Insight

crico
2014

Category	Percentage
Clinical Judgment	68%
Communication	32%
Technical Skill	28%
Clinical Systems	21%
Behavior	19%
Administrative	14%
Documentation	13%

Risks of Ambulatory Care

The current health care landscape creates tremendous challenges, particularly in a climate focused on reducing cost and increasing efficiency. For example, payor/provider risk contracts incent providers to focus on the cost and quality of health care, but not on patient safety. Compounding these issues, the ambulatory setting presents unique challenges for creating safe systems. Chaos is an underlying condition within primary care practices, where problems include: workload/production pressures, time constraints, panel composition and size, isolation, haphazard routines, staffing challenges, unclear role definition, and communication challenges around handoffs and referrals. As you are well aware from your own experience, the complexity and level of perpetual dysfunction in these environments can seem insurmountable. At CRICO, we are able to provide clarity and focus on areas where there is an opportunity to have a positive impact. Through in-depth analysis of our medical malpractice claims, we can clearly illustrate the risks inherent in ambulatory practice. More than a third of ambulatory cases cite a diagnostic error; 11% of those involved a problem with referral management and 90% of referral management cases involved a failure or delay in obtaining the consult. It is our goal to use our data and resources to drive change, improve patient safety, and reduce risk in the delivery of ambulatory care delivery. The articles and data contained in this publication are one way in which we work towards that objective.

Luke Sato, MD
Senior Vice President and
Chief Medical Officer, CRICO

Insight

Risks of Ambulatory Care

The Future of
Primary Care

by Andrew L. Ellner, MD
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The Future of Primary Care: View from the Front Line

Andrew L. Ellner, MD

It is a time of great challenge and opportunity in primary care. I have the privilege to work both at the front lines of our health care system, as a primary care physician in a busy academic internal medicine practice, and in a position focused on systems and educational redesign and policy, as the Co-Director of the Harvard Medical School Center for Primary Care (the Center).

On the front lines, while I experience many rewarding interactions with patients, staff, and other providers, I also experience frequent frustration. My clinical sessions are filled with challenging cases that are complex from a medical and psychosocial perspective. These are the patients who drew me to medicine—but to effectively care for them, resources (time, support staff, information technology systems) must be in place. Instead, I find myself spending too much time on documentation and administrative tasks, and too little time building inter-personal relationships or conducting the reading and thinking that allow for complex diagnoses and management plans. I constantly feel at risk of missing something that could have harmful consequences for one of my patients. I worry about burning out.

What are the aims of the AIC CARES Initiative?

- Continue practice transformation towards high functioning interdisciplinary teams.
- Prevent missed and delayed diagnoses of breast and colorectal cancer in adults and developmental delay in children through new systems and processes.
- Improve the care of patients at high risk for harm due to low socioeconomic status, multiple diagnoses, and/or behavioral health conditions.
- Spread transformation across our affiliated practices and systems.

Primary Care Physicians at CRICO

2,097
CRICO-insured PCPs

45%
of cases naming a PCP involved multiple providers

71%
of PCP cases involved a diagnostic failure

$842k
average indemnity paid per case

59%
of PCP diagnosis cases involved cancer

PATIENT-CENTERED MEDICAL HOMES

In my work at the Center, I am fortunate to envision a primary care experience that is radically different, and much better, for patients, providers, and staff. Much has been written, not all of it supportive, about patient-centered medical homes (PCMHs). This dialogue and analysis are necessary, but can also be a distraction from common sense. When patients are facing a shortage of access to primary care, it is profoundly wasteful to have highly-trained and expensive medical doctors performing basic administrative tasks or following simple algorithms. We need to work together to leverage the time and expertise of all members of a high-functioning team, including practice assistants, medical assistants, nurses, pharmacists, and others. Innovations in information technology have revolutionized other industries, dramatically altering how people work, communicate, manage, and analyze. We should figure out how to use IT to proactively manage populations of people or ensure that patients get basic recommended preventive and chronic disease care. And, we should allow patients to communicate with their physicians in new ways outside of the doctor's office, to ensure nothing about patients' care falls through the cracks.

CENTER FOR PRIMARY CARE
HARVARD MEDICAL SCHOOL

CRICO is dedicated to helping its members and affiliated health care organizations improve the quality and safety of the patient care they provide. We offer grant monies to stimulate research and patient safety interventions, including support for the Harvard Medical School Center for Primary Care. Our collaboration with The Center through the CARES Collaborative enables The Center to leverage core CRICO programs in ambulatory safety, such as the Ambulatory Risk Management (ARM) Program and our cancer screening algorithms for diagnosis and treatment of breast and colorectal cancer.

We are excited by the work the Center has accomplished since its inception and are thrilled to support the AIC CARES Collaborative as we work to make primary care safer for the patient and the provider.

Most evaluations of the PCMH have taken a narrow, short-term view, to assess how a specific intervention (such as achieving National Center for Quality Assurance certification) impacts the quality and total cost of care. Looking through this narrow lens, we see that while not all PCMHs are created equal, most are at least as good as the current state of care delivery, and many are better. Several studies have found that high-functioning PCMHs deliver equal or better quality of care at equal or lower cost. In the short-term, the impact on cost is most likely due to a decrease in hospitalizations among the small percentage of highly complex patients who are frequently hospitalized. Traditionally, these patients account for a vastly disproportionate amount of overall health care expenditure.

How do we create high-functioning systems of care that serve patients exceptionally well in the ways people want to be cared for?

How do we build and sustain a high degree of quality, safety, and reliability in primary care?

How do we make the work joyful and sustainable for providers and staff?

DOES IT WORK?

Still, assessing whether the PCMH "works" or "doesn't work" is not particularly helpful at this time. We know from population-level studies that areas with more robust primary care have better health outcomes at lower cost. We might instead ask questions like: how do we create high-functioning systems of care that serve patients exceptionally well in the ways people want to be cared for? How do we build and sustain a high degree of quality, safety and reliability in primary care? How do we make the work joyful and sustainable for providers and staff?

Given the workload and complexity of primary care, there is no way to deliver on this promise unless we figure out how to work well with teams and use IT systems in new ways. Our patient should be considered the most important member of our team. Our patients spend the vast majority of their time out of our offices; their actions have much greater impact on their health than any medicine we can prescribe, and are almost completely outside of our control.

ACADEMIC INNOVATIONS COLLABORATIVE

At the Center, we have had the privilege of beginning a journey towards high-performing, team-based care through our Academic Innovations Collaborative (AIC). The AIC is a partnership of 20 primary care practices associated with the six major HMS affiliate hospitals (Brigham and Women's Hospital, Beth Israel Deaconess Medical Center, Boston Children's Hospital, Cambridge Health Alliance, Massachusetts General Hospital, and Mount Auburn Hospital). With the assistance of the non-profit organizations, the Institute for Healthcare Improvement (IHI) and Qualis Health, we designed and implemented a two-year learning collaborative that focused on building teams, engaging patients, and building capacity for managing clinic populations to improve chronic disease and preventive care.

While making significant improvements in all participating practices, we learned important lessons. We learned that engaged and effective leadership at every level is critical, from the front line clinical teams to the hospital's C-suite. We also learned that this complex transformation process is not linear. Clinics were able to make great leaps forward after important organizational interventions such as a reorganization of reporting structures or a change in leadership. And, we learned that the voice of patients can be particularly powerful in helping providers and staff understand the types of changes needed and the urgency for making them.

LOOKING AHEAD

Going forward, we are delighted to welcome two Atrius Health practices. The next phase of the AIC will be focused on building systems to deliver care that is **C**omprehensive, **A**ccessible, highly **R**eliable, **E**xceptional and **S**afe. The AIC CARES Collaborative will continue to focus on building high-performing teams, and use the existing team-based platform to create highly reliable systems for ensuring early and accurate diagnosis of important conditions. The Collaborative will tackle important issues like breast and colorectal cancer (CRC) in adults, developmental delay in children, and caring for patients of all ages with complex care needs. It will be critical in this phase to begin to focus on how our primary care teams can best integrate with the broader systems in which they work. We will pay particular attention to IT systems and specialists, such as gastroenterologists in the case of CRC prevention.

Through our work, we have a better understanding of the challenges primary care providers face on the front lines, and are helping develop teams and systems that will alleviate these challenges. This work will allow us to re-focus on why we went into health care in the first place—to provide exceptional, safe, relationship-centered care for our patients and families. I am convinced that learning how to work on high-functioning teams and using well-designed IT in new ways is critical to getting there, and that doing so will restore the joy and meaning we crave.

Andrew L. Ellner, MD is Associate Physician in the Division of Global Health Equity at Brigham and Women's Hospital and a primary care physician at the Phyllis Jen Center for Primary Care. He is also Co-Director at the Harvard Medical School Center for Primary Care.

Does Following a Clinical Guideline Help Later in Court?

When it comes to clinical guidelines, providers often ask, "Does following a clinical guideline or published algorithm in the course of evaluating a patient or recommending treatment have implications for professional liability?" In other words, if something goes wrong, and a patient blames the doctor, do clinical guidelines help or hurt in the defense of a malpractice claim? CRICO asked a leading defense attorney in Boston for some insights.

A CRICO Interview:
Ellen Epstein Cohen, JD

Do clinical guidelines help or hurt in the defense of a medical malpractice claim?

You have to first ask: What's the role of the use of clinical guidelines in the practice of medicine? Because the best and strongest way to defend any medical malpractice allegation is to prove that you practiced good medicine. If you are in a specialty and there are guidelines that are published and widely used and referred to in the field, then it would be appropriate in treating the patient—to use, refer to, and try to conform—to those guidelines. On the flip side, what is the significance if in a particular patient's care you do not comply with the guideline? Does that mean that you were negligent? The answer to that is no. It doesn't mean you were negligent, but it would be one piece of evidence that a plaintiff lawyer and expert on the other side would use to try and argue that your care did not comply with the standard of care. To say it more simply, guidelines can be one piece of evidence in trying to prove what the standard of care is.

CRICO guidelines are updated every 2–3 years. Does it matter which version was current at the time of an event or is the long-term adherence the thing that is critical?

We know that the practice of medicine is not static. It's changing and evolving and improving all the time, and that's why the guidelines are changed and modified as the state of knowledge is increased and improved. A practitioner will be held to the standard of care that applies at the time of the treatment rendered. Many years down the road when we're in a courtroom defending that care at a trial, we describe the standard of care in place at the time of the incident. That's what the practitioner is held to, and it

may be evidenced in part by what the guidelines were at that time. So earlier versions of the guidelines are very important to us in defending these cases.

How about the process behind developing guidelines. Does the use of subject matter experts, peer reviewed articles, outcome data, professional society pronouncements, etc., make a guideline better than those derived from a less rigorous process?

The more rigorous peer reviewed guidelines have greater weight and credibility in establishing what the standard of care is. They are only one factor in establishing that, but the more rigorously designed guidelines, the ones that are reviewed by blue ribbon panel, by people who are invited as experts in the field, the ones that are published in the peer review literature, the ones that are published by the leading national organization in a field of specialty—those tend to have greater weight in proving what the standard of care is and is not.

Are disclaimers important?

They are very important, and as a defense lawyer, I have referred to them and read them aloud to juries where necessary. I think it's very important to make clear that these are intended to guide and assist providers but not to compel them to treat any particular patient in the same exact way as every other patient. They usually have some kind of disclaimer somewhere in the document which says that these are general guidelines and recommendations which of course must be modified or used within the judgment of the provider in the care of individual patients.

What's the bottom line for how clinical guidelines affect a legal defense?

Guidelines are a very important part of, first and foremost, providing good care and trying to assist providers in how to approach specific medical issues. But I think they also play an important role in the courtroom in the defense of medical malpractice cases. Even if there was a bad outcome, we can still prove that it was a reasonable and appropriate workup because it complied with a guideline. On the other hand, when the guidelines are used against our providers to say you didn't do it exactly this way, the disclaimers become important. Our doctors and nurses will then explain why a particular patient's circumstances mandated some variation from what the guideline recommends.

———

Ellen Epstein Cohen, JD, is a partner with Adler, Cohen, Harvey, Wakeman & Guekguezian, LLP, interviewed by Tom Augello, CRICO.

CRICO's Decision Support Tools

Created by physicians for physicians

Clinical and patient safety best practices to protect you and your patients

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- Case Studies
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A CRICO DECISION SUPPORT TOOL

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A DECISION SUPPORT TOOL

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Ahead of Her Time
in Ambulatory Patient Safety

A CRICO Interview:
Gila Kriegel, MD

IS TAKING CARE OF YOUR OWN PATIENTS ENOUGH?

Multiple generations in the same family have received care at Beth Israel Deaconess Medical Center (BIDMC) from Gila Kriegel, MD, and she loves them. But her answer would have to be 'no.'

Before many of her colleagues really "got" what she was doing, Dr. Kriegel was trying to systematically make care better and safer for their patients too. Today this places her at the center of a data and dollar-driven movement to reduce preventable bad outcomes in ambulatory medicine.

Primary care in particular has historically received less attention than the inpatient setting, for risk management or patient safety. Data now show that malpractice claims are most likely to arise in the outpatient setting. After toiling in some lonely fields for more than 20 years, Dr. Kriegel is finally in the vanguard.

"It's really nice that our time has come, because we were working and not getting a lot of recognition so it's very exciting that there's new enthusiasm for the kind of work we're doing. It's wonderful."

ERROR PREVENTION BEYOND THE INPATIENT SETTING

While the medical world gradually recognized the need for error prevention beyond inpatient settings, Dr. Kriegel and some of her colleagues in ambulatory care weren't content to wait. They saw ways to shore up vulnerabilities around them, starting with a focus on documentation and screening tests.

Pap smear management, high-risk referrals, coordination with specialists on follow up of individual patients, and medication reconciliation: these have all felt the light beam of Dr. Kriegel's quality and patient safety focus.

"Patient safety risk in ambulatory care is different because cases unfold over a long period of time. The risk is not always as apparent, and even the fact that there was an adverse event isn't always that apparent. You have to ask the question, then look to see whether this was something that could have been prevented or whether something might have made a difference to prevent it."

One case involving a patient who did not get appropriate immunization or antibiotics for infections despite being asplenic, led to a Plan/Do/Study/Act intervention with Dr. Kriegel's leadership. Asplenic patients on the panel were put on a monitoring list to verify their immunization status. Some changes worked, and some didn't as they designed a new "population management" approach that raised the percentage of asplenic patients with appropriate interventions from 14 percent to almost 90 percent.

REMOVING ROADBLOCKS

Project interventions have helped, but so have changes to everyday workflow. Marching her five-foot frame in and out of exam rooms three days a week at her group practice at BIDMC, Dr. Kriegel tries to apply some of the lessons learned about effective patient safety techniques in hospitals.

She holds a "huddle" with staff at the start of the day to get a shared mental model of the day's patient issues and priorities. If a test result is misplaced or unaddressed, she clicks on a simple computerized "near-miss" report and shoots it off to the hospital's reporting system.

It's a reporting process that Dr. Kriegel helped pioneer at BIDMC for outpatient risk management. Similarly, when she looked around for a protocol on ordering and managing pap smears, there wasn't one. So she wrote it.

"One of the big issues in ambulatory safety is closing the loop on test ordering and result management. So many steps take place. And they take place over a long period of time as compared to the inpatient setting where you order a chest X-ray, it gets done, and you get the result right away. In the outpatient setting, something like a mammogram or a colonoscopy, you order it at a visit; it may or may not get scheduled. The patient may or may not come in. The results may or may not get back to you. If they get back to you, you send the patient a letter; you try and get in touch with the patient. You may or may not reach them. There are challenges every step along the way."

Dr. Kriegel and her colleagues in quality improvement continued blazing trails, finding their own way forward in a safe work environment provided by the hospital. Now, the organizational support is beginning to grow. New federal rules and other institutional mandates on patient safety even come with money.

The Harvard system, via CRICO, has distributed millions of dollars in project grants, and provided initial funding specifically for ambulatory risk management staffing. Dr. Kriegel says having a risk manager in her setting at BIDMC has made many of her efforts possible and more effective.

She believes every ambulatory practice will be getting into the patient safety act eventually.

"As the systems become more complicated, you need to be able to step back and look at when things go wrong, how can you change those systems to make sure that your patients are getting the best quality of care and that there aren't things in the system that are conspiring against that."

MAKING A DIFFERENCE

Participating in these improvement efforts is one way that Dr. Kriegel copes with increasing complexity and change. She says she is "compulsive" about documenting the shared decision-making that she carefully pursues with patients, including the uncertainty inherent in primary care.

"We live with a lot of uncertainty in general medicine, a lot of uncertainty. You cannot admit every patient who has some kind of chest pain. You can't scan every patient who has abdominal pain. You have to be able to live with that and it's not always easy. It's never easy."

Yet the bond with her patients runs deep. Having practiced for such a long time, she says, means her patients are like friends. When she enters the exam room, they know her and she knows them. A drawer full of thank you notes from patients and their families is also crammed with plenty of chocolate gifts that Dr. Kriegel is quick to share with visitors. "People are very appreciative and it makes you want to keep on sort of fighting the good fight."

 "I love the improvement work because I feel that the work I'm doing extends to other patients in our practice. And it also impacts patients in the whole hospital, the hospital system, and through the work with CRICO to other Harvard hospitals. That's very motivating, because you can multiply your efforts and see them making a difference."

Gila Kriegel, MD, is an internist at Beth Israel Deaconess Hospital and Assistant Professor of Medicine, Harvard Medical School. She was interviewed by Tom Augello, CRICO.

Diagnosing Diagnosis

In ambulatory care malpractice cases alleging diagnostic failure...

39%
of cases involved a problem with evaluation of the patient's symptoms

44%
of cases involved a problem with ordering a diagnostic test or lab work

26%
of cases involved a problem with follow up with the patient

When a Procedure is Anything but Routine

- A nurse's incorrect selection of needle size for the chemotherapy port results in excoriation of tissue, infection, and the need for additional surgery.

- When her care team fails to diagnose a bowel perforation after a screening colonoscopy, the 66-year-old patient dies.

- A patient undergoing a core needle biopsy for a breast lesion experiences a lung puncture.

Each year, thousands of patients undergoing routine screening, diagnostic, or therapeutic procedures in an ambulatory care setting face the consequences of a seemingly benign process that went wrong. When those patients are injured and they (or their families) seek compensation for their losses, their physicians, nurses, and technicians have to face the consequences of a medical malpractice allegation.

A study of more than 18,000 cases in CRICO Strategies' national Comparative Benchmarking System (CBS) found that 18 percent (1,497) involved errors related to routine (non-surgical) procedures. The vast majority (71 percent) occurred in ambulatory settings. While more than two thirds of the injuries were relatively minor, 14 percent of the procedure cases involved patients who died. Of the procedure-related cases that have closed, 36 percent closed with a payment

(average=$212,000). Most of the procedures that triggered these cases fall into one of six distinct categories (see below).

More than half (56 percent) of the procedure-related cases in the CBS study named a physician (across more than 40 specialties); six percent named a nurse. Although technical errors during the procedure dominate these cases (88 percent), they do not exclusively reflect hands-on skill lapses. Errors related to rules of practice or protocol (21 percent of the cases), and errors in the caregiver's knowledge and clinical judgment (28 percent) are also commonly involved—often compounding a skill error.

Additional data, case examples, and recommendations and best practices related to routine medical procedures, can be found in CRICO's *2013 Annual Benchmarking Report, Malpractice Risks of Routine Medical Procedures.*

	% CASES	AVG TOTAL INCURRED	EXAMPLES
Scopes	24 %	$ 108 K	colonoscopy, cystoscopy, bronchoscopy, etc.
Injections	20 %	$ 184 K	anesthesia, medications, chemotherapy, etc.
Punctures	19 %	$ 175 K	venipuncture, spinal tap, thorocentesis, etc.
Biopsies	16 %	$ 91 K	aspiration, excision, etc.
Tubes	13 %	$ 214 K	ETT, CT, NG, PEG, urinary catheter, etc.
Imaging	7 %	$ 33 K	diagnostic (CT, MRI, etc.) and interventional

Case Study:

Failure to Connect the Dots During Multiple Visits

Jessica Bradley, MPH

A 43-year-old male smoker who was seen often for episodic care over five years, died of sudden cardiac arrest.

Explore more case studies:

KEY LESSONS

Episodic visits to multiple physicians can complicate continuity of care.

Offices need reliable systems to contact patients who do not keep appointments.

Multiple physicians caring for the same patient need to communicate with each other about who will serve a coordinating role when the patient lacks a PCP.

CLINICAL SEQUENCE

A 38-year-old male first presented to a multi-site primary care practice with a complaint of hemorrhoids. The physician diagnosed a bleeding hemorrhoid and gave the patient educational material to follow (blood pressure was 138/94). Seven months later, the patient was seen by the same physician, as well as a nurse practitioner, with a chief complaint of earwax (BP 110/90).

He was next seen in the practice two years later, by a different physician, for a persistent cough (BP 132/100). The diagnosis was bronchitis, hypertension, and smoking dependency. He received prescriptions for antibiotics and cough medicine. In addition, the physician recommended smoking cessation and asked the patient to return in one month for a blood pressure check. The patient did not return for the check up.

Seven months after that visit, the patient returned with right ankle pain (BP 144/98). He was seen by a third physician, who diagnosed a sprained ankle and prescribed Ibuprofen and an air cast. The patient

returned for a one-month follow up with one of the earlier physicians, with continued ankle pain and swelling (BP 134/92). He received Indocine for his ankle pain, as well as recommendations that he follow a low salt diet, exercise regularly, and return in 3–6 months to have his blood pressure rechecked.

He returned in two months with continued foot and ankle complaints. He was seen by an NP, who referred the patient to Orthopedics (BP 130/88). When seen by Orthopedics a week later, his X-rays were negative for a fracture. He was placed in a walking cast, which was removed three weeks later.

Nine months later, the patient was treated for hemorrhoids (no BP noted). During a subsequent appointment soon after, the patient has earwax removed by an NP (BP 122/88).

The patient returned again six months after that, and was seen by a fourth physician who diagnosed bronchitis (BP 144/88). In less than a month, he was seen for hemorrhoids (BP 165/105, upon repeat 130/90). The patient was asked to follow up with his PCP.

Two days later, the patient was seen by an NP for a routine health maintenance exam and blood pressure follow up. He was noted to have no family history of hypertension, but a positive history for diabetes. Blood work was obtained, and the patient was educated about life style changes and advised to return in three weeks for blood pressure follow up. The patient did not keep that appointment.

Two months later, the patient was seen by an NP to follow up on hypertension and laboratories. The NP's impression was hypertension, hypothyroidism, and hypercholesterolemia. She prescribed medication for hypothyroidism and discussed smoking cessation. The patient was asked to return in 6–8 weeks.

Two months after that, at age 43, the patient was found dead by his wife, after having an acute myocardial infarction.

ALLEGATION

The patient's family sued the internal medicine practice, alleging that it failed to properly control cardiac risk factors that resulted in premature death.

DISPOSITION

The case was ultimately dropped by the plaintiff attorney.

ANALYSIS

Clinical Perspective

The patient was predominantly treated episodically by multiple providers within the same practice, and it was not clear who the primary care physician was.

Appreciating the seriousness of a patient's condition can be difficult at times, especially when the patient comes in only episodically with varying complaints. Patients like this need to have someone overseeing the bigger picture, pulling the pieces of the puzzle together. Ideally in the primary care setting, every patient has a primary care physician and a relationship is developed between the provider and the patient seeking care. PCPs also maintain a comprehensive medical record for the patient, in which pertinent medical information and plans of care are kept. This information is

Effective communication among teams of caregivers can make the difference between an optimal outcome and an adverse event.

useful, not only to the PCP, but also to any other practitioner within the practice following up with the patient. Effective communication among teams of caregivers can make the difference between an optimal outcome and an adverse event. Updated problem lists can help covering clinicians understand the patient's past and present medical conditions. Especially with patients who come to a practice often for episodic care, every physician caring for a patient should establish with other providers who will serve in a coordinating role. If no one is responsible for coordinating care, then it is left up to the patient, which is a failed solution.

Multiple providers failed to take an up-to-date medical and family history across multiple encounters, thus missing the opportunity to factor that history—which included cardiac disease, high cholesterol, and smoking—into his diagnoses and treatment.

Family history often provides the first clues that a patient may be at high risk for developing certain conditions, and it must be updated periodically to incorporate new developments. This history is a key component to the providers' formulation of a clinical impression and working diagnosis. For example, a history of smoking, high cholesterol, and hypertension could lead to more timely intervention for heart disease.

Patient Perspective

For the first four years that this patient was seen by this practice, he never had a complete assessment (i.e., complete physical exam and patient/family history).

After a bad clinical outcome, a patient's family might look back at several visits over several years at the same practice, and ask if some basic things were done. They will look for reassurance that providers took adequate measures to identify risk factors and offer treatment to maximize the patient's chances of survival. Episodic care that is exclusively reactive with no action to "connect the dots" may appear insufficient. Patients and their families want to know that everything reasonable was done to prevent the outcome, especially if multiple signs and symptoms could have signaled an underlying disease or vulnerability that is often treated effectively.

Risk Management Perspective

The patient consistently missed recommended follow-up appointments.

To encourage the patient to participate in the care process and take responsibility for his/her health care, the patient must be fully informed of the issues and the risks, benefits and alternatives to treatment. In the event a patient fails to follow up as recommended, documentation of the advice to the patient is crucial for both better care of the patient and to the defense of any potential claim. Such defense is further bolstered by the physician's documented reminders and follow-up with patients who fail to keep appointments. Any outreach telephone calls or letters to the patient must be documented in the medical record. Practices are responsible for making a reasonable effort to contact patients who miss scheduled appointments or tests. The reasonableness of the effort depends on the clinical importance of the test or visit, the severity of the patient's medical condition, and the risk associated with the missed appointment. For patients at minimal risk, a single phone call or postcard following the missed appointment may suffice. For patients whose care requires ongoing monitoring or treatment, a more concerted effort (perhaps including certified mail) should be made to inform them about the specific risks of missing appointments. Attempts to obtain follow-up, as well as missed appointments, failure to follow care instructions, and any other examples of patient non-adherence should be documented.

Legal Defense Perspective

The jury agreed with the defense expert who cited guidelines from the Joint National Committee on Prevention that state a patient with this history and blood pressure readings should be initially monitored and educated about changes to diet and exercise.

A claim is more defensible and may never be brought if the documentation supports the clinician's decision-making process. A documented discussion with the patient about the nature of a diagnosis and the reasons not to immediately prescribe medication can establish later that a well-defined treatment plan had been formulated, based on specific guidelines, rather than allowing the possibility that an omission had occurred.

Malpractice Claims Analysis Confirms Risks in EHRs

Debra Bradley Ruder

A prescription for a short-acting drug is entered into the computer as the long-acting version. The order is refilled six times based on the erroneous information.

When converting to electronic records, a doctor's office omits a patient's aneurysm history from the active problem list. During a medical procedure several years later, the aneurysm bursts. The specialist has been unaware of the patient's risk.

Nursing notes for an entire shift vanish after a computer crash, compromising care.

Distressing situations like those described above are happening around the country as health care organizations adopt electronic health records (EHRs) in growing numbers. Although these systems promise to reduce costs and improve quality and safety, they've also ushered in unintended consequences as a result of human error, design flaws, and technology glitches.

Recognizing these emerging risks, CRICO—the patient safety and medical malpractice insurer for the Harvard medical community—is taking action. The Massachusetts-based company has expanded its proprietary coding system to capture EHR-related problems that have contributed to patient harm, and to guide the hospitals, physicians, and other providers it serves toward addressing vulnerabilities in their systems.

EHR, EMR:
What's the difference?

Electronic health records (EHRs) are real-time, computerized patient "charts" designed to bring together information from all the providers involved in a patient's care. The data moves securely with the patient to specialists, laboratories, the hospital, etc., allowing for coordinated care. Electronic health records are more comprehensive than electronic medical records (EMRs), which contain only the medical and treatment history of patients in one provider's office. The information in EMRs is not easily shared beyond the practice (Garrett & Seidman, 2011).

Top Issues in MPL Cases with EHR Factors

	% cases*
Incorrect information in the EHR	20%
Hybrid health records/EHR conversion issues	16%
System failure, electronic routing of data	12%
System failure, unable to access data	10%
Pre-populating/copy & paste	10%
Failure of system design to meet the need	9%
EHR (user) training and/or education	7%
Lack of integration/incompatible systems	7%
EHR-related user error (other than data entry)	7%

Results from an analysis done in 2013 by CRICO of 147 medical malpractice cases from our Comparative Benchmarking System that were found to have an EHR-related contributing factor.

*A case will often have multiple factors identified.

This new set of codes is part of a complex taxonomy that CRICO has developed over the past 30 years to analyze malpractice claims. CRICO uses this methodology to pinpoint clinical elements that can lead to medical error, to recognize historical and current trends, and to drive successful risk management efforts.

"We need to identify specific vulnerabilities so we can design systems and processes that protect us and our patients from these errors," says Dana Siegal, RN, CPHRM, director of Patient Safety Services for CRICO Strategies, a division of CRICO that serves a national community of clients.

Computer systems that don't "talk" to each other, test results that aren't routed properly, and mistakes caused by faulty data entry or copying and pasting…

CRICO identified 147 cases (asserted over a five-year period) in which the EHR was identified as a contributing factor. Computer systems that don't "talk" to each other, test results that aren't routed properly, and mistakes caused by faulty data entry or copying and pasting were among the EHR-related problems found in the claims, which represented $61 million in direct payments and legal expenses.

Electronic records are on the rise nationally, thanks partly to the federal HITECH Act of 2009, which authorizes incentive payments to encourage their adoption and "meaningful use." But the extent of their use varies from provider to provider and state to state.

In 2012, some 44% of U.S. hospitals had at least a basic EHR system (up from 12% in 2009), while 72% of office-based physicians used either an EMR or EHR system (up from 48% in 2009), with considerable variations across the states, according to government sources (see sidebars).

Comparing Adoption of EHR Systems by State Against the National Average

A state-by-state comparison of non-federal acute care hospitals with adoption of at least a basic EHR system in 2012. Twelve states had significantly higher adoption rates than the national average of 44.4%, while 11 were significantly lower. A basic system includes such required functions as lab reports, computerized order entry for medications, and discharge summaries.

Office of the National Coordinator for Health Information Technology/American Hospital Association

CRICO's findings, though preliminary, send a clear message: Caregivers need accurate information to make life-saving decisions, and there's room for improvement in EHR design and implementation, such as adding alerts or expanding user training. As EHR adoption spreads, new vulnerabilities are bound to arise, predicts CRICO chief medical officer and senior vice president Luke Sato, MD. "This analysis is the tip of the iceberg," he says. "We're going to find things down the road that we weren't even thinking of. There's a lot of work to do."

DATA-DRIVEN APPROACH

CRICO, a medical professional liability captive insurer, provides claims management, litigation, and educational services to its member owners—including more than 12,000 physicians, 22 hospitals, and 100,000-plus nurses, technicians, and other employees of Harvard-affiliated organizations. Its data-driven strategy involves using evidence to promote patient safety and minimize lawsuits.

A centerpiece of that strategy is a large comparative data-base that CRICO has developed with claims information collected from Harvard affiliates and CRICO Strategies partners around the country. This Comparative Benchmarking System (CBS) features 275,000 open and closed cases from more than 500 hospitals and 125,000 physicians, and it's a potent tool for analyzing, trending, and targeting remedies. Participating organizations can, for example, use this clinically coded information to evaluate their patient safety performance against other academic and community healthcare systems in the U.S.

"CBS provides us with a significant pool of data for analysis and enables us to stay ahead of the curve and be prepared to collect information when new vulnerabilities or errors begin to emerge," notes Heather Riah, assistant vice president of operations for CRICO Strategies. Adds Siegal, "This is exactly why we started focusing on EHR issues. Recognizing that our members and clients were raising more and more concerns, we did some initial research and launched a pilot project."
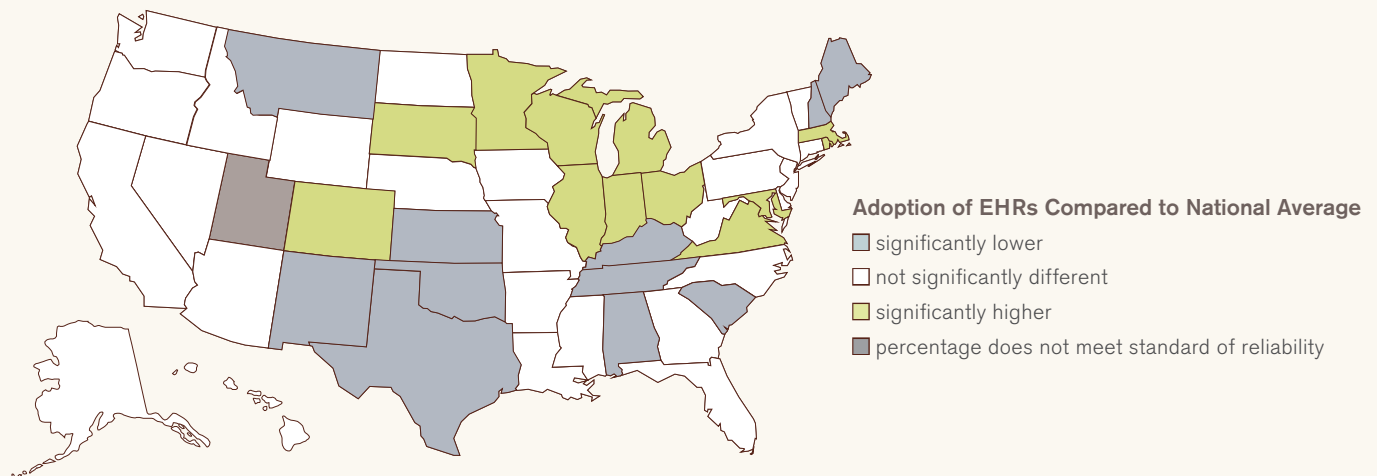
The team asked its CRICO and Strategies members, "What vulnerabilities are you seeing? What are your risk managers worried about? What are your doctors complaining about?" It used that feedback to draft a set of EHR-specific codes and then tested them in three datasets: CRICO (Harvard users) and two of Strategies' larger clients, The Doctors Company and Princeton Insurance. Based on those results, CRICO revised and approved 15 new EHR codes that went "live" in January 2013.

That means CRICO's cadre of nurse coders can now identify EHR as a contributing factor to a malpractice claim, instead of using one of the less specific factors available in the past. And they can flag whether the problem involved user issues, system/technology issues, or both. "In some cases," Sato points out, "the system design sets up humans to make errors."

VEXING VULNERABILITIES

Which EHR vulnerabilities are most troubling? CRICO's early analysis reveals that incorrect information in the EHR was a factor in 20% (30) of the 147 medical error cases reviewed (sidebar). This might include:

- Faulty data entry: A patient's height is 60 inches but is recorded as 60 centimeters, which distorts her body mass index (BMI).

- Unexpected conversion: The data is entered correctly, but the computer auto-converts it without the user noticing. For example, 2.5 changes to 25, which becomes a medication error when a clinician acts on the higher number.

- Wrong file or field: A user accidentally opens up the wrong patient file and orders medication or records vital signs for someone else.

Adoption of EHRs Compared to National Average
- significantly lower
- not significantly different
- significantly higher
- percentage does not meet standard of reliability

Tips When Using EHRs

- To prevent, detect, and mitigate problems caused by duplicate record, patient mix-ups, and commingled records, check the patient ID to ensure that you are in the correct patient record.

- Document conversations, even online communications, into the patient record when the information is pertinent to clinical care decisions or treatments.

- ePrescribing:
  - Review and update allergies prior to entering any medication orders.

  - For children, if not built into the EHR, use weight based dosing recommendations, age appropriate dosing calculators, dose range checking, and pedi-specific drug-to-drug interaction.

- Close loops in communications
  - If your institution's EHR process does not facilitate both cancellation and acknowledgment of receipt of orders for labs, radiology, and pharmacy, then make sure to close this loop.

  - Electronic messaging needs to include the urgency of a message and closed loop communication in order to ensure clear, active receipt.

- Be aware of, and use when appropriate, clinician decision support (CDS) tools in the EHR.

- Minimize the use of free text for order entry.

- Be alert to avoid faulty data entry:
  - Minimize the use of copy and paste, as this may repeat incorrect information.

  - Be aware of the measurement system the EHR uses (U.S. Customary Units vs. Metric System).

  - Make sure that the data you enter hasn't been automatically converted to incorrect data. This is especially important with numbers, i.e., if you enter 2.5 make sure it isn't converted to 25.

  - Make sure you enter information into the correct field.
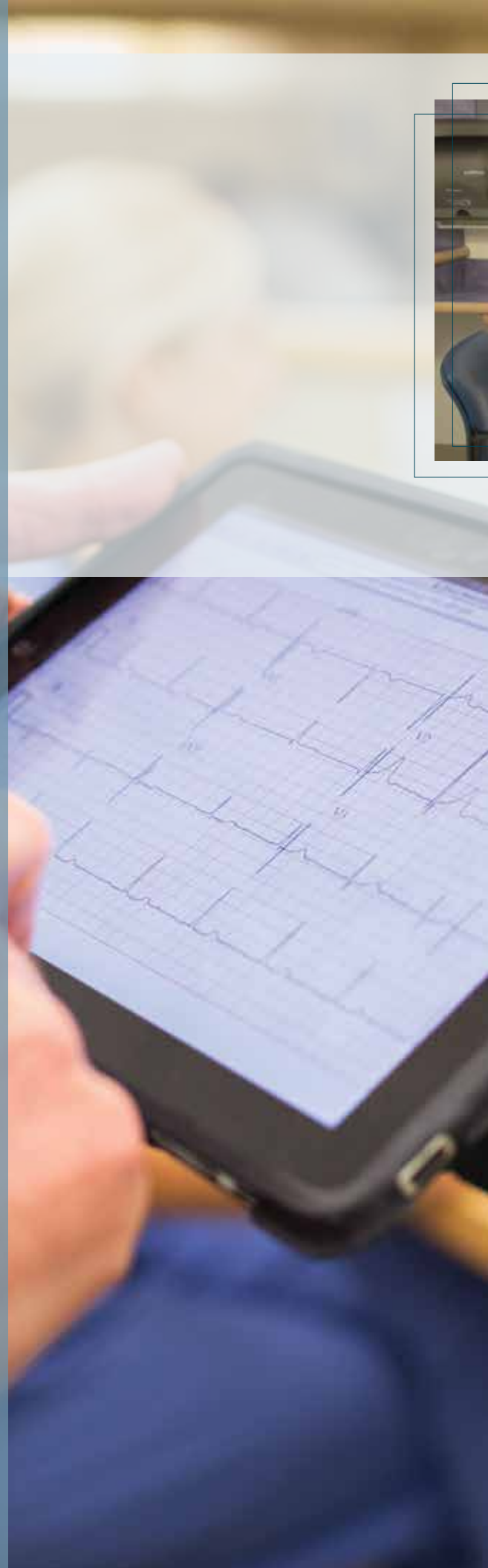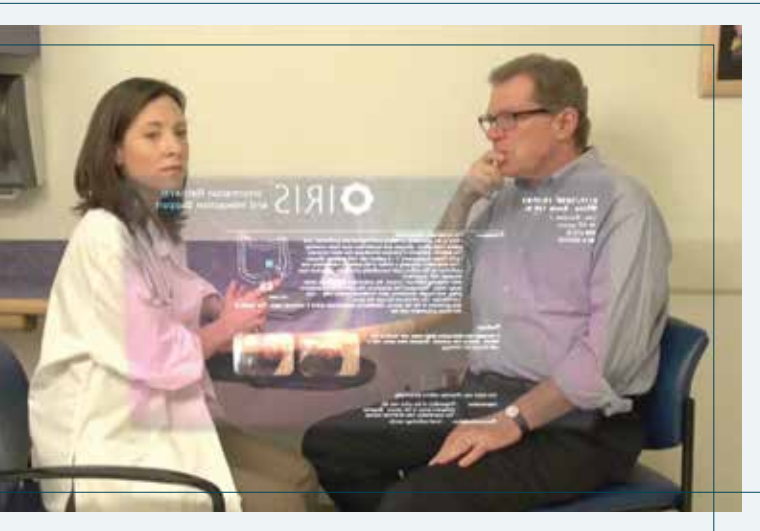
Better, Safer Care
Imagining a Medical Record of the Future

Everyone who works in a clinical setting, or has ever been treated in one, probably has an opinion about EHRs. Physicians complain about alert fatigue, time needed to document an encounter, and information overload. Patients complain about competing for their physician's attention during an exam due to time spent on the computer.

CRICO produced a video, *Better, Safer Care: Imaging a Medical Record of the Future,* based on real malpractice cases. Through combined analysis of how harm can come to patients from flawed encounters with providers and conversations with medical and technological visionaries across the country, we integrated various scenarios into one possible vision of the future.

Watch the video:
RMF.HARVARD.EDU/EHR

As Sato explains, "Because of the way EHRs are designed, you can get lost easily and enter information in an incorrect field or for an incorrect patient without realizing it."

• Repeated errors: Mistakes in a patient record persist for years without being caught.

"With data entry, whether we're putting it on paper or into a computer, we are vulnerable to human error," says Siegal.

Hybrid health record/EHR conversion issues, another vexing vulnerability related to users, were a contributing factor in 16% (24)

With data entry, whether we're putting it on paper or into a computer, we are vulnerable to human error.

of the CRICO cases. This happens when paper and electronic records are inconsistent, often during the transition to EHR. A patient's status can wind up being misinterpreted. For example, a 4-year-old develops a penicillin allergy. It is noted in the paper record at the pediatrician's office, which is transitioning to an electronic system. A relative who doesn't know about the allergy takes the child for an urgent care visit in the same healthcare system. The EHR doesn't yet reflect the new allergy, and a caregiver prescribes penicillin, triggering an allergic reaction.

Technology problems also contribute to medical errors, according to CRICO's analysis. These include routing failures (test results aren't sent to the hospital unit where the patient is now located, for instance); computers that go down or help desks that aren't available; and systems that are incompatible, even within the same facility.

The EHR coding study also found that:

• Medicine and Nursing were the services most frequently identified. This isn't surprising, since many of the claims involved the electronic medication record, long in use by these services. OB/GYN and surgery were close behind medicine and nursing.

• Most of the cases involved either medication (both ordering and administering) or diagnosis (when the EHR lacks information needed to make a diagnosis—or a doctor misses it).

• More than half (56%) of the malpractice claims emerged from ambulatory care settings, compared to 31% for inpatient and 13% for emergency departments. Within ambulatory, hospital clinics and physician offices accounted for the vast majority.

• Half of the 147 cases resulted in severe injury.

"Ultimately, this is about supporting critical decision making," says Siegal. "In the ambulatory and hospital worlds, we depend on the electronic medical record to give us (the correct) information to make important decisions, such as whether or not to prescribe a drug, which drug, or how best to treat the results of a test."

CRICO has long appreciated the value of effective EHR systems in advancing the patient safety agenda, Siegal adds. "We believe the EHR will provide a vehicle that protects us from our humanness and promotes improved communication and information exchange among providers."

CRICO leaders plan to collect more data to support the ongoing development of recommendations around EHRs and patient safety, according to Arvind P. Kumar, Chair of the Technology Council for the Alliance for Quality Improvement and Patient Safety. Kumar, who teaches the benefits and pitfalls of electronic records at the Harvard School of Public Health, stresses the need to partner with industry, including EHR vendors, to improve all health information technology. He encourages a more standardized approach to system development that reflects the experience of end users: providers. "The idea," Kumar says, "is to bring together creators and users to guide the process."

Looking ahead, Sato envisions a day when electronic records are fully integrated into clinical workflow. In 2012, he led production of a provocative video, Better, Safer Care: Imagining a Medical Record of the Future, which shows a doctor using a tablet that "speaks" during a patient visit. It interacts with both patient and physician, providing essential support such as documenting the encounter, retrieving historical information, and scheduling follow-up appointments and reminders. You can watch the video on CRICO's website or through YouTube (Sato & Augello, 2012).

Sato advises remembering the why behind the work: "Healthcare organizations are so busy implementing their EHR/EMR systems that they sometimes lose sight of the big picture: that we're doing this to make healthcare accessible, higher quality, and safer—to help clinicians deliver better care to patients."

Jonathan Einbinder, MD, assistant vice president for advanced data analytics and coding for CRICO, agrees. "These new EHR codes will help us build a better system by providing a view into how technology may contribute to patient harm. It doesn't mean that having technology is worse than not having it," says Einbinder, who practices medicine at Brigham and Women's Hospital in Boston. "Effective use of well-designed computer systems will absolutely improve care. I've worked with paper records, and I wouldn't want to go back to doing it that way."

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Debra Bradley Ruder is a Boston-based freelance writer specializing in health care and education.

Are you a researcher looking for adverse event data?

CRICO's Comparative Benchmarking System (CBS) is a database now comprising more than 300,000 medical malpractice cases originating from a variety of academic medical centers and community hospitals, as well as captive and commercial insurers.

The data arising from these coded cases provide insight into key patient safety vulnerabilities and inform strategies to mitigate clinical risks.

Distribution of Top Allegations Across Time

21,184 cases | $3.6B total incurred
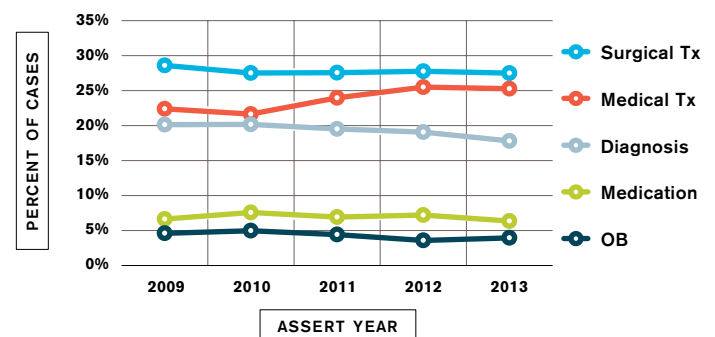
What's Available?

CBS contains cases originating from a broad cross section of the US, including large urban centers and rural regions from east to west coasts and north to south.

The CRICO coding taxonomy captures 10–15 clinical and/or system factors on each medmal case.

We're sharing four data profiles—overview, diagnosis, surgical, and obstetrical—from our national database. Each profile contains 8–10 charts in pdf format and includes:

- responsible services
- major allegations
- clinical severity
- final diagnoses
- contributing factors
- charts specific to the topic

Download CRICO data now:
RMF.HARVARD.EDU/MPLDATA

"Wrong Patient" Risks
IN THE AMBULATORY SETTING

With the inclusion of affiliated ambulatory clinics into larger hospital systems, there is a new need to carefully assess risks in these settings and develop responsive safety strategies.

Academic Medical Center
Patient Safety Organization

Most hospitals are aware of the need to prevent "never events," such as wrong patient, wrong site, or wrong intervention, and have developed proven systems and universal protocols such as surgical checklists, time-outs, and patient identification procedures. However, with the inclusion of affiliated ambulatory clinics into larger hospital systems, risks in these settings need to be carefully assessed and responsive safety strategies developed.

The Academic Medical Center Patient Safety Organization (AMC PSO) functions as a national convener of clinicians and health care organizations to collect, aggregate, and analyze data in a secure environment in an effort to identify and reduce the risks and hazards associated with patient care. The AMC PSO has highlighted some potential risks contributing to wrong patient interventional procedures in the ambulatory setting and has identified safety strategies to mitigate these risks.

WHAT ARE THE RISKS?

Staff Training & Orientation
- Limited, often informal, clinic-based orientation sessions, instead of full-day, standard orientation sessions for support service staff.

- Failure to use standard or well-established patient identification procedures, e.g., name verification with patient or identification band checked against patient chart (medical record).

Policy/Practice Interpretation

- Non-standard policies and training procedures in the ambulatory setting.

- Ambulatory interventional procedures may not be viewed as "invasive," depending on the history, culture, or specialty of the clinic.
  - If a procedure is not considered invasive, universal protocols may not be applied.

Human Factors

- Lack of coordination among team members, including medical assistants, nurses, ancillary services (e.g., interpreter services), residents, and attending.

- Faulty task planning: assigning tasks outside the appropriate scope of responsibility.

Supervision

In academic medical settings, a patient may be well known to an attending physician, however, in the procedural clinic, the visit may be the first encounter with a member of the house staff.

Environment/Culture/Leadership

- Provider schedules include rotating clinicians, each with varying procedures and practice patterns.

- Non-standard communication of patient information between clinic staff and rotating clinicians.

- High volume/production pressures: tendency to overschedule to compensate for frequent patient no-shows.

- Uncoordinated scheduling of support services to meet specific patient population needs, e.g., interpreter services.

SAFETY STRATEGIES

Staff Training and Supervision

- Orientation: Require all support and ancillary staff to complete a standard orientation regardless of whether they service the inpatient or outpatient clinical areas.

- Room Preparation: Refrain from setting up exam rooms with interventional procedure kits before completing universal protocols (as clinicians may incorrectly conclude that these safety checks have already been completed).

- Scope of Responsibility: Ensure that staff are not asked to perform duties outside their role, e.g., support staff, including interpreters, should not be responsible for bringing patients to the exam room or conducting verification of patient identification during busy times.

- Supervision: Ensure appropriate attending provider oversight in cases, including house staff participation.

- Resident Training: Domain-specific knowledge should be communicated to new staff.

- Communication: Adoption of standard and structured communication processes for all staff members responsible for handoff of patient information is essential. Examples include SBAR Situation-Background-Assessment-Recommendation (IHI) and "I Pass the Baton" (AHRQ: TeamSTEPPS).

Verification of Patient Identification

Ask the patient to state his or her name and date of birth, rather than having medical staff read the name and ask for verification.

Disclosure and Apology of Safety Events

- Support ambulatory clinics in providing training and clear policy and procedure guidance on the process for disclosure and apology of safety events, including:
  - Decide how to involve Risk Management/Patient Safety and Social Services for assistance and support in the disclosure and apology process.
  - Clarify roles and responsibilities of clinical staff in these disclosure and apology discussions.

Other Safety Considerations

Post universal protocols, including sample scripts for the timeout, in outpatient areas.

- Empower staff to confront physicians who choose to ignore safety rules with appropriate, scripted language, so they are comfortable speaking up about safety issues.

- Inform physicians that staff members are expected to speak up when safety issues are identified, and set expectations that this input will be respectfully acknowledged.

- Use all opportunities to reinforce awareness of safety practices and disclosure and apology procedures.

- Focus quality improvement discussions on the evaluation of common vulnerabilities and collaborate on interventions that can be widely disseminated.

Ambulatory Risk Managers Grant Program

A CRICO Interview:

Tatum O'Sullivan, Ailish Wilkie, and Barbara Szeidler

Recognizing an uptick in ambulatory malpractice claims, in 2010, CRICO convened a group of patient safety leaders from member institutions to discuss the issue and see what might be done collectively to combat this emerging risk. The result was a CRICO-funded grant—The Building Risk Management/Patient Safety Bridges to Networks of Outpatient Providers Grant Program—or, the Ambulatory Risk Management (ARM) program. The program offered a three-year grant to ten CRICO-insured organizations.

This grant represents the first time CRICO provided funding to support the development of an infrastructure in ambulatory patient safety. To achieve this, each participating institution determined how to staff based upon their organization's ambulatory structure. Some created an ambulatory risk manager position, while others chose to fund analysts, clinical and non-clinical safety consultants, physician safety leaders, or project managers.

Tatum O'Sullivan, RN, MHSA, CPHRM is the Ambulatory Risk & Patient Safety Manager for North Shore Physicians Group (NSPG). She has been in this role for 2.5 years and previously worked in hospital settings where physicians were more likely to avoid her than seek her out. "Here," she says, "they come to me much more than I go to them. The medical staff are very engaged and I feel I have a good rapport with a large group of physicians. I've established strong relationships that promote communication in both directions."

As a grant requirement, an iterative report of pre-defined metrics must be submitted to CRICO at regular intervals. This enables measurement of the internal progress/success of the program at each organization. Under CRICO's direction, the ARM program risk managers and safety leaders meet bi-monthly to discuss challenges and issues specific to the ambulatory environment. One example involves the challenge of capturing patient concerns and complaints with the intent for resolution. "These complaints often represent near miss or adverse event opportunities," says Barbara Szeidler, RN, BHA, LNC, CPHO, patient safety operations manager at CRICO. **"Through the ARM program, organizations' risk managers now have a forum where they are able to discuss common concerns, barriers, and shared successes."**

Some of the issues recognized through the ARM program appear to be similar across the participating organizations. Common themes include: disparate complaint management systems across an organization's ambulatory sites, use of a universal ambulatory taxonomy, and lack of an established best practice for test result and high risk referral management. "The themes emerging from the ARM program resonate with what CRICO was seeing around test result management and high risk referral management in our claims data," says Szeidler.

ARM Participating Organizations

Atrius

Beth Israel Deaconess Medical Center

Brigham and Women's Hospital

Boston Children's Hospital

Cambridge Health Alliance

Dana-Farber Cancer Institute

Massachusetts General Hospital

Mount Auburn Hospital

Newton-Wellesley Hospital

North Shore Medical Center

According to Ailish Wilkie, MS, CPHRM, CPHQ, who oversees Patient Safety & Risk Management for Atrius Health, the ARM program provided the resources needed to establish a comprehensive patient safety & risk management education program at Atrius Health and target learning to the ambulatory setting. As a solely ambulatory group, Atrius is unique among members of the ARM program. **"With the support of CRICO," says Wilkie, "we have developed a robust event reporting culture that has resulted in continuous learning in regard to known and unknown risks. It is helping improve the way we deliver care."**

It may be too soon to tell what impact this program is having on patient safety. However, says Szeidler, "There have been recent claim reviews that seem to point toward improvement. But, similar to our incentive programs, we can't necessarily attribute the improvement directly to this program." Organizations participating in the ARM program report an overall increase in safety event reporting and subsequent root cause analysis investigations as appropriate. Says Szeidler, "We hope with the increase in safety event reporting that has been demonstrated, an even greater decrease in future claims will become evident and opportunities for further improvement will be identified."

The collaborative efforts of the members and the awareness this program has brought to ambulatory practice represents the most exciting aspect of the ARM program for Szeidler. Until the launch of this program, no cross-institutional collaborative forum existed for ambulatory issues. This is reinforced by Tatum O'Sullivan who says, "Providers and staff are very willing to have conversations about concerns and are open to collaborating to develop solutions. I am fortunate that NSPG has a high regard for lean methodologies. **Promoting patient safety and mitigating risk is so much more productive when the culture is progressive. It's a credit to both the ARM program, the culture, and the leadership."**

Wilkie echoes this belief, "The regular meetings of the ARM group provide an opportunity to exchange ideas, learn from one another's experiences and share best practices, which has proven invaluable."

"I am so encouraged to have watched this program evolve to the current state," concludes Szeidler. "It has extended far beyond the grant recipients to now include ambulatory patient safety and quality staff from all CRICO organizations and their affiliates."

Oversight of the ARM program is managed by Carol Keohane, MS, RN, assistant vice president, AMC PSO, CRICO, along with patient safety operations manager, Barbara Szeidler, and members of CRICO's Risk Management Grants Program, Amanda Maninos, grants administrator and Jason Boulanger, program administrator, AMC PSO.

Tatum O'Sullivan, RN, MHSA, CPHRM, is Ambulatory Risk and Patient Safety Manager for North Shore Physicians Group.

Ailish Wilkie, MS, CPHRM, CPHQ, oversees Patient Safety and Risk Management for Atrius Health.

Barbara Szeidler, RN, BHA, LNC, CPHQ, is Patient Safety Operations Manager for CRICO.

Managing Risk in the Referral Lifecycle

Jock Hoffman, CRICO

Like any multi-step processes, the management of referrals is prone to breakdowns—too frequently with a consequential impact on the patient's diagnosis and treatment.

More than two-thirds of patients are referred to a specialist at least annually, with those appointments accounting for half of all ambulatory visits.[1–2] Underneath that staggering volume of send-receive transactions—making appointments, completing visits, transmitting results—is significant opportunity to lose track of critical information. Such missteps increase the risk of harm for vulnerable patients and expose the clinicians responsible for their care to allegations of malpractice.

Analysis of malpractice data from CRICO indicates that, for ambulatory care patients, diagnosis-related errors reflect the most common major allegation.
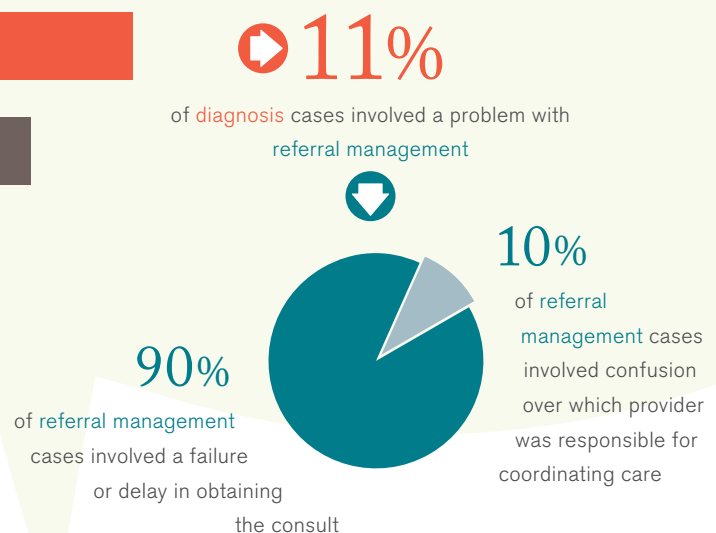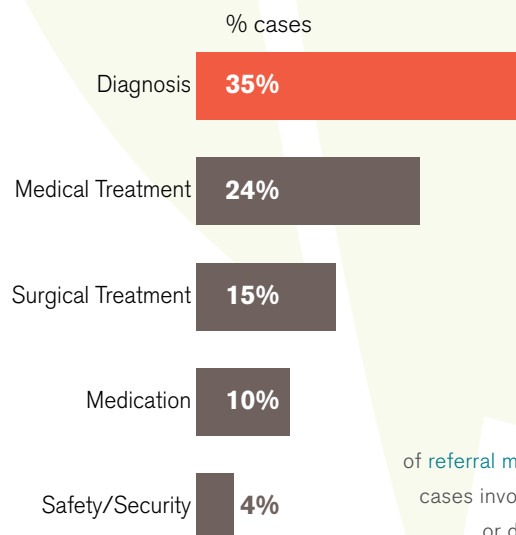
Exploring further and examining the diagnostic process of care continuum for such cases reveals that gaps in the management of referrals present an important focal point for potential outpatient safety improvement.

Critical Connection

Even after arriving at a correct diagnosis, problems managing the referral to a specialist can lead to patient harm.

More than a third of ambulatory care cases cite a diagnostic error.

Major Allegations in Ambulatory Care Cases

% cases

Diagnosis	35%
Medical Treatment	24%
Surgical Treatment	15%
Medication	10%
Safety/Security	4%

▶ **11%**
of diagnosis cases involved a problem with referral management

90%
of referral management cases involved a failure or delay in obtaining the consult

10%
of referral management cases involved confusion over which provider was responsible for coordinating care

CRICO BEST PRACTICES FOR REFERRAL MANAGEMENT

Like any multi-step processes, the management of referrals is prone to breakdowns—too frequently with a consequential impact on the patient's diagnosis and treatment. As CRICO has examined malpractice data, along with several years worth of results from office practice evaluations, best practices for each step in the referral management lifecycle have become evident.

When all parties involved in referral transactions assign ownership to, and consistently meet, the full intent of these "business rules" they reduce the opportunities for patients (or reports) to fall through the cracks. Technology and human factors engineering are key tools for helping providers ensure successful completion of all steps, but only if all clinicians making or receiving referrals have a full understanding of what is needed and expected at each step of the referral management process. That knowledge and appreciation is essential for the adoption, use, and continuous improvement of any (low- or high-tech) solutions put in place to help physicians with the extraordinary volume of referrals and the considerable risk of missteps, patient harm, and allegations of malpractice.

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Jock Hoffman is senior editor, patient safety at CRICO.

Referral Management Lifecycle

As CRICO has examined malpractice data, along with several years' worth of results from office practice evaluations, best practices for each step in the referral management lifecycle have become evident.

1. A referral is ordered by the provider.

2. The practice/patient schedules the referral appointment.

3. The referring provider's office reconciles the referral against the consult report to identify missed appointments.

4. Missed appointments are reviewed with the ordering provider for appropriate follow up.

5. The office contacts the patient to reschedule if necessary.

6. A note is placed in the medical record about missed/canceled/not rescheduled appointments.

7. The consult note is transmitted to the responsible provider (electronic/paper).

8. The consult note is reviewed by the responsible provider and acknowledged.

9. The consult note is filed in the medical record and includes the provider's acknowledgement.

10. The patient is notified of the consult report and any new treatment recommendations (and knows who is responsible for coordination of care).

11. Auditing and reporting system compliance and success with the 10 step process.

ABOUT THE DATA

The data in this issue of Insight is based on cases asserted in the past five years (2009–2013).

552 cases occurred in an ambulatory care setting.

341 of those cases named a physician, and 86 of those involved a primary care physician.

Our cover shows the contributing factors identified in the 341 ambulatory care cases naming physicians. A case will often have multiple contributing factors.

ABOUT INSIGHT

Insight examines the issues impacting health care providers' ability to provide safe care and practice in an environment where they are supported by a proactive medical liability insurance program.

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" *Patient safety risk in ambulatory care is different [than inpatient], because cases unfold over a long period of time. The risk is not always as apparent, and even the fact that there was an adverse event isn't always that apparent.*"

—Gila Kriegel, MD

Protecting Providers.
Promoting Safety.

CRICO, a recognized leader in evidence-based risk management, is a group of companies owned by and serving the Harvard medical community. For more than 30 years, the CRICO companies have provided industry-leading medical professional liability coverage, claims management, and patient safety resources to its members, proudly serving more than 12,000 physicians (including residents and fellows), 22 hospitals and more than 200 other health care organizations.