Designing a Safer Practice

Chapter FastFACTS

1. **Physicians need to take the lead in implementing best practices.**
2. **Safety strategies of other high-risk industries may help healthcare.**
3. **Evidence-based team training is key to quality care.**
4. **Even if you think you're doing a good job, get a second opinion.**
5. **Having a tracking system is vital to patient safety.**

Now that international government agencies, medical groups, hospitals, and insurance organizations are focusing on improving patient outcomes, quality care may finally be getting the boost it needs to become a realistic—and reimbursed—part of your practice.

This new focus is part of an emphasis on healthcare safety that is steadily gaining ground—and none too soon. Just last spring the Consumers Union, the nonprofit publisher of *Consumer Reports*, gave the United States a "failing grade" on certain aspects of creating a healthcare system free of preventable medical harm (see "Four Reasons Patient Safety Efforts Have Failed," p. 14). Now healthcare organizations are reviewing how other industries improve safety and how their methods can be applied in treating patients. Experts are analyzing what's right—and wrong—in physician practices in order to design new guidelines. These new initiatives, along with a recent emphasis

on report cards, will result in practical solutions to patient safety that can be achieved without confusing best practices with "cookbook medicine."

As the healthcare system works to improve its processes and reduce preventable errors, it is hardly surprising that evidence-based medicine and best practices are gaining more attention. Like the shortest escape from a maze, best practices are methods that have been proven in past performance to solve the problem at hand. In patient safety, a best practice could be as simple as a new, more efficient way to answer the telephones to make sure every patient gets heard and responded to.

Barry R. Furrow, JD, professor of law and director of the health law program at the Earle Mack School of Law at Drexel University in Philadelphia, notes that best practices have been on a slow track, and he attributes that pace to the difficulty of achieving consensus on defining the term. "I think the core problem with best practice [is] how do you define a zone of best practice that doesn't scare doctors because it may infringe on them too much," he says. The fact that "there are clearly billions of dollars for research on clinical practice guidelines" makes some people worry that guidelines will narrow the range of autonomy in practice, he says. "When you talk about practice guidelines, the typical response is, 'Let's not have cookbook medicine.' Doctors need a range of autonomy in clinical decision making to deal with different patients and hospitals," he says.

Physicians Take the Lead

Historically, it has been sufficient for physicians to have the knowledge and skills required for their area of expertise. But now physicians need not only a basic understanding of improvement methods and system processes, but also an ability to lead the way to change, given the complexities of healthcare, says Allan Frankel, MD, a patient safety advisor on the faculty of the Institute for Healthcare Improvement (IHI) (*www.ihi.org*), and a

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The First

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MOXATAG™ (amoxicillin extended-release) Tablets is indicated for the treatment of tonsillitis and/or pharyngitis secondary to *Streptococcus pyogenes (S. pyogenes)* in adults and pediatric patients 12 years and older. MOXATAG should be used only to treat or prevent infections that are proven or strongly suspected to be caused by susceptible bacteria. The full 10-day course of therapy should be completed for effective treatment. Patients taking MOXATAG should not chew or crush tablet.

Important Safety Information

- MOXATAG is contraindicated in patients with known serious hypersensitivity to amoxicillin or to other drugs in the same class or patients who have demonstrated anaphylactic reactions to beta-lactams. Serious and occasionally fatal hypersensitivity (anaphylactic) reactions have been reported in patients on penicillin therapy. If an allergic reaction occurs, MOXATAG should be discontinued and appropriate therapy instituted.

- *Clostridium difficile* Associated Diarrhea (CDAD) has been reported with nearly all antibacterial agents, including amoxicillin, and may range in severity from mild diarrhea

Please see brief summary of Prescribing Information on next page.

References: 1. MOXATAG Prescribing Information. MiddleBrook Pharmaceuticals, Inc. 2008. **2.** Kardas P. Patient compliance with antibiotic treatment for respiratory tract infections. *J Antimicrob Chemother.* 2002;49(6):897-903. **3.** Sclar DA, Tartaglione TA, Fine MJ. Overview of issues related to medical compliance with implications for the outpatient management of infectious diseases. *Infect Agents Dis.* 1994;3(5):266-273.

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MOXATAG® — Refining the delivery of amoxicillin therapy with innovative proprietary technology

- Extended-release tablets efficiently deliver amoxicillin using a once-daily dose of 775 mg for 10 days[1]
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to fatal colitis. If CDAD is suspected or confirmed, MOXATAG should be discontinued and appropriate therapy instituted.

- The possibility of superinfections with mycotic or bacterial pathogens should be kept in mind during therapy. If superinfections occur, MOXATAG should be discontinued and appropriate therapy instituted.
- The most common drug-related adverse reactions associated with MOXATAG observed in clinical studies are vulvovaginal mycotic infection (2.0%), diarrhea (1.7%), nausea (1.3%), vomiting (0.7%), abdominal pain (0.3%) and headache (1.0%).

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RX ONLY

INDICATIONS AND USAGE

MOXATAG is a once-daily amoxicillin product indicated for the treatment of tonsillitis and/or pharyngitis secondary to *Streptococcus pyogenes* (*S. pyogenes*), more commonly referred to as 'strep throat,' in adults and pediatric patients 12 years or older.

To reduce the development of drug-resistant bacteria and maintain the effectiveness of MOXATAG and other antibacterial drugs, MOXATAG should be used only to treat or prevent infections that are proven or strongly suspected to be caused by susceptible bacteria.

DOSAGE AND ADMINISTRATION

The recommended dose of MOXATAG is 775 mg once daily taken within 1 hour of finishing a meal for 10 days. MOXATAG should be taken approximately the same time every day. The full 10-day course of therapy should be completed for effective treatment of tonsillitis and/or pharyngitis secondary to *S. pyogenes.*

Do not chew or crush tablet.

CONTRAINDICATIONS

MOXATAG is contraindicated in patients with known serious hypersensitivity to amoxicillin or to other drugs in the same class or patients who have demonstrated anaphylactic reactions to beta-lactams.

WARNINGS AND PRECAUTIONS

Anaphylaxis and Hypersensitivity Reactions

Serious and occasionally fatal hypersensitivity (anaphylactic) reactions have been reported in patients on penicillin therapy. Although anaphylaxis is more frequent following parenteral therapy, it has occurred in patients on oral penicillins. These reactions are more likely to occur in individuals with a history of penicillin hypersensitivity and/or a history of sensitivity to multiple allergens. There have been reports of individuals with a history of penicillin hypersensitivity who have experienced severe reactions when treated with cephalosporins. Before initiating therapy with MOXATAG, careful inquiry should be made concerning previous hypersensitivity reactions to penicillins, cephalosporins, or other allergens. If an allergic reaction occurs, MOXATAG should be discontinued and appropriate therapy instituted.

Clostridium difficile Associated Diarrhea (CDAD)

Clostridium difficile Associated Diarrhea (CDAD) has been reported with nearly all antibacterial agents, including amoxicillin, and may range in severity from mild diarrhea to fatal colitis. Treatment with antibacterial agents alters the normal flora of the colon leading to overgrowth of *C. difficile.*

CDAD must be considered in all patients who present with diarrhea following antibiotic use. Careful medical history is necessary since CDAD has been reported to occur over two months after the administration of antibacterial agents.

If CDAD is suspected or confirmed, ongoing antibiotic use not directed against *C. difficile* may need to be discontinued.

Superinfections

The possibility of superinfections with mycotic or bacterial pathogens should be kept in mind during therapy. If superinfections occur, amoxicillin should be discontinued and appropriate therapy instituted.

Mononucleosis Rash

A high percentage of patients with mononucleosis who receive ampicillin develop an erythematous skin rash. Thus, ampicillin-class antibiotics should not be administered to patients with mononucleosis.

Development of Drug-Resistant Bacteria

Prescribing amoxicillin in the absence of proven or strongly suspected bacterial infection or treating prophylactically is unlikely to provide benefit to the patient and increases the risk of the development of drug-resistant bacteria.

False-Positive Urinary Glucose Tests

High urine concentrations of ampicillin may result in false-positive reactions when testing for the presence of glucose in urine using Clinitest®, Benedict's Solution or Fehling's Solution. Since this effect may also occur with amoxicillin, it is recommended that glucose tests based on enzymatic glucose oxidase reactions (such as Clinistix®) be used.

ADVERSE REACTIONS

In a controlled Phase 3 trial, 302 adult and pediatric patients (≥12 years) were treated with MOXATAG 775 mg once-daily for 10 days. The most frequently reported adverse reactions (>1%) which were suspected or probably drug-related are vaginal yeast infection (2.0%), diarrhea (1.7%), nausea (1.3%) and headache (1.0%).

DRUG INTERACTIONS

Probenecid

Probenecid decreases the renal tubular secretion of amoxicillin. Concurrent use of MOXATAG and probenecid may result in increased and prolonged blood levels of amoxicillin.

Other Antibiotics

Chloramphenicol, macrolides, sulfonamides, and tetracyclines may interfere with the bactericidal effects of penicillin. This has been demonstrated *in vitro*; however, the clinical significance of this interaction is not well documented.

Oral Contraceptives

As with other antibiotics, amoxicillin may affect the gut flora, leading to lower estrogen reabsorption and potentially resulting in reduced efficacy of combined oral estrogen/progesterone contraceptives.

USE IN SPECIFIC POPULATIONS

Pregnancy: Teratogenic Effects. Pregnancy Category B.

Reproduction studies have been performed in mice and rats at doses up to 2000 mg/kg (12.5 and 25 times the human dose in mg/m²) and have revealed no evidence of impaired fertility or harm to the fetus due to amoxicillin. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Labor and Delivery

It is not known whether use of amoxicillin in humans during labor or delivery has immediate or delayed adverse effects on the fetus, prolongs the duration of labor, or increases the likelihood that forceps delivery or other obstetrical intervention or resuscitation of the newborn will be necessary.

Nursing Mothers

Penicillins have been shown to be excreted in human milk. Amoxicillin use by nursing mothers may lead to sensitization of infants. Caution should be exercised when amoxicillin is administered to a nursing woman.

Pediatric Use

The safety and effectiveness of MOXATAG in pediatric patients 12 years of age and older have been established based on results of a clinical trial that included adults and pediatric patients (12 years or older). The safety and effectiveness of MOXATAG in pediatric patients younger than 12 years has not been established.

Geriatric Use

This drug is known to be substantially excreted by the kidney, and the risk of adverse reactions to this drug may be greater in patients with impaired renal function. Because elderly patients are more likely to have decreased renal function, care should be taken in dose selection, and it may be useful to monitor renal function.

Renal Impairment

MOXATAG has not been studied in patients with renal impairment; however, a reduction of amoxicillin dose is generally recommended for patients with severe renal impairment. Therefore, MOXATAG is not recommended for use in patients with severe renal impairment (CrCl <30 mL/min) or patients on hemodialysis.

OVERDOSAGE

In case of overdose, discontinue medication, treat symptomatically, and institute supportive measures as required. If the overdose is very recent and there is no contraindication, an attempt at emesis or other means of removal of drug from the stomach may be performed.

Interstitial nephritis resulting in oliguric renal failure has been reported in a small number of patients after overdosage with amoxicillin.

Crystalluria, in some cases leading to renal failure, has also been reported after amoxicillin overdosage in adult and pediatric patients.

Renal impairment appears to be reversible with cessation of drug administration. High blood levels may occur more readily in patients with impaired renal function because of decreased renal clearance of amoxicillin.

For additional information about overdose treatment, call a poison control center (1-800-222-1222).

HOW SUPPLIED/STORAGE AND HANDLING

MOXATAG tablets for oral administration are provided as blue film-coated, oval-shaped tablets that contain 775 mg of amoxicillin. The tablets are printed with "MB-111" on one side in black edible ink. MOXATAG is packaged in bottles as follows:

Presentation	NDC Code
Bottles of 30	11042-142-03

Storage

Store at 25° C (77° F); excursions permitted to 15–30° C (59–86° F) [See USP Controlled Room Temperature.]

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principal at patient safety-focused Pascal Metrics Inc., in Washington, DC. While this dual role may not suit everyone, it may be inevitable, spurred by patients who are better informed than ever, and by national politics, as well as initiatives within healthcare.

Improving patient safety and quality of care is one of the stated goals of the American Recovery and Reinvestment Act, which became law in February of this year. Money from the stimulus package backs those goals with $1.1 billion for research on the effectiveness of certain healthcare treatments. An even larger investment—19.2 billion—is being made to encourage providers to transition to electronic medical records (EMRs) to reduce cost, improve quality, and ensure patient privacy.

This could have a real effect on physicians' income. According to a *New England Journal of Medicine* article (March 12, 2009), starting in 2011, "Medicare and Medicaid will provide financial incentives over multiple years of up to $40,000 to $65,000 per eligible physician and up to $11 million per hospital for 'meaningful' use of health information technology, such as the electronic exchange of data and reporting of clinical quality measures. Starting in 2015, physicians and hospitals that do not use certified products in a meaningful way will be penalized. The Congressional Budget Office projects that the incentives will boost the proportions of physicians and hospitals adopting comprehensive electronic health records by 2019 to 90% and 70%, respectively, from the 65% and 45% that would be expected to do so anyway."

With the development of a national electronic health record, physicians will be exchanging better and better data. "In 2009, the data that we're collecting is modest," Dr. Frankel says, "but in the future we will be increasingly capable of identifying high-quality care and the locations where it is occurring." As healthcare evolves in this direction, physicians need to position themselves for success by learning about such topics as process improvement that weren't taught in medical school.

Back to Core Values

Of course, the quest for safety is not new. Patient safety was a priority as far back as the Fourth Century BCE, when healers

Four Reasons Patient Safety Efforts Have Failed

Why has it been so difficult to create a healthcare system that can prevent medical harm?

In its report, "To Err is Human—To Delay Is Deadly," the Consumers Union stated: "Since the Institute of Medicine Report (IOM) was issued, there have been countless task forces, conferences, editorials, and even episodes of Oprah focused on patient safety. But action on key recommendations has been sluggish, leaving us without reliable means to track our progress or hold the local healthcare systems accountable for ending preventable patient harm. We have failed to make the systematic changes in healthcare needed to end preventable medical harm."

The report attributed the lack of change to the following:

- **Doctors and other health professionals are not expected to demonstrate competency.** There has been some piecemeal action on patient safety by peers and purchasers, but there is no evidence that physicians, nurses, and other healthcare providers are any more competent in patient safety practices than they were ten years ago.

- **Few hospitals have adopted systems proven to prevent medication errors, and the FDA rarely intervenes.** For example, while the FDA reviews new drug names for potential confusion, it rarely requires name changes of existing drugs despite high levels of documented confusion among drugs, which can, and occaisonly does, result in dangerous medication errors.

- **A national system of accountability through transparency—as recommended by the IOM—has not been created.** While 26 states now require public reporting of some hospital-acquired infections, the current medical error reporting system fails to create external pressure for change. In most cases hospital-specific information is confidential, and under-reporting of errors is not curbed by systematic validation of the reported data.

- **No national entity has been empowered to coordinate and track patient safety improvements.** Because no national entity is comprehensively tracking patient safety events or progress in reducing medical harm, we can't tell if we are any better off than we were a decade ago.

See the full report at *http://www.safepatientproject.org/ safepatientproject.org/pdf/safepatientproject.org-ToDelayIsDeadly.pdf.*

swore to uphold ethical standards and when the Hippocratic Oath was believed to have been written. Although the Oath's original wording has undergone many variations over time and is not universally required by medical schools today, its "do no harm" theme remains a guiding principle, according to the National Institutes of Health's (NIH) History of Medicine Division of the National Library of Medicine (*www.nlm.nih.gov/hmd/greek/greek_oath.html*).

But despite best intentions, mistakes happen and patients are harmed. According to the Consumers Union 2009 Safe Patient Project, "more than 100,000 patients still needlessly die every year in U.S. hospitals and healthcare settings—infected because of sloppy compliance with basic cleanliness policies, injured by failure to follow simple checklists for safety." That's despite the Institute of Medicine's (IOM) "To Err is Human: Building a Safer Health System" report a decade ago, stating that preventable errors caused the deaths of between 44,000 and 98,000 hospital patients. Even then, the report said, "Healthcare in the United States is not as safe as it should be—and can be."

The spotlight on hospital errors intensified focus on improving inpatient safety while changes in the medical office were left to individual practices—not because patient safety was regarded as any less important in the ambulatory setting, but because inpatient mistakes tended to be more catastrophic and because it was easier in the inpatient setting to examine existing systems, to monitor procedures as well as providers, and to fund and implement change.

After The Joint Commission found that 70% of adverse events can be traced to a "communication problem," Alan Rosenstein, MD, started to look at the human-factor side of why people make mistakes. Dr. Rosenstein is medical director of Physician Wellness Services online and vice president and medical director of the west coast office of VHA, a national network of not-for-profit hospitals working to improve clinical and economic performance. His organization's research showed that 50% of physicians "are just not good communicators" and that "this directly relates to patient safety." Healthcare is so complex now because there are more new technologies, more specialists, and often multiple doctors treating any given patient. "When you

have ten physicians collaborating on a patient [at any given time], think of the mishaps that could occur if they are not communicating," he says.

He points out that hospitals have improved their safety practices with new technologies for electronic surveillance, more checks and balances to make sure that people are being very conscious about what they're doing, and early alerts to warn when something contrary to policy is being done. Hospitals have made "remarkable improvements," he adds, "but errors still occur." (See "Why Inpatient Care is Still Your Problem," p. 19.)

"The idea for me," Dr. Rosenstein says, "is making physicians aware" of how their behavior and communication skills affect the staff they work with as well as their patients.

Ambulatory Care Quality

While the inpatient world focused on patient safety, ambulatory care focused on improving quality, says Lisa M. Letourneau, MD, MPH, executive director of Maine's Quality Counts, a project of the Robert Wood Johnson Foundation's Aligning Forces for Quality (AF4Q) initiative (*http://www.mainequalitycounts.org*).

Now inpatient safety and quality care are coming together, and the move to improve patient safety in ambulatory care is growing, too, she says. "I've been doing this work in Maine for about ten years now, and it is a far different world today from what it was even three years ago."

In the past, a gap in medical training resulted in "far less emphasis on creating safe systems of care" and more emphasis on doing the right thing for individual patients, Dr. Letourneau says. The hope was that better care for individuals would translate into better care for populations, but "that doesn't always happen," she says. Developing best practices helps physicians see the link between doing what they think is best for each patient and building a better system to make sure the whole population of patients gets safer, higher-quality care.

The $300-million AF4Q initiative offers new approaches to finding healthcare solutions. "The whole notion of [their] effort," Dr. Letourneau says, "is that change happens in a region and that change happens not because of one isolated thing here

or there," but because of the following "drivers of change" that combine forces within a community:

- Community leadership
- Performance measurement
- Public reporting of quality data
- Quality improvement assistance to providers who are ready to make a change
- Consumer engagement about the use of quality data, health information technology, and payment reform

Like the "it takes a village" concept, what makes the AF4Q program work is that it combines the efforts of people—community leaders, healthcare providers, and consumers—working toward a common goal with the measurement, reporting, and payment reform tools they need to achieve success. (See "Is There a Quality Initiative Near You?" p. 20.)

Couldn't doctors just do things on their own? Of course, but the burden on the individual practice would be far greater. For example, it would be possible for an individual doctor or practice to tackle a diabetes quality improvement project, but it's unlikely that many doctors would want to try it. "Over time," Dr. Letourneau says, "it would be difficult to sustain."

How well is Maine's Quality Counts project working? The number of primary care practices in Maine that have been awarded blue ribbons (the symbol of quality and achievement in the AF4Q rating system) has increased. Among the 447 practices, those

achieving two blue ribbons increased by 20% and those achieving three ribbons increased by 35%. Now more than half the state's primary care practices have earned two or three blue ribbons.

What Works?

To find out what works, healthcare organizations are focusing on learning how other high-risk industries reduce their error rates and then applying those same techniques to medicine. One such organization is the National Patient Safety Foundation (NPSF), which was created in 1997 in response to what seemed to be an inordinate number of unexpected, avoidable events that led to serious injury or death.

Best known among these events was "the Betsy Lehman overdose," says Diane C. Pinakiewicz, president of NPSF. A 39-year-old mother of two, the health columnist was being treated for breast cancer and died after an accidental overdose of an anti-cancer drug. Then a seven-year-old child died in Florida because he was injected with the wrong medication during routine, elective ear surgery. "We had a wrong leg amputated in Tampa. We had the wrong side of the head operated on in New York," Ms. Pinakiewicz says. "It suddenly seemed as if there was a lot of this going on."

Other high-risk industries—aviation, NASA, petroleum, nuclear power—had used safety science to successfully reduce their errors. Could that same science be applied to healthcare?

A 50-person board was assembled including patient representatives, trial attorneys, insurers, and various representatives from the pharmaceutical industry, organized medicine, nursing, aviation, human factors research, and safety science. That was the start of NPSF. The diversity of disciplines and problem-solving tools helped the team realize there were similarities between healthcare and other industries that also had complex, high-risk processes. The cross-application of solutions from one industry might work for healthcare, too.

Today the organization offers programs like "Ambulatory Stand Up for Patient Safety" for doctors in the ambulatory care setting. It provides members with easy-to-use patient safety resources and materials for ambulatory patient care (see *http://npsf.org/hp/su/Ambulatory.php*). Member Resource Guide

Why Inpatient Care is Still Your Problem

Because many primary care doctors no longer perform inpatient care, there's a tendency to think hospital errors are "not my problem."

"I think that the biggest thing for physicians is to recognize that even though they may not see a lot of safety issues in their own individual practices, these things are occurring to a significant degree at hospitals around the country," says Matthew J. Lambert, III, MD, FACHE, senior vice president for clinical operations, Elmhurst Memorial Healthcare, Elmhurst, Ill., and author of *Leading a Patient-Safe Organization* (Executive Essentials Book, 2004, *www.ache.org*).

All physicians reflect on what they see in their own practice and determine whether a problem exists, Dr. Lambert explains. But even if a problem is rare or doesn't happen in your practice, it still warrants attention.

For instance, before he became a full-time administrator, Dr. Lambert says (as a surgeon), "I never had a case of wrong-site surgery. I don't even remember seeing a case of wrong-site surgery. But the fact is that it does occur with some significant frequency around the country; and even though it is a rare event, it does require that safeguards be put in place to prevent it."

Because wrong-site surgery is rare, many surgeons bring a perfunctory attitude to the operating room when they're engaged in some of the policies and procedures designed to prevent it, Dr. Lambert says. "You can extrapolate that out to any other safety issues," he says, "whether it be bloodstream infections or falls or pressure ulcers."

modules, for example, include DVDs; brochures; audio-Web conferences; subscriptions to related newsletters (such as "Current Safety Awareness" and "Focus on Patient Safety"); management seminars; and a members-only, Web-based discussion group. Each year at its Patient Safety Congress, NPSF brings together healthcare stakeholders including healthcare executives and administrators, patient safety officers and risk managers, quality improvement directors, doctors, nurses, pharmacists,

government leaders, educators, and patient safety thought leaders. The next congress will be held May 17-19, 2010, in Orlando, Fla.; conference highlights will be posted on *www.NPSF.org*.

Team Players

The future of ensuring quality care is a "service-line of care" model, in which physicians are made aware of what happened prior to their involvement with the patient and what is going to happen to the patient afterward, Dr. Frankel says.

"The delivery of care is not going to be by independent practitioners; it is going to be as members of teams," he says. And the next major change, which is already in place in certain areas, will be applying improvement in teamwork to service-line delivery, led by integrated delivery systems and clinic models like Kaiser, Mayo, and Cleveland Clinic, according to Dr. Frankel.

AF4Q brings together local community resources and aligns the key figures—physicians and physician groups, nurses, and clinics; employers and insurers; and patients—to improve the quality of healthcare for chronic care patients. As a result of

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Is There A Quality Initiative Near You?

The Robert Wood Johnson Foundation's Aligning Forces for Quality initiative currently operates in these 15 locations (note that not all locations are specific cities):

- Albuquerque, N.M
- Cincinnati, Ohio
- Cleveland, Ohio
- Detroit, Mich.
- Humbolt County, Calif.
- Kansas City, Mo.
- Maine
- Memphis, Tenn.
- Minnesota
- Seattle, Wash.
- South Central Pennsylvania
- Western Michigan
- Western New York
- Willamette Valley, Ore.
- Wisconsin

Rising concerns about patient safety spurred passage of the Patient Safety and Quality Improvement Act of 2005 (Public Law 109-41). This act was intended to encourage confidential reporting of adverse events and the creation of Patient Safety Organizations whose task would be to collect and analyze reported events, to identify patterns, and to find ways to eliminate patient safety hazards.

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these joint efforts, they have found that patients are more adherent, cooperative, and informative. Employers and insurers learn to support and appreciate the value of preventive care. Physicians, practices, and healthcare teams including non-medical support staff (office clerks, receptionists, schedulers, billing staff, etc.) share the same vision.

The federal government also supports team practice and team training by funding the Agency for Healthcare Research and Quality's (AHRQ) TeamSTEPPS (*http://teamstepps.ahrq.gov*), a new evidence-based team training and implementation toolkit, which demonstrates techniques of effective communication and other teamwork skills.

Best Practice Coaching

If you think you're already doing a good job, it may be eye opening to get another opinion. For example, internists who are members of the American College of Physicians (ACP) can use ACPNet, a Web-based quality improvement program that helps doctors incorporate evidence into practice, teaches doctors how to implement quality improvement tools and techniques, and provides support (see *http://www.acponline.org/running_practice/quality_improvement/projects/acp_net*).

"We tell them about the evidence-based best practices. We provide educational programs to increase their awareness about the standards of care," says Amir Qaseem, MD, PhD, FACP, senior medical associate in ACP's clinical programs and quality-of-care department. Once you give ACPNet your data, it will analyze your practice patterns, tell you where your team needs to improve, then help you make the improvements.

For example, an ACPNet analysis might reveal that your practice's diabetic patients are not getting regular eye and foot exams and hemoglobin A1c monitoring. Often a doctor's first reaction is denial, Dr. Qaseem says: "The data must be wrong. This can-

not be my practice data. The data shows only my most sickly outliers." But when doctors realize the data really is theirs and is accurate, they can begin making positive changes. Although physicians tend to want to fix everything at once, small steps are more sustainable. For example, a doctor whose diabetic screening was inadequate might tap ACPNet resources for a system that would help his office staff identify all the practice's diabetic patients. Next, he might set up a training program to make sure the practice staff understands and follows the key steps for diabetic patient care. Then he might start a tracking program to record when diabetic patients have had eye exams, foot checks, and A1c tests; and the staff might flag when patients are due for follow-up visits. For more advice, see "Four Tips to Improve Safety in Your Practice," opposite.

Reduced Malpractice Risk

Physicians should welcome practice guidelines, clinical algorithms, and other approaches that narrow the range of practice based on evidence, in order to provide the best care for patients and to make sure that care is consistent from one state or city to the next, Prof. Furrow says. But there is another useful reason, too: a reduced malpractice risk.

For one thing, the "presumption of compliance with the standard of care" would be "a little bit of a malpractice defense shield that you can erect," Prof. Furrow says. For another, consistency may even lower your malpractice insurance costs.

Best practices establish a "floor," or minimum level of practice. "It means you've got to keep up, not just with what you learned in medical school; you've also got to pay attention to your CME, and you've got to know what the best practice in your specialty is," Prof. Furrow says. That's not always easy, and it may take time to develop "gold standard" agreement on how to do things.

Setting Up a Tracking System

A key part of standardizing a practice is setting up a system that reliably tracks such things as lab tests, X-rays, and referrals. Tracking should be part of the way workflow is designed, and staff should be held accountable for using the system you put in

place, explains Bruce Bagley, MD, medical director for quality improvement for the American Academy of Family Physicians (AAFP). Electronic records can make the task easier; but regardless of the device—even a simple notebook can be used as a log—tracking is vital to patient safety.

It is, of course, vital to inform patients when their tests show clinically significant abnormal results; but too often, that is not happening, according to research published in the June 22, 2009, *Archives of Internal Medicine*, which showed that the key to success was having good processes in place to manage test results. (See *http://archinte.amaassn.org/cgi/content/ short/ 169 /12/1123*.)

Four Tips to Improve Safety in Your Practice

Patient safety efforts have focused on hospitals more than outpatient care because the magnitude of errors is lower in the outpatient sector and mistakes don't lead to patient deaths as often. But there are clearly many opportunities for improvement in the outpatient setting, according to Bruce Bagley, MD, medical director for quality improvement for the American Academy of Family Physicians.

Here are four steps you can take to improve safety in your office:

- **Train staff to practice injection safety.** "Don't just give a shot, walk out the door, then have the patient faint and bump their head," Dr. Bagley cautions. Patients should be lying down or observed for a short time after an injection.

- **Elderly patients should get an "eyeball assessment"** by the nurse to determine how agile they are and whether they need assistance to change into a gown and get up on the table.

- **Meet with your staff to discuss systems you'll be using.** You'll be sure all members of the team will be doing the same things in the same way, and you'll be more likely to hold people accountable if they fail to follow the procedures. "If you don't have that discussion," Dr. Bagley says, "you don't have any agreed-upon game plan, and nobody holds anybody to anything."

- **Check your office's emergency preparedness.** What's your plan if a patient has a cardiac arrest in your waiting room? Is a defibrillator available? Does somebody check the crash carts regularly to make sure the medicines are there and up to date?

A review of 5,424 records of patients aged 50 to 69, randomly selected from 23 primary care practices (19 community-based, mostly small practices, and four academic medical centers) found a 7.1% failure rate—failure either to inform patients of abnormal results or to document having informed the patient. That's roughly one failure in every 14 abnormal tests—results that, as the authors point out, can be lethal for the patient and can, as the review says, "expose physicians to indefensible malpractice liability."

The review included 11 blood tests, mammograms, Pap smears, and fecal occult blood tests. The authors expected to find lower failure rates in practices that used EMRs; but in fact, the study found no significant difference in failure rate between practices using EMRs and those using paper records to track patient notifications. Practices that used a combination of both paper records and EMRs had the highest failure rates.

The good news is that a simple system to deal with test results can slash error rates. The best practices (those with the lowest failure rates) followed these five key steps:

1. Results are routed to the responsible physician.
2. That physician signs off on the results.
3. Patients are informed of all results—normal and abnormal.
4. The practice documents that the patient has been informed of test results.
5. Patients are asked to call after a certain time if they haven't been notified.

In order to provide reliable quality and consistent care, physicians need a systematic way to monitor patients' status. Chronic care registries—lists of patients in the practice who have a certain condition—offer a simple and effective tool to track patients who have or have not had a recent office visit, patients who have or have not had their flu shots, etc.

For instance, Dr. Bagley says, a single family doctor might have 100 to 120 diabetic patients, each of whom would be listed on that practice's diabetes registry, a document that looks like a spreadsheet. Entries for each diabetic in the registry would show when the patient was last seen and when he or she last had a hemoglobin A1c test, foot exam, eye exam, LDL test, and other

procedures. Using a tracking system means "you're proactively managing people instead of just relying on them to come in and say, 'Hey, I'm here for my diabetes check,'" he explains. "Big difference." Once you've decided which parameters are priorities in your practice, everybody on staff should use them regardless of his or her role on the patient care team, Dr. Bagley says. Of course, a commitment to good communication is also a part of the equation.

Making Patient Safety Work

Given the new trends in ensuring patient safety, gone is the old fallback of blaming an error or unintended outcome on a "bad provider." Instead, explains Ms. Pinakiewicz, using the team approach to look at the incident and perform a root-cause analysis like other industries often produces a different explanation.

"You find out that . . . often . . . you have a well-intended, capable provider caught in a set of circumstances" that led to a consequence that was not the point-of-care provider's fault, she says. Amending those circumstances is a matter of addressing process issues.

It's not easy to shift from an individual perspective to seeing your role in the larger system of healthcare. "[Medicine] is a very autonomous type of profession where we're used to taking care of our own patients in our own way," says Matthew J. Lambert, III, MD, FACHE, senior vice president for clinical operations, Elmhurst Memorial Healthcare, Elmhurst, Ill. But making that adjustment is important in preventing rare problems.

Help is available not only from medical associations like ACP, but from resources such as Medicare's Hospital Compare (*www.hospitalcompare.hhs.gov*) and The Joint Commission's National Patient Safety Goals (*www.jointcommission.org/ patientsafety/nationalpatientsafetygoals*), which includes information on sentinel events and patient safety in a variety of settings including ambulatory, critical care, hospitals, long-term care, and other facilities.

Which approach or tools work best? "All that matters is that people take advantage of the knowledge," Ms. Pinakiewicz says, and "do the best they can to improve."