonomous communities regulates quality standards independently. Each region designs independent mechanisms for healthcare quality regulation with some providing financial incentives linked to quality. One problem with a regional approach is that it creates obstacles to data sharing as there are no national definitions or aggregated data sets. In contrast to the devolved control of the Spanish and Italian healthcare systems, central regulation of the U.K.'s National Health Service (NHS) enables the Department of Health to issue quality reports across the entire service. In this way, the U.K. has national standards for quality, but ineffective policies and programmes may be magnified.

In The Netherlands, the Ministry of Health is driving the quality agenda with input from providers. The Sneller Beter (Better Faster) programme focuses on safety and “patient logistics” or communication and transfer processes between departments. Sneller Beter is comprised of three core activities: benchmarks for hospitals and primary healthcare, indicators for safer care and a quality, innovation and efficiency programme. The programme has

been successful in identifying and publicising innovative best practices such as improvement in artificial respiration for intensive care patients.

As the single largest purchaser of care, governments also can focus on key health priorities that drive quality. For example, the government of Australia has targeted chronic disease management, specifically osteoarthritis, rheumatoid arthritis and osteoporosis. Recently, the Better Arthritis Care budget initiative for 2005-2006 funded 11 quality improvement projects focussed on improved patient access to care.

Accreditation as a path to quality

Governments also help improve quality through accreditation processes. In contrast to licensing, which holds institutions or individuals to minimum standards, accreditation programmes are designed to encourage improvement through benchmarking best practices. Accreditation systems may be market-based, professionally self-regulated or government-managed.⁹ However, some accreditation systems managed by public bodies have been criticized for leaning towards licensing

activities, applying compulsory minimum standards rather than quality promoting initiatives. The fundamental concept of accreditation to promote quality improvement can run counter to the role of government as regulator.

Quality-based accreditation systems originated in the U.S., where accreditation is the realm of private agencies. The Joint Commission on Accreditation of Healthcare Organisations (JCAHO) accredits more than 15,000 hospitals and other healthcare organisations.¹⁰ JCAHO has deemed status, which means that accreditation doubles as licensing to receive Medicare reimbursement. (Medicare typically accounts for 40% of hospital revenues). In terms of private insurers, the National Committee for Quality Assurance (NCQA) accredits private health plans based on their effectiveness of quality improvement. The organisation covers more than 75% of health maintenance organisation members in the U.S.¹¹ Responding to criticisms that accreditation was a rubber stamp and a black box, JCAHO and NCQA have recently taken steps to make the process more transparent and to raise the bar by introducing new,

more difficult standards. For example, JCAHO's hospital inspections are now unscheduled and often unexpected.

Canada, Australia and many European countries have been slower to adopt such systems. France has a national accreditation system, taking a highly prescriptive approach. The system is managed by an independent body responsible for both designing and implementing the system and process in an effort to promote safety and quality. Similarly, the Dutch Care Institutions Act, introduced in 2001, required accreditation or certification of all hospital providers. A new system of voluntary accreditation for primary care providers was implemented in 2005 and is run by an independent body, the Dutch College of Family Physicians.

Professionals and self-monitoring

In terms of professionals, a careful balance between central government authority and professional self-regulation is important. For example, in Eastern Europe and Spain, groups of providers have initiated quality assessment and accreditation systems that subsequently failed because of lack of government support and universal application.

However, initiatives that have been too “top down” have been met with resistance from providers who may view these programmes as an additional administrative burden. In The Netherlands, “quality circles” of about 10 healthcare professionals review clinical practice guidelines in multidisciplinary groups. “Peer visits” from other healthcare professionals are also important in ensuring that clinical guidelines are implemented and improvements in quality are encouraged. The Norwegian Medical Association, a physicians’ professional trade association, started the Breakthrough Project in 1998, which is used at several hospitals in the U.S. and Europe. Physicians are chosen to participate in quality projects lasting six to eight months along specific themes such as intensive and perinatal care, using a strict framework.

The emerging voice of patients

Patients have an important responsibility in quality, but experts agree they need more information to make effective decisions. Experts say patients often lack an understanding of medical information and the resulting lack of confidence to make informed decisions about their own

health and healthcare. This recognition has spurred a trend towards “consumerism” in the U.S., whereby corporations provide incentives and information to their employees in order to encourage them to assume a greater role in managing their own care and making better healthcare decisions. PricewaterhouseCoopers’ research found that 80% of executives surveyed believe the most promising option for reducing corporate healthcare cost increases is to provide financial incentives for employees to live healthier lifestyles.¹² Increasingly, employers are taking an active role in encouraging their workforce to adopt a healthy lifestyle by offering incentives, information, or establishing innovative healthcare programmes.

Even without choosing their care based on quality, patients in many countries play an important role in monitoring healthcare quality through mandatory patient satisfaction surveys and complaints systems. In Italy, patients are able to register complaints at several levels: directly to the hospital through a ‘mandate office’, the local office of the ‘national health supervision’ or to a national organisation for patient compensation.

Measurement

Responsibility and accountability depend on measuring the right things, and that hinges on the availability of accurate, reliable, and valid performance measures. Despite the critical importance of having valid information, development of standard quality measures remains a work in progress. For example, selected system measures, like waiting times, infection rates, accidents and near accidents, and patient satisfaction are reported by all hospitals across Norway, but there are no nationally agreed-upon definitions for clinical quality. Clinical quality data are instead collected by groups of physicians within medical specialties. While professional collaboration on clinical quality studies has helped identify best practices, national standards for collecting clinical data are needed to enable better comparison across providers.

A large number of measures to assess healthcare quality are available or under development, and they are generally categorised as structure, process, or outcome measures. Details and selected examples are summarised in Table 1.

In measuring quality, international debate continues around the use of process versus outcomes data.¹³ While healthcare outcomes may be part of the patient's basic medical record, discrete process information has not historically been collected in many publicly funded

health systems. In contrast, the billing and payment structures in the U.S. have necessitated extensive process data collection. Yet, even in the U.S., access and use of process data is complicated by inconsistencies between medical and billing records, often making this information unusable in practical terms. Regardless, electronic information systems can make process and clinical outcome data more accessible.

In addition, discussion is evolving on how to use quality metrics in whole or in part. An emerging area of quality assessment is in “all-or-none” dimensions. For example, all-or-none measures might reflect the percent of diabetes patients receiving all of the appropriate care for management of their condition (e.g., HbA1c testing, lipid profiling, retinal examination, foot examination, and influenza vaccination) annually. In contrast, traditional population-based measures reflect the percent of patients receiving each test (i.e., the percent receiving HbA1c testing, the percent receiving lipid profiling etc.). A provider could provide each of the various diabetes tests to a high proportion of the eligible patients, but still miss one or more tests for the majority. Thus, all-or-none measurement encourages health providers to think and act as a system concerned with the whole sequence of care and handoffs, not only parts.¹⁴

Many countries have successfully developed national standards for patient pathways and clinical guidelines of specific procedures, particularly surgeries.

However, chronic disease management spanning different care settings remains a challenge. The rise of chronic conditions such as diabetes, arthritis and cardiovascular disease is prompting increased interest in disease prevention and care management. Improving care management of chronic conditions is the focus of a process redesign for district medical services in Japan, which aims to clarify the role of local general practitioners and small hospitals in relation to other providers.

From measurement to reporting

Once measures are decided upon, the next decision point is how to disseminate them. The rationale for publishing provider data varies. In competitive provider markets such as the U.S., reporting quality information is essential to informing patient choice. Research has shown that when public reports are designed to be highly valuable by consumers, hospitals are motivated to improve their performance.¹⁵ In other regions with limited competition, public reporting is viewed as important for provider accountability.

While public reporting has the potential to motivate improvement, it risks unfairly singling out providers and creating unintended behaviours by others. For example, case studies of the impact of England's star rating system (a national performance rating system for public hospitals) showed that some hospital managers

Table 1: General types of quality measures

Type of measure	Categories	Examples	Sources	Advantages	Disadvantages
Structure	Administration/ Operations Utilisation Patient safety	• Volume • Staffing levels • Accreditation • Board certification • Implementation of computerized-physician order entry systems • Protocols to reduce wrong-site surgery	• Administrative and claims data • Provider surveys	• Easy and inexpensive to collect • One measure, such as frequency, can relate to better outcomes • More predictive of subsequent performance than other measures for some procedures, e.g., high risk surgeries • Most useful for selective referrals and network tiering	• Limited in number • Do not exist for ambulatory care • Rarely reflect performance of individual hospitals or providers • Generally not actionable (e.g., a small hospital or physician practice cannot turn itself into a high volume centre)
Process	Hospital-oriented Physician-oriented Population-based Patient-oriented	• Mammography for age-appropriate women • Aspirin use for patients with coronary artery disease	• Administrative and claims data • Provider surveys	• Reflect care that patients receive and that clinicians deliver • Supported by providers • Actionable for quality improvement activities • Generally do not require risk adjustments	• Sample-size constraints for some conditions • Limited utility for profiling individual physicians or small practices or pay for performance programmes • Extent to which processes measures correlate with important outcomes can vary, and is often unknown
Outcome	Clinical Patient, employee and physician satisfaction	• Risk-adjusted mortality • Complication rates • Patient satisfaction • Health status	• Medical chart reviews • Patient surveys • Administrative and claims data • Provider surveys • State- or national-level clinical registries	• Intrinsically valid • Measurement alone can improve outcomes	• Sample size constraints • Need for risk adjustment • Not particularly useful for many ambulatory services, where clear outcomes occur infrequently or much later than the care is delivered

incorrectly reported data. Aiming for certain performance ratings can create “tunnel vision” in which providers disproportionately focus on measured elements of care at the expense of more subjective or holistic areas.¹⁶ Professional attitudes around reporting and fear of reprisal have been barriers to data collection. In addition, clinicians are likely to under-report if they are sceptical of the use and management of the data or in specialties such as emergency medicine with a high risk of medical malpractice.

Cross-border assessment models

Quality measurements today need to be reviewed on a multi-territory scale because cross-border care is no longer limited to a few wealthy individuals with specialised needs. Patients are increasingly looking outside their own countries for care, which is creating new opportunities for some systems. For example, Dubai Healthcare City (DHCC) is a new regional education, research and healthcare services centre of excellence with Harvard Medical International. Because DHCC is an independent provider and operates outside of an established public health system, its planners can share international best practices in developing quality monitoring and improvement systems, drawing from wide international experience.

In Europe, several countries have structured agreements with neighbours to meet the capacity needs of struggling public systems. In Luxembourg, patients can easily cross borders to receive care in Germany, Belgium, and France (and about one quarter of patients do) and services are reimbursed by Luxembourg’s mandatory health insurance. As a result, the government, the insurance fund and the provider are all interested in aligning quality information systems and risk management processes within the country and with its neighbours. National performance indicators are guided by wider EU policy developments and over the next two years the electronic medical record system in Luxembourg will be oriented to EU standards. Cross-border care presents challenges for follow up and continuity of care, requiring sophisticated and comprehensive information sharing between providers across borders and foremost is based on an informed patient.

Belgium’s size and historical experience with languages and workforces crossing borders has similarly made cross-border healthcare a natural experience. Over the past 10 years, providers and insurers have taken the initiative to make this process easier and more efficient for patients. Belgian hospitals benefit from foreign patients paid for by foreign insurers and differentiate themselves

in specialties in a competitive market. Shared protocols are in place between The Netherlands and Belgium to reduce transmission of antibiotic-resistant bacteria, a concern in cross-border care. Such patient mobility promotes quality improvements in both Dutch and Belgian hospitals.¹⁷

Standardising Quality Assessment

Opening patient choice to both domestic and foreign providers has the theoretical potential to drive quality improvement through competition. This trend is prompting the need for quality assessment models that provide some degree of standardisation, comparability, and results evaluation. In the absence of global health standards, many health systems are embracing models used by other industries. For example, a generic industry model established by the non-profit European Foundation for Quality Management (EFQM) has been widely adopted by healthcare organisations across Europe. The general EFQM framework is comprised of five “enabler” or process-related criteria and four “results” or outcome-oriented criteria¹⁸ as shown in Table 2.

Several autonomous communities in Spain adopted the EFQM system and are reviewing how to apply it to the health sector. In addition, 31 organisations of the Basque Health Service used the EFQM Excellence Model and found improvement in

several process measures, the most dramatic being in patient satisfaction.²⁰ Finally, the Dutch Institute for Healthcare Improvement has used EFQM as general guidance for excellence.

Standards developed by the International Organization for Standardization (ISO) for management systems are also used as the basis of health system quality assessment in multiple European countries. ISO is widely used and known because it is cross-industry and EFQM is the most widely used health specific system. Specific certification, including a national accreditation system for laboratories and recently developed laboratory quality systems are based on ISO standards. Recently, a large number of German hospitals were certified in both ISO 9000 and EFQM.

In terms of healthcare-specific models, Joint Commission International, the international arm of the agency that accredits healthcare organisations in the U.S., has been expanding globally. Both the OECD and WHO have been involved in aligning international quality indicators. Quality indicators identified by an international panel of experts convened by the OECD were broken down into three dimensions: impact on health, importance to national policy and ability of the healthcare system to influence the measure. One of the challenges encountered by the OECD cardiac expert panel

Table 2: EFQM Excellence model criteria¹⁹

Enablers	Leadership
	Policy and strategy
	People
	Partnerships and resources
Results	Processes
	Customer results
	People results
	Society results
	Key performance results

Innovative quality improvement approaches from across the globe



Luxembourg, Belgium and The Netherlands
Shared protocols and patient mobility improve quality of cross-border care in the Benelux region

The Netherlands
Government-driven quality agenda focuses on safety, patient logistics, and transfer processes between departments

United States
Health insurance benefits and employers target quality through wellness programmes, reduced prescription drug programmes, and disease management

United Kingdom
Family practice pay-for-performance programme surpasses expectations

Spain
Local efforts around regional healthcare networks include electronic pharmacy prescriptions and medical records



Norway

Healthcare professionals lead quality project and physicians collect system measures

Germany

Patient rights and data protection emphasized on quality agenda

France

E-health initiatives and personal electronic medical records seek to improve care coordination

United Arab Emirates

Private healthcare centre leverages best practices in quality cross-territory

Taiwan

Hospital pay-for-performance programme improves breast cancer survival

Middle East

Manual record keeping hinders data collection

Australia

Disease management pilot projects focus on patient access to chronic care

was isolating indicators of quality in primary prevention because measures must extend beyond medical care and into community and social care. Furthermore, many measures of primary and secondary care could not be agreed on internationally and, when they were universal, could not feasibly be collected internationally.²¹

Purchasing

With responsibility and measurement in place, health systems can move toward strategic purchasing, which was identified by the World Health Organization in 2000 as a powerful tool for health system improvement. At its core, strategic purchasing adopts methodologies that improve quality and patient satisfaction through payment incentives. For example, a pay-for performance breast cancer treatment programme at a Taiwanese specialist cancer hospital, the Koo Foundation Sun Yat-Sen Cancer Centre, contributed to an 87% survival rate.²²

Governments in countries with largely publicly funded health systems have long taken an approach to “commissioning” healthcare for their citizens that sought to reduce health inequalities through health planning. Increasingly, these governments are recognising the potential for building performance indicators into purchasing and reimbursement activities. Pay-for-performance programmes by a single national payer are powerful

in driving quality improvement nationwide, but may also be complex and challenging to implement. Where purchasing is executed at the level of the local or regional government, pay-for-performance schemes are often applied selectively, giving rise to geographic variations and effectively encouraging improvement in some medical specialties while neglecting others.

Early indications of positive results

In what has been described as the largest pay-for-performance experiment in the world, general family practitioners in the U.K. now receive bonuses for achieving certain quality metrics.^{23 24} General practitioner income can be boosted by as much as 30% depending on achievement of 104 different indicators for specific chronic diseases like diabetes, coronary heart disease and asthma. At the lowest end of the scale, points are awarded for simple things like having a disease registry. More points are awarded for process measures like taking blood pressure in patients with hypertension. The highest points are awarded for proxy outcome measures (like successfully controlling blood pressure below a target in a significant percentage of the target group). In all, practices can gain 1,050 points, with each point being worth around \$230, and then multiplied up or down according to the number of patients with each chronic disease (a prevalence factor).

The results have been impressive with most practices achieving more than 950 points, and many achieving the maximum. The positive interpretation is that more patients will get evidence-based care, and health inequalities will narrow. The contract has led to a 20% pay raise for many physicians. The magnitude of the change caught the government by surprise because the budget expected practices to achieve around 750 points. As a result, the contract was recently renegotiated with a slightly different point system, and a two-year pay freeze.

Ultimately, this type of pay-for-performance is intended to drive lasting and meaningful financial, clinical and satisfaction improvement. Finland, France, Germany, Italy, Sweden, and the U.K. have adopted some degree of public sector purchasing designed to motivate quality. For example, the German organisation “GemBA” (Gemeinsamer Bundesausschuss) was created to make purchasing and reimbursement decisions in collaboration with government and public insurers. Similarly, recent health system reforms introduced in The Netherlands in January 2006 include changes to insurance reimbursement practices that include consideration of provider quality and efficiency.

A surge of pay-for-performance initiatives is unfolding in the U.S., where a recent survey reported that

39% of health leaders believe pay-for-performance models will be the norm for healthcare delivery in the next five to 10 years.²⁵ The number of private pay-for-performance programme sponsors in the U.S. has significantly increased. Thirty-five programmes were in place in 2003, 84 in 2004, 108 in 2005, and 160 by 2006. These programmes are estimated to cover more than 39 million beneficiaries.²⁶ Some insurers and employers use pay-for-performance criteria to differentiate payment to providers. Others use it to create tiered networks in which patients have financial incentives to choose more cost-effective, “high-performing” doctors and hospitals. While pay-for-performance is gaining significant traction, the proliferation of these programmes is causing some providers to express frustration at the number and variety of methods used to measure and reward quality. As a result, the U.S. Institute of Medicine has recommended a National Quality Coordination Board to oversee development and consistency of quality standards.²⁷

The largest U.S. pay-for-performance initiatives are being spearheaded by the federal government. The Centers for Medicare and Medicaid Services (CMS) has two major hospital pay-for-performance initiatives underway: the Hospital Quality Initiative and the Premier Hospital Quality Incentive Demonstration Project. The Hospital Quality Initiative currently is paying for

Common elements of pay-for-performance programmes:

- Evidence-based clinical measures
- Patient safety measures
- Patient satisfaction measures
- Efficiency measures
- Information technology infrastructure
- Financial incentives
- Payment calculations

reporting performance, but intends to move toward paying for actual performance. Hospitals report on 10 quality measures for acute myocardial infarction, heart failure and pneumonia. Hospitals that do not report have their reimbursement cut by 0.4 percentage points.²⁸ In the programme's first year, more than 90% of hospitals reported the 10 measures. The future of pay-for-performance in the U.S. is likely to mirror CMS' initiative with Premier, a large alliance of not-for-profit hospitals. That project, which began in 2003 and involves more than 260 hospitals, collects data on more than 34 quality measures relating to acute myocardial infarction, heart failure, coronary artery bypass graft, pneumonia and hip and knee replacement. Hospitals scoring in the top 10% for a given set of quality measures receive a 2% Medicare payment bonus for the associated DRG. Those scoring in the next highest 10% receive a 1% bonus. The government also is turning its attention to physician groups in two initiatives, one with 10 large (200+) physician groups and one that is testing a population-based model of disease management. In the latter, providers receive a monthly per beneficiary fee for managing chronically ill beneficiaries with advanced congestive heart failure and/or complex diabetes.

Information technology

Strategic purchasing is difficult without available and consistent data. A strong majority (more than 80%) of hospital executives surveyed in five countries (Australia, Canada, New Zealand, U.K., U.S.) viewed the use of electronic medical records and electronic prescribing/ordering of medications as effective in improving quality of care. In all five countries, investment in some form of IT led the list of hospital executives' top priorities.²⁹ Governments across the world are acknowledging the importance of health information technology as a prerequisite for quality and are investing in developing national information infrastructures. Experts in Spain say that improving healthcare quality is impossible without a "digital transformation." The focus is on implementation of electronic pharmacy prescriptions and electronic medical records. Autonomous communities have local efforts under way to implement regional healthcare networks. The next steps will be to create a "network of networks" covering the entire national territory and enabling information exchange.

Developing a digital backbone

Personal health records have been accepted by the European Union as a standard to be achieved in all European countries regardless of their funding model or infrastructure. Most

countries are seeking to achieve this goal in their own way. For example, the German government is driving e-health through introduction of a new health card to allow easy access to patient records and other data for anyone involved in a patient's care. Italy is developing a national information system to allow identification of appropriate clinical pathways according to patient history, with the goal of improving management of chronic conditions. And in France, the government has mandated that each citizen have a personal electronic medical record (dossier medical personnel, or DMP) by July 2007, and that care reimbursement could be reduced if a citizen fails to present a DMP to a physician. France expects the DMP to reduce the costs of poor quality, which its Health Quality Agency estimates as 15% to 20% or more of its total health budget.

Probably the largest health information technology effort is in England. An independent review of England's NHS concluded that in order to meet expectations and deliver high quality care over the next 20 years, England would need to double the previous spending on information and communications technology. As a result of an ambitious national health IT project, English citizens can now review performance of local hospitals against national benchmarks, family practice physicians must report the

treatments they have prescribed to evaluate their effectiveness, and a national framework spells out what kind of care is appropriate for key disease groups.

However, advanced information technology is not a panacea and can expose other problems. For example, the U.K. cardiac surgery community was one of the first to rigorously collect and publish clinical outcomes data. However, because of inconsistencies in reporting and failure in transferring information from patients' records, the database was regarded as incomplete and unreliable.³⁰ This is also a concern in the U.S. where detailed clinical information is often recorded by hand in patients' medical records and not duplicated in electronic billing records. Similarly, a recent survey of healthcare providers across the Middle East revealed miscoding issues that were attributed to the variety of languages used by the workforce and a lack of IT infrastructure. Experts in Saudi Arabia similarly cite lacking broadband capabilities and primarily manual record-keeping processes as hindering data collection. Another issue centers on data security. For example, strong data security laws in Germany complicate efforts to strengthen monitoring systems and increase information sharing between hospitals and providers. By German law, all public data must be fully anonymous.

Electronic medical records are seen as tools to:

- Make safer, faster diagnoses, based on a better understanding of patient history and current health status
- Reduce redundant testing
- Avoid complications due to drug interactions
- Create medical statistics for population-based studies
- Introduce transparency to make it easier to establish protocols, develop policies, and structure how care is delivered.

Prescription for the future - Advice from the experts

Hospitals, physicians, health plans, pharmaceutical manufacturers, employers, governments and patients all want quality. Yet achieving quality requires changes in the way health services and treatments are developed, provided, measured and financed.

Although change is difficult, it is made easier when leaders are willing to push the envelope, expose the myths and offer practical solutions. Two such leaders are an American physician, Donald Berwick, M.D., and a Dutch researcher, Richard Grol, Ph.D. Both have achieved international stature as statesmen for quality, with often revolutionary ideas. They advise the industry to remember that healthcare is a people business -- involving and affecting those who receive and deliver care -- and advocate step-by-step, consistent approaches and policies towards quality improvement. They offer the following recommendations:

Invest in primary care

Research has repeatedly shown that primary care-oriented systems have far better health outcomes, lower mortality rates, and higher satisfaction among consumers--all for lower cost. These studies carry an important message: investing in a workforce of well-trained family medicine specialists and nurses, setting up integrated primary-

secondary care programmes for chronic care, increasing the numbers of nurses taking responsibility for surveillance and educating/counselling patients with long term conditions might reap dividends.

Beware of popular trends that may not improve quality

The health industry has attempted to improve quality through numerous efforts such as evidence-based medicine, chart audits, clinical governance, capitated budgets for general practitioners, continuing professional development, total quality management and business process redesign, organisational learning and development, patient empowerment, and “breakthrough” collaboratives. All have raised high expectations but few have demonstrated evidence of substantial and sustained impact on patient care and outcomes. If poorly formulated, policies can cause harm by distorting priorities, stripping out some of the most humane aspects of healthcare and encouraging perverse behaviours amongst caregivers. They may act as a distraction to the urgent need for reform, or even worse, as a barrier. Hence, policymakers need to evaluate potential programmes carefully and consider the potential unintended consequences of the changes that they put in place.

Foster collaborative, grass roots efforts

In every country, there are optimistic and enterprising organisations committed to building a better future for healthcare. It is exponentially easier to improve together than it is alone. For example, the Institute for Healthcare Improvement (IHI), a non-for-profit organisation based in Cambridge, Massachusetts that is leading the improvement of health care throughout the world, has an IMPACT programme that pools collective knowledge of the members with IHI’s improvement expertise and guidance to achieve, sustain, and spread breakthrough improvements. IHI’s 100,000 Lives Campaign has used a social movement technique to save 100,000 lives that would have otherwise been lost by engaging hospitals across the U.S. The campaign builds on the virtues of cooperation and sharing and focuses on key proven interventions, like rapid response teams and reducing ventilator acquired pneumonia in the participating hospitals. Preliminary projections suggest over 90,000 lives will be saved by the end of the campaign.

Identify the integrators

Integrators use different approaches to quality improvement in healthcare and build bridges among them. The challenge of change in healthcare is

too large and too complex to be left to one approach. It is important to set up consistent, comprehensive quality improvement systems in which different approaches are utilised. These can include evidence-based guidelines, performance indicators, education and support to professionals, feedback and reporting, improving team work and collaboration, redesign of processes, collaborative work and learning from other teams and practices, integrated care models, and incentives. The need for integration is crucial for quality in patient care; but often, no one or no organisation assumes the role. Authorities, policymakers and managers at different levels of healthcare need to take the lead in demanding, facilitating and supporting such systems, but they are preferably conducted by those who are directly responsible for care provision.

Move beyond research to focus on accelerating change

The key to quality improvement is in how to encourage those areas of good practice to be sustained and spread across whole health systems.

Policies need to be systematically and consistently applied over a broad range of methods -- and at all levels in healthcare systems -- to have an impact.

Donald Berwick, M.D., is president and chief executive officer of the Institute for Healthcare Improvement (IHI). IHI is a not-for-profit organization leading the improvement of healthcare throughout the world. In 2005, Berwick ranked third on Modern Healthcare's list of 100 Most Powerful People in Healthcare. Berwick is clinical professor of pediatrics and healthcare policy at the Harvard Medical School and professor of Health Policy and Management at the Harvard School of Public Health.

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The good news is that every organisation and every individual in the healthcare industry has the power to make a substantial difference in how patients are treated.

Conclusion

It is not surprising that international variation in the cultural, political, economic and historic environments surrounding healthcare create an equally wide variety of national concerns and priorities for quality improvement. The global experiences highlighted in this report demonstrate these differences. However, as variable as these experiences are, international experience also provides some unique and innovative solutions to quality issues that may not be exclusive to a region or country. As care across borders becomes increasingly common, health systems planners have the opportunity to benefit from their neighbours, not only by sharing services and providers but by sharing approaches to quality monitoring and improvement.

The good news is that every organisation and every individual in the healthcare industry has the power to make a substantial difference in how patients are treated. Health leaders face a turning point that requires a conscious decision between “business as usual” and a new mindset. The new path is not necessarily expensive or rugged. But it will take a dedicated spirit.

For more information

PricewaterhouseCoopers has developed a book, *The Quality Conundrum: Practical Approaches for Enhancing Patient Care*, which explores these issues in further detail and describes selected examples of innovative quality improvement practices in the U.S. For more information on how to obtain copies of the book please visit www.pwc.com/healthcare.

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Health Research Institute

PricewaterhouseCoopers Health Research Institute provides new intelligence, perspective and analysis on trends affecting all health-related industries, including healthcare providers, pharmaceuticals, health and life sciences, and payers. The Institute helps executive decision makers and stakeholders navigate change through a process of fact-based research and collaborative exchange that draws on a network of more than 4,000 professionals with day-to-day experience in the health industries. The Institute is part of PricewaterhouseCoopers’ larger initiative for the health-related industries that brings together expertise and allows collaboration across all sectors in the health continuum.

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