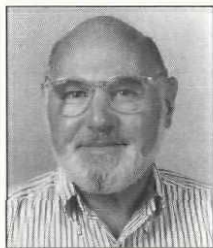


PRACTICE PARAMETERS BENEFIT ALL

*Patient Management Strategies Improve
Outcomes for Patients, Lower Costs for Payers*

BY RICHARD D.
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As she checked in at the hospital, Betty felt relieved that she would soon give birth to her second child. She was apprehensive nonetheless. Her firstborn had been delivered by cesarean section; she assumed her second child would be, too. Betty fretted. How would she cope at home during the recovery period?

Fortunately, under a practice parameter adopted by the hospital's obstetric staff to reduce the frequency of cesarean sections, Betty was judged an excellent candidate for vaginal delivery. Her child was delivered without complications. A few days later Betty was home, in good spirits, and starting to take up her normal routine.

Betty's case is not unique. Every day, across the nation, practice parameters are eliminating thousands of unwarranted medical procedures. The result: greater satisfaction for patients and lower costs for payers.

By adopting a cesarean section parameter, the obstetric department at Mount Sinai Medical Center, Chicago, was able to lower the cesarean rate from 25 percent of all deliveries (the national

rate) to less than 12 percent. For each cesarean delivery eliminated at Mount Sinai, approximately, \$3,500 in physician and hospital charges were saved. If adopted nationwide, a practice parameter like this could eliminate 450,000 cesarean surgeries a year, saving more than \$1.5 billion.¹

PRACTICE PARAMETERS DEFINED

"Practice parameters" is the term the American Medical Association (AMA) uses to define patient management strategies designed to help physicians make clinical decisions. Some parameters come out of a review and synthesis of published scientific studies; others are based on the consensus of experts.

"Properly developed and implemented, practice parameters define appropriate medical care and provide a rational foundation for improvement," John T. Kelly, MD, PhD, AMA's director of quality assurance and health care organizations, explained in an interview. They would be used more widely, according to Kelly, if all who could benefit knew they existed and how to get them.

Summary Practice parameters, patient management strategies designed to help physicians make clinical decisions, can eliminate thousands of unwarranted medical procedures each year, resulting in greater satisfaction for patients and lower costs for payers.

But physicians have yet to adopt many recently issued parameters. The enthusiasm with which they embrace newer guidelines depends on their views concerning the expertise of the sponsoring organization and the participants in the group that developed the parameter.

Practice parameter development is costly. Before creating a practice parameter, it is a good

idea to find out if a parameter already exists that can be modified for local use, or if one is being developed elsewhere.

Some think inertia is a major obstacle to carrying out practice parameter guidelines. Others believe healthcare professionals' opposition is a more substantial roadblock. Some physicians believe practice parameters threaten their autonomy and the art of their practice. Pressure from patients to use certain procedures can also be an obstacle.

Practice parameters work best if developed by authoritative physician specialty organizations. Implementation needs to be backed up with continuing education and feedback.

Practice parameters issued by leading medical specialty organizations are published annually in AMA's *Directory of Practice Parameters*. The directory lists names and addresses of sponsoring organizations, withdrawn parameters, and updated parameters that replace them. One section suggests how to use practice parameters in quality assurance programs. AMA sends *Practice Parameter Update*, a quarterly publication that lists recently completed parameters and those under development, to directory subscribers.

Leading medical specialty organizations sponsor most practice parameters, and regional or local physician groups often modify them for their own use. In a hospital, compliance is best when the team that modifies the parameter includes managers, clinicians, and others who will be affected by it.

In one survey of a group of surgeons, 78 percent of respondents said they believed parameters of care should be developed by organized groups of healthcare professionals.² But physicians often resist externally imposed standards and guidelines fixed by others. And managers and physicians seeking authoritative guidance can be confused by the plethora of advisories on practice coming from a variety of sources.

THE EFFECT ON PRACTICE

Are practice parameters followed? The answer is a qualified yes. Most physicians follow, for example, well-established parameters on immunization. These are widely accepted because they were developed by a highly respected organization (the American Academy of Pediatrics) and were established many years ago. The academy has been issuing guidelines for more than half a century.

Other guidelines, such as those on the use of permanent cardiac pacemaker implants, sponsored by the Joint Task Force of the American Heart Association and the American College of Cardiology, have had an impact on cardiology practice.³ From 1983, the year before these guidelines were published, to 1986, the implantation rate dropped almost 28 percent.⁴

Before the issue of these guidelines, surgeons were performing 120,000 implants a year at a cost of about \$1.4 billion. And the rate of implantations was climbing at an alarming 15 percent a year. Since publication of the studies and resulting guidelines, the increase has slowed to about 1 percent a year, according to Allan M. Greenspan, MD, codirector of the Electrophysiology Laboratory at Albert Einstein Medical Center, Philadelphia, and associate pro-

fessor of medicine at Temple University.⁵ If the practice parameters eliminate unnecessary implantations, 240,000 people will enjoy better lives and \$2.88 billion can be saved over a 10-year period.

More recently, the American Society of Anesthesiologists standards on intraoperative monitoring enabled hospitals in Massachusetts to reduce hypoxic injury to surgical patients by 54 percent.⁶ And, in the early 1980s, one hospital's use of practice parameters on proper timing of prophylactic antibiotics cut the rate of deep post-operative wound infections by 50 percent.⁷

A LACK OF COMPLIANCE

On the other hand, a survey of hospitals and obstetricians in Ontario indicates that physicians do not always follow practice parameters. The Ontario survey was conducted before and after the release of a widely distributed, nationally endorsed consensus statement recommending fewer cesarean deliveries.⁸ After the statement's release, physicians reported they were performing

MOTIVATING CLINICIANS TO USE PRACTICE PARAMETERS

The Harvard Community Health Plan (HCHP), Brookline, MA, is a health maintenance organization (HMO) that provides healthcare to 400,000 members at 35 locations. HCHP has generated a system for developing guidelines as clinical algorithms and ensuring their use (Lawrence K. Gottlieb, "Algorithm-based Clinical Quality Improvement," *HMO Practice*, vol. 6, no. 1, pp. 5-12). HCHP learned quickly that providing clinicians with the guidelines was not enough to achieve the desired changes in practice. So a task force, as part of a coordinated continuing medical education program, devised several approaches to ensure implementation. At departmental meetings leaders encourage doctors to learn the algorithms and, when necessary, teach them the skills needed to provide the clinical care called for.

HCHP initiated other reinforcing strategies such as clinical reminder systems and system improvements to ease guideline compliance. But HCHP did not stop there. It also introduced a computer and interactive video disk training system to teach clinicians the content and logic of the guideline algorithms. The training system allows clinicians to self-test their knowledge and skills.

Forms (e.g., laboratory test order forms and preferred drug lists) have been revised to follow the guideline procedure. And systems have been set up to allow clinicians instant access to the algorithms and supporting documentation at computer terminal screens in their own offices. To foster continuing improvement, HCHP's Department of Quality Control began a data collection system that provides the necessary information for an ongoing evaluation of the clinical process.

substantially fewer cesareans. However, independent data showed there had been almost no decline in the cesarean section rate.

The study group concluded, "The dissemination of research evidence in the form of practice parameters is unlikely to have much effect on inappropriate practices that are sustained by powerful nonscientific forces." An unrelated study may explain why this cesarean-section guideline was not followed: "Unless it is coupled with follow-up programs that translate the message into local or individual action, . . . its impact will be limited."⁹

Several experiences support this theory. Mark R. Chassin, MD, and Sally M. McCue found that, after an educational program that included data feedback, physicians in the study hospitals were able to reduce the frequency of x-ray pelvimetry to less than a third of that frequency in control hospitals without similar education and feedback programs.¹⁰

A study conducted at Massachusetts General Hospital, Boston, underscores the importance of feedback. It found that hospital admission and intensive care unit (ICU) parameters, when augmented by physician feedback, reduced the length of hospital stays by 11 percent to 14 percent and the length of time in ICUs by 11 percent to 15 percent.¹¹

Scott M. Weingarten, MD, director of health services research at Cedars-Sinai Medical Center in Los Angeles, explains how a parameter plus physician-to-physician communication is used to speed transfer of selected "low-risk" patients from a cardiac care unit to nonmonitored beds:

A physician-advisor telephones the physician treating the patient, explaining the guideline and study which led up to its development. The advisor informs the physician of the low risk the study found in transferring patients with similar diagnoses to nonmonitored beds. The treating physician can then either agree and transfer the

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patient or disagree and defer transferring the patient.¹²

COST REDUCTIONS

Every year hospitals and physicians pay billions of dollars in malpractice insurance premiums.¹³ Until recently these insurance premiums were climbing at an average of 19.5 percent a year.¹⁴ The use of practice parameters in obstetrics, surgery, and anesthesiology has reduced injuries, and now insurance premiums are beginning to decline.¹⁵

After studying the malpractice problem, the Risk Management Foundation of the Harvard Medical Institutions, Inc., Cambridge, MA, which coordinates the professional liability insurance program for 15 Harvard-affiliated healthcare facilities and more than 5,000 physicians, came to believe it could prevent most malpractice cases involving major morbidity or death. With patients collecting on more than a third of all malpractice claims, there was certainly room for improvement from the medical community's point of view.

Anesthesiology The Risk Management Foundation developed and implemented standards. Since their adoption, Harvard's anesthesia losses, which had been running \$5.24 per anesthesia, dropped first to \$2 per anesthesia, and then in successive years to \$1.84 and \$0.78. Annual liability insurance premiums followed suit, declining to half of what they had been before anesthesiologists started following practice parameters.¹⁶

One reassuring aspect of this story is that these clinicians voluntarily put the standards to work, with no inkling that their action would lower insurance premiums. Their sole motivation was to improve patient safety and reduce compensatory events.

Obstetrics One welcome consequence of the anesthesiologists adopting anesthesia standards was it piqued the interest of other specialists. Within months, three Harvard teaching hospital obstetric department heads got together to review obstetric-related claims. After analyzing the claims, the chief obstetricians supervised development of 21 standards for Harvard-affiliated

ed obstetric services. The goals of the standards were not only to improve results, but also to foster more informed and reasonable outcome expectations among patients.

Invasive Diagnostic Procedures Between 1987 and 1990, 41 percent of radiologists practicing in the United States were sued for malpractice.¹⁷ The most important claim losses arose out of the following invasive diagnostic procedures: cardiac catheterization, computed tomography, and myelograms.

As a result, radiologists and supporting services developed and began to apply new standards for documenting and communicating radiologic information, examining, and applying procedure safety measures.¹⁸

Physician-owned Insurance Carriers Doctor-owned insurance carriers, such as Denver-based Colorado Physicians Insurance Company and the Washington State Physicians Insurance Exchange in Seattle, are now providing voluntary guidelines for obstetricians.¹⁹ The trend is important because doctor-owned companies provide professional liability insurance for more than half the nation's practicing physicians.²⁰

PARAMETER DEVELOPMENT IS COSTLY

Healthcare professionals should be careful not to reinvent the wheel, cautioned Priscilla S. Dasse in an interview. Dasse is vice president of the Risk Management Foundation of the Harvard Medical Institutions, Inc. Practice parameters are costly and time-consuming to develop. Before creating a practice parameter, one should find out if a parameter already exists that can be modified for local use, or if one is being developed elsewhere, she said.

What can senior managers do to foster the development and implementation of practice parameters? Experts have several views.

Senior managers can help focus specialists' attention on practice parameters by informing them and their task forces of applicable, available parameters or those about to be issued. Senior managers should not leave the selection of practice parameters to be implemented up to the physician specialty task forces. Rather, the managers should become familiar with what practice parameters are available and identify those which deal with the more serious problems in their own institution, suggested Kelly.

Dasse proposed that managers identify areas that most need improvement by analyzing case studies, claims experience, and the results of quality assurance programs. "Wide variation in practice," she said, "is the hallmark of needed im-

provement. Wide practice variation is what produces wide variation in outcomes."

She believes managers should present information about variant practice in such a way that physicians understand both the need to improve treatment protocols and the benefits of participating in an improvement program.

In an interview Greenspan emphasized that practice parameters are only one element of a quality assurance program. He believes that giving administrative authority to physicians who are committed to quality control is the real key to improving hospital care.

Greenspan suggested that the chairperson of a hospital's department of medicine needs qualified, academically oriented department heads who will secure equal commitment to continuing education and high-quality care from subspecialty heads. "Senior management," Greenspan added, "must select the best person for the job, without allowing seniority to stand in the way." Accomplishing this, he admitted, can be more dicey in a community hospital than in a teaching hospital.

Nancy Sokol, MD, associate director of clinical quality management at Harvard Community Health Plan, Brookline, MA, likens a practice parameter to a set of plans and specifications for a building. "To get started, you surely need plans

STEPS TO DEVELOP PRACTICE PARAMETERS

AMA's *Directory of Practice Parameters* identifies eight steps for developing a parameter and making it a part of a quality improvement program.

1. *Issue identification*: selecting a specific clinical area of interest
2. *Issue refinement*: determining services to be addressed
3. *Identification of relevant practice parameters*: locating parameters that apply in the directory or the update
4. *Evaluation of practice parameters*: collecting and rating relevant parameters
5. *Selection and modification* (if needed)
6. *Implementation of practice parameters and assessment of practice*: testing the parameter in practice, obtaining physician leader endorsement, and collecting and studying outcome data to assess actual practice
7. *Evaluation and feedback*: using results to help physicians improve knowledge and change their practice patterns
8. *Periodic review of practice parameter recommendations*: continually evaluating and improving the quality assessment, assurance, and improvement process

and specifications, but to build the building, you have to start laying bricks," she said in an interview.

OBSTACLES TO IMPLEMENTATION

Some think inertia is the major obstacle to carrying out guidelines. Others believe health-care professionals' opposition is a more substantial roadblock.

Those who oppose practice parameters use these arguments.

Documentation Can Be Damaging Written standards will only encourage plaintiff lawyers to bring more suits against physicians.

James F. Holzer, JD, puts this argument into perspective: "There does not appear to have been a major malpractice case in which a written risk management standard was used as pivotal evidence."²¹

Edward B. Hirshfeld, AMA's associate general counsel for health law, litigation, and policy, adds, "It is unlikely that practice parameters will create new liabilities or aggravate existing malpractice liabilities." Hirshfeld notes that practice parameters actually may help physicians defend against unwarranted malpractice suits. Maine has established parameters as a legal defense against claims. Plaintiffs are no longer able to base suits on what the standard of care should have been because it has been established by a practice parameter.²²

Practice Parameters Are Cookbook Medicine Written standards are too restrictive and rigid to address variable clinical circumstances.

Practice parameters are not substitutes for the judgment of an experienced clinician. The cookbook medicine argument makes a valid point, but it ignores the fact that practice parameters frequently offer a range of practice recommendations and support a physician's right to tailor care in a patient's best interest.

It Will Not Work Here Standards developed in a specific geographic region or clinical setting are inappropriate in other regions (e.g., urban area medical standards versus rural area medical standards).

This argument does not acknowledge that most practice parameters (whether written for a

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specific class or pool of providers or for general use) are intended to be modified as necessary by local user groups.

Do Not Rock the Boat Medicine has done well so far without formal guidelines, so why tinker with it now?

This is a common response to change in any field undergoing rapid transformation. But in retrospect it is difficult to argue against rapid scientific and technical changes that have recently advanced medicine. Other disciplines are subject to constant

reexamination for the purpose of improvement. Medicine should not be exempt.

There Is No Proof of Their Efficacy No scientific proof exists, for example, that a liability control standard actually reduces patient morbidity or mortality rates or malpractice claims.

This argument is simmering down, as outcome data build a convincing case for the efficacy of practice parameters.

Physician Resistance Underlying these arguments, though seldom expressed, may be the real reasons for resistance: Some physicians believe practice parameters threaten their autonomy and the art of their practice.

But plans to guide work, even when modified in use, are essential in any field. As Donald M. Berwick, MD, puts it, "Doctors, themselves, though they may not recognize them as such, have used diagnostic and therapeutic routines as 'rules of thumb,' often handed down from 'the chief,' for as long as medicine has been practiced."²³

Other practitioners may resist practice parameters because they have inadequate skills to follow practice guideline recommendations, such as a vaginal delivery of a baby in breach presentation.

Finally, physicians and hospital managers may be motivated by time-saving and monetary considerations to resist practice parameters. (A cesarean section brings higher payments to the physician and hospital and takes less time than a vaginal birth.)

Marvin Moser, MD, clinical professor of medicine at Yale University School of Medicine,

sees our current fee-for-service method of reimbursement and competition between hospitals as serious roadblocks to implementing practice parameters and lowering costs. "We have to recognize that practice parameters which reduce hospital admissions and limit in-hospital procedures are at cross purposes to the financial goals of hospital administrations," he said in an interview.

"To keep the hospital financially viable, managers encourage doctors to admit patients, and gear up to do as many procedures as possible. It is hard to cut the number of procedures when compensation is based on how many are performed and when, for financial reasons, very costly equipment needs to be fully utilized."

Pressure from patients themselves can also be a factor in circumventing practice parameters. One example is a woman who is offered the option of a cesarean section to avoid a potentially painful, prolonged vaginal delivery.

PARAMETER ACCEPTANCE TAKES TIME

Despite their benefits, practice parameters are not the magic bullet for eliminating unwarranted medical procedures. "It would be like achieving medical nirvana, full implementation of perfect medical knowledge," said Greenspan. He added, "Piecemeal new research and data are being generated all the time, but that information is imperfect. After new information has been presented in meetings and papers, it gains a certain currency. But only after that information has been around a while, has been checked, and retested is it widely accepted and used. So the journey from discovery to accepted practice can be a long haul." □

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