Health Information Systems and Physician Quality: Role of the American Board of Pediatrics Maintenance of Certification in Improving Children’s Health Care

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ABSTRACT
A second revolution in quality is occurring in US health care, as profound as the Flexner revolution almost 100 years ago. Systems issues are the basis for most of the concern, but physician quality and professional development are also important. Specialty board certification and maintenance of certification are key drivers of professional development and improvement of care. Physicians are now required to document that they can assess and improve quality of care. Functional health information systems are essential for this process. Pediatrics 2009;123:S108–S110

HEALTH CARE IN the United States is now engaged in a second quality revolution, even more profound than the Flexner revolution 100 years ago. The current revolution is focused on the quality and safety of clinical care and is international in scope. There are significant unexplained variations in health care utilization, appropriateness, and outcomes even in care delivered by the best physicians at the best institutions, as demonstrated by the work of Wennberg,1 Brook et al,2 and others. Mangione-Smith et al3 demonstrated that children receive only 46% of the recommended care in the United States. For the first time, physicians, who risk patients’ lives on the basis of the care they and their care teams deliver, have the professional obligation to measure whether the care they deliver is safe, timely, evidence-based, efficient, and equitable and meets patients needs and, if there is a gap in quality, to improve the quality of care.4

Although the Institute of Medicine reports have focused primarily on system failures as the source of most of the quality problems in US health care, there is increasing interest in the role that physicians play in the delivery of quality care. For almost 75 years, the American Board of Pediatrics (ABP) has addressed the issue of physician quality. The pediatric medical community created the ABP in 1933, in the aftermath of the Flexner revolution, to assure the public that physicians who were board-certified had the knowledge and skills to deliver quality care to children. The ABP has certified >80 000 pediatric generalists and subspecialists throughout its history. Today, the almost 250 pediatric leaders from around the country who constitute the ABP set standards and develop tools to help pediatricians assess their levels of knowledge and skills to deliver quality care. The model for assessing physician quality for the past 7 decades has been based on the demonstration of medical knowledge (“the more you know, the better the care you deliver”). This model worked well until the quality revolution began to show that even well-trained, well-intentioned, board-certified physicians have unexplained variations in utilization rates, appropriateness, and quality. From such studies, it has become clear that medical knowledge is necessary but not sufficient for delivery of quality care.

Beginning in the middle 1990s, the ABP, along with the other American Board of Medical Specialties (ABMS) member boards and the Accreditation Council for Graduate Medical Education, began to reassess its standards for physician training and practice. In 1999–2000, the Accreditation Council for Graduate Medical Education and the ABMS boards adopted a common set of 6 core competencies that are thought to be necessary for physicians to deliver quality care.5 For the ABP, this meant a significant change from a periodic assessment of medical knowledge once every 7 years to a more-continuous process of assessing, in addition to medical knowledge, professional behavior, communication skills, practice performance, and improvement of care. The new process, which was adopted by all 24 ABMS boards, is called maintenance of certification (MOC)6 and consists of 4 parts: part 1 involves maintaining a valid license to practice, part 2 involves demonstrating a lifelong commitment to learning through ongoing knowledge self-assessment, part 3 involves passing a periodic secure examination on medical knowledge, and part 4 involves demonstrating the ability to assess and to improve the quality of practice performance.
The requirement that all diplomates measure and improve quality of care requires a different approach to assessment and standard-setting than the assessment of medical knowledge. Several health services researchers\(^7,8\) have pointed out the inherent difficulties in attempting to distinguish whether one individual physician’s clinical performance differs from another’s in a valid, statistically significant manner. Issues of small sample size, determining how much of a patient’s care can be attributed to any individual physician, and adjusting for confounding factors such as severity of illness make measuring individual physicians’ clinical quality a difficult task. In addition, the problem of clinical quality in US health care is not that a few physicians and hospitals provide low-quality care but rather that there is a significant gap between the mean performance of the majority of providers and optimal care. The ABP and other boards are creating MOC programs that help physicians close the quality gap. As the standard for MOC part 4, the ABP is requiring diplomates to demonstrate with data the quality of the care they deliver, to compare their quality with peer results and benchmarks, and, where gaps exist, to improve care systematically over time. This approach represents a shift from searching for a small number of low-performing “bad apples” to focusing on improving the performance of the majority of physicians, the “good apples.” The challenge is how to help all physicians and their care teams deliver better care no matter where they are, rather than trying to change only a few low-performing physicians. In doing this, the ABP and the other ABMS boards have become drivers for changing physician practice behaviors to improve the quality of care.

There are 2 options through which pediatricians can meet the ABP requirements that they assess and improve practice performance. The first option is to use Internet-based improvement modules, such as the Electronic Quality Improvement in Pediatric Practice program developed by the American Academy of Pediatrics and the Patient Safety Improvement Program developed by the ABMS. These modules guide pediatricians through the basic process of measuring and improving quality of care for a small sample of patients from their clinical practice, using evidence-based guidelines. Participating pediatricians can compare their performance with peer results and national standards. The other option for MOC part 4 is for diplomates to receive credit for participating in an ABP-approved, established, quality improvement project. More than 20% of physicians are currently involved in a local, regional, or national improvement effort that involves the patients in their practices.\(^9\) The ABP has developed standards to enable established quality improvement projects to meet the requirements for MOC part 4, as well as standards for what constitutes valid participation by a pediatrician for MOC credit. The ABP has approved projects in neonatal care, access to care, prevention of bloodstream infections in PICUs, asthma, and immunizations for MOC credit, and additional applications are pending. All of the efforts that satisfy the requirements of MOC part 4 would be facilitated by fully functioning health information systems.

Prospective, multicenter, improvement efforts are essential, especially for pediatric subspecialty care. The numbers of children throughout the nation who are affected each year by most complex problems are relatively small, which makes it difficult (if not impossible) for any 1 practice or center to have enough patients to determine by itself what constitutes quality care, especially with respect to clinical effectiveness. There is a significant opportunity to integrate data collection in these projects with emerging electronic health records, so that the data can be used not only for daily delivery of care and quality improvement but also for longitudinal studies and clinical trials. The outstanding example of collaborative practice and data sharing in pediatrics has been the Children’s Oncology Group,\(^10\) which has dramatically increased the survival rates for childhood cancer in the past 40 years.

The ABP, through its foundation, has funded and has helped spread the model of collaborative improvement to other pediatric subspecialties, as an option for MOC part 4. The ABP is working with the National Association of Children’s Hospitals and Related Institutions, the American Academy of Pediatrics, specialty societies, and other organizations to help create national projects to improve children’s health care through shared data, collaborative practice, and application of quality improvement science. All of these efforts are intended to integrate the ABP MOC process into daily practice.

For physicians, the practice of medicine is changing rapidly, and there are both internal and external forces driving the need to assess and to improve quality of care. For almost 75 years, the ABP has been committed to assuring the public that certified pediatricians possess the knowledge, skills, and experience required for the provision of high-quality care in pediatrics. With the new MOC program, the ABP has added the assessment of practice performance to the critical assessment of medical knowledge and has become a major force in helping pediatricians close the quality gap in children’s health care. Functional health information systems are essential for the delivery of quality care and for professional development, including maintenance of board certification, maintenance of state licensure, and medical credentialing. The ultimate goal is one-time data entry that occurs during the delivery of quality care and that can be used to improve care, to guide professional development, and to generate new knowledge, so that “we learn from every child we treat.”

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