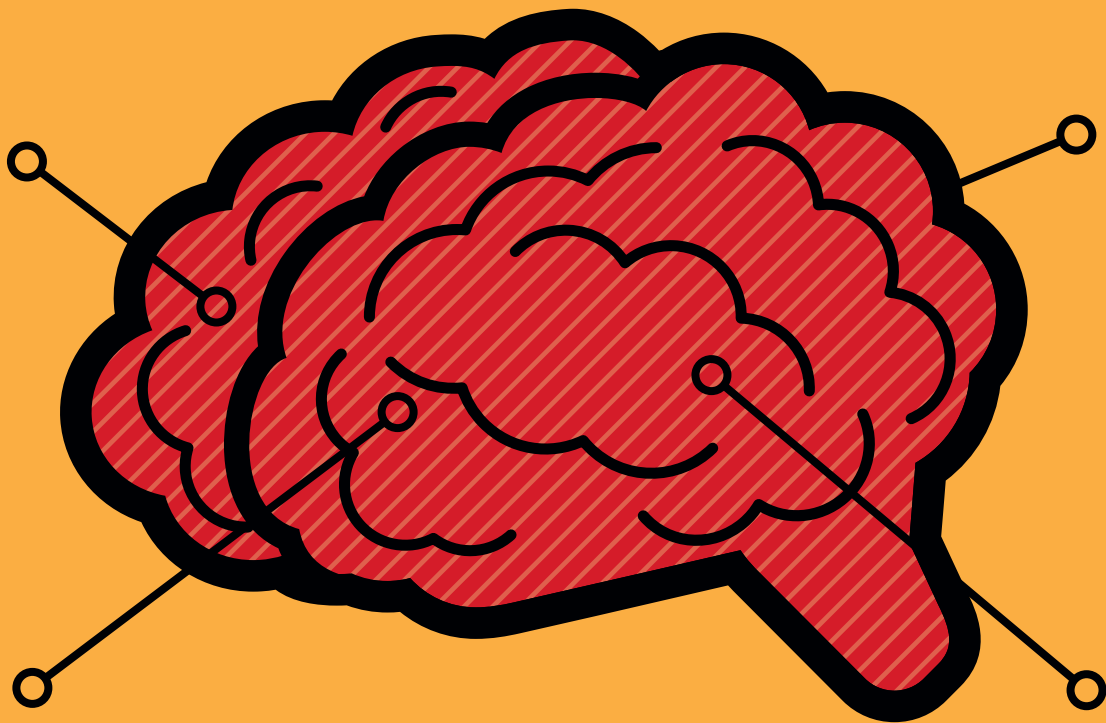


Brink

IMPROVING THE DIAGNOSTIC PROCESS: LESSONS FROM MALPRACTICE CLAIMS DATA



INCLUDES DATA ANALYSIS
OF NEARLY 3,000 CLAIMS AND SUITS
FROM 2010–2015

SINCE WE LAST ADDRESSED DIAGNOSTIC ERROR IN OUR PAGES ALMOST THREE YEARS AGO,

interest in the topic has skyrocketed as evidence of its impact on both care and costs has accumulated. Our patient safety team has presented both our data and national data to audiences throughout the country. The presentations have been very well received, yet the problem persists.

In 2015, the Institute of Medicine (now the Health and Medicine Division of the National Academies of Sciences, Engineering and Medicine), published its groundbreaking report, *Improving Diagnosis in Health Care*, which has inspired a lot of organizations to get serious about tackling this problem. The report defines a diagnostic error as “the failure to (a) establish an accurate and timely explanation of the patient’s health problem(s) or (b) communicate that explanation to the patient.” Consistent with our own research, the report’s findings include the following evidence of the pervasiveness of diagnostic error:

- ✓ “A conservative estimate found that 5 percent of U.S. adults who seek outpatient care each year experience a diagnostic error.
- ✓ “Postmortem examination research spanning decades has shown that diagnostic errors contribute to approximately 10 percent of patient deaths.
- ✓ “Medical record reviews suggest that diagnostic errors account for 6 to 17 percent of hospital adverse events.
- ✓ “Diagnostic errors are the leading type of paid medical malpractice claims, are almost twice as likely to have resulted in the patient’s death compared to other claims, and represent the highest proportion of total payments.”



One clear message of the report, which we hear consistently, is that diagnosis today is a team sport. Many of the recommendations to improve diagnosis focus on effective teamwork. At Constellation, we have joined forces with national organizations like the Society to Improve Diagnosis in Medicine (SIDM), as well as local entities like the Minnesota Alliance for Patient Safety (MAPS) and Stratis Health, to make our efforts go further, and to learn more, faster. We are excited about how much we are learning and want to share the expertise we’ve gained from analyzing six years of diagnosis-related medical liability claims. We want to provide you with ideas, tools and resources to help you improve diagnosis in your own practice. This issue of *Brink* is a result of that focus.

We also want to team with you, our valued policyholders, to make sure you have access to the latest research and our best insights as your risk management and medical liability partner. Whatever we all learn together will help us better serve patients, who ultimately bear the risk of harm from diagnostic error.

Thank you for the opportunity to serve you; it is an honor and a privilege.

Sincerely,

Bill McDonough,
President and CEO, Constellation



Brink® is published three times annually by Constellation. Constellation is a growing partnership of mutual liability insurers and health organizations that unite to provide solutions and support to physicians and other health care providers. Formed in 2012 as a response to an increasingly challenging market, Constellation is guided by its own board of directors comprised of physicians, medical liability professionals and health care leaders. MMIC is a founding member company; UMIA joined Constellation in 2013, Arkansas Mutual in 2015. More partners will be joining soon and, as we grow, our partnerships will extend beyond medical liability insurers to include provider support and consulting solutions.

To download *Brink*, visit MMICgroup.com. To contact the editor, please send an email to Liz.Lacey-Gotz@ConstellationMutual.com.



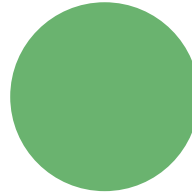
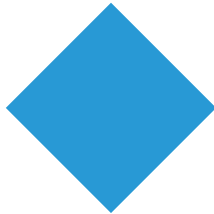
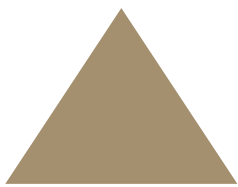
IMPROVING THE DIAGNOSTIC PROCESS: LESSONS FROM MALPRACTICE CLAIMS DATA

About the data in this issue:

MMIC analyzed nearly 3,000 medical professional liability claims and suits asserted from 2010 to 2015. Nearly 500 of these cases involved an alleged diagnostic error, making diagnosis the third most frequent type of allegation. However, diagnosis cases accounted for \$84.7 million in total incurred costs, making it the second-highest expense category. In this *Brink* special edition,

we focus improvement strategies on the outpatient setting where over half of diagnosis-related cases originate.

Our patient safety and risk management experts studied significant findings of the analysis, and were able to identify top causative factors of diagnosis-related malpractice claims and suits, in order to share with our policyholders the most effective risk mitigation strategies for improving errors in diagnosis.



SPECIAL ISSUE HIGHLIGHTS

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Improving Diagnosis in Health Care

Defining methods, dispelling myths

This past fall, MMIC/Constellation co-hosted a session of health care leaders in Minnesota who had convened to tackle the problem of diagnostic error. Mark Graber, MD, a national leader in the field of patient safety and founder of the Society to Improve Diagnosis in Medicine, was on hand to provide encouragement, learn more about our project, and offer his perspective on the directions our nascent effort might take.

Modeling the transparency and openness to learning from error that has come to characterize this movement, Dr. Graber candidly shared an experience from early in his medical career in which he did not follow up on a patient's lab test, and the lack of follow-up contributed to the patient's death. A meeting participant quickly came to his defense, suggesting that the incident didn't technically constitute a diagnostic error.

Dr. Graber wasn't looking for redemption. "Categorizing isn't all that helpful," he countered. "It's about how to solve the problem."

Keeping our eyes on the prize is critical in this most challenging area of medicine.

It's an area the Institute of Medicine (IOM) steered clear of when it published its landmark *To Err is Human* report in 1999. They did so, not because diagnostic error wasn't on the radar then, but because "it was too scary," Dr. Graber said. "They didn't want to go there."

There was the challenge of defining what a diagnostic error actually was. There was the lack of proven ways to improve diagnostic performance. And there were healthy egos inclined to see the cognitive errors that can hamper the diagnostic process as, well... other doctors' errors. There was also no lack of other problems on which to focus, problems that were easier to understand and easier to address, like wrong-site surgeries and medication errors. These more visible targets galvanized attention and invigorated the patient safety movement.

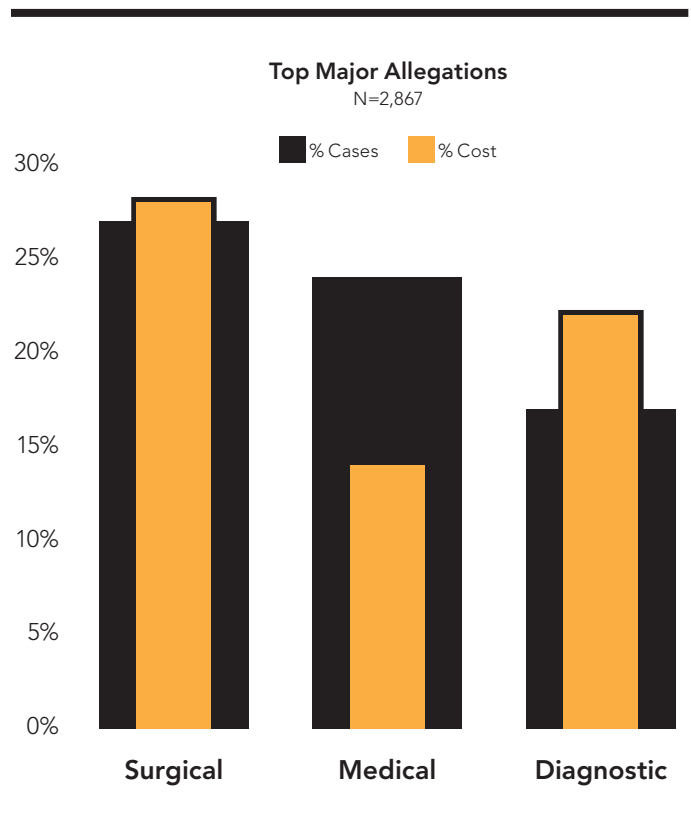
But over the next decade, the data on diagnostic error—its frequency and its costs—slowly accumulated. And the wherewithal to take on the challenge gathered steam.

In September 2015, the IOM, as part of the National Academies of Sciences, Engineering and Medicine, published the next in its series of Quality Chasm reports, this one focused solely on *Improving Diagnosis in Health Care*.

Among the report's findings:

1. Five percent of U.S. adults who seek outpatient care each year experience a diagnostic error.
2. Diagnostic errors account for 6 to 17 percent of hospital adverse events.
3. Diagnostic errors are the leading type of paid medical malpractice claims and represent the highest proportion of total payments.

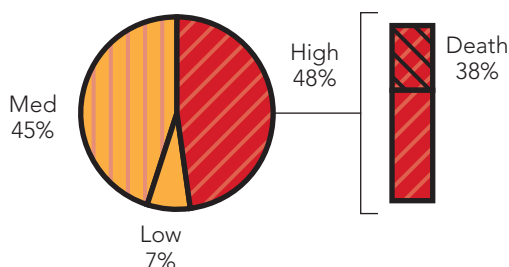
MMIC's own findings echo those in the report. Our analysis of 2,867 malpractice claims asserted from 2010–2015 confirmed that allegations of diagnostic error are frequent and costly.



Cases involving diagnostic error also are more likely to result in high-severity injury.

Diagnosis-related Cases Injury Severity

N=484



Nat'l Association of Insurance Commissioners Clinical Severity Scale
 HIGH: Death, Perm Grave/Major/Significant
 MED: Perm Minor, Temp Major/Minor
 LOW: Temp Insignificant, Emotional/Legal Only

Improving Diagnosis in Health Care set forth eight goals the health care system must pursue to improve diagnosis and reduce diagnostic errors, which it defined as “the failure to establish an accurate and timely explanation of the patient’s health problem(s) or communicate that explanation to the patient.”

Goals for improving diagnosis and reducing diagnostic error

1. Facilitate more effective teamwork in the diagnostic process among health care professionals, patients, and their families
2. Enhance health care professional education and training in the diagnostic process
3. Ensure that health information technologies support patients and health care professionals in the diagnostic process
4. Develop and deploy approaches to identify, learn from, and reduce diagnostic errors and near misses in clinical practice
5. Establish a work system and culture that supports the diagnostic process and improvements in diagnostic performance

At MMIC, diagnosis-related malpractice claims are third most frequent, but account for the second highest cost

\$84.7 million

484 PL cases asserted 2010–2015

6. Develop a reporting environment and medical liability system that facilitates improved diagnosis through learning from diagnostic errors and near misses
7. Design a payment and care delivery environment that supports the diagnostic process
8. Provide dedicated funding for research on the diagnostic process and diagnostic errors

Achieving improvement in diagnosis “will require a significant reenvisioning of the diagnostic process and a widespread commitment to change among health care professionals, health care organizations, patients and their families, researchers, and policy makers,” according to the report.

Leading thinkers in health care are heeding the call. At a November 2016 meeting of the Society to Improve Diagnosis in Medicine, keynote speaker Catherine Lucey, MD, vice dean for education at the University of California San Francisco School of Medicine, highlighted several myths about the diagnostic process that she said need to be dispelled in the name of progress.

This more enlightened approach to the diagnostic process has much to recommend it, not only for the medical students that Dr. Lucey inspires, but for practitioners everywhere who know first-hand that diagnostic errors remain a consistent challenge to high-quality patient care and safety.

Myth

Expert clinical reasoning is a unique talent.



Truth

It’s a universal skill that can and should be optimized in all physicians.

Myth

Diagnosis is an event.



Truth

It’s a process that evolves over time.

Myth

Our patients expect perfection.



Truth

Patients are looking for conscientiousness, engagement and respect.

Myth

The test will provide the answer.



Truth

The test will influence the reasoning.

Myth

Computers will save the day.



Truth

They’ll serve a decision support function.

Where the Data Lead

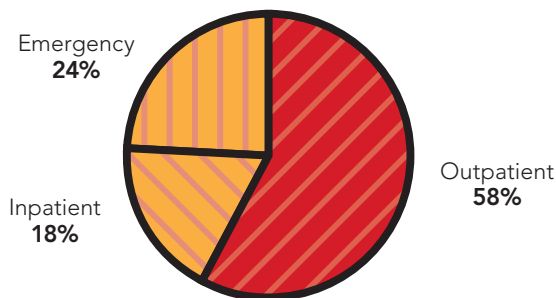
Looking at diagnostic error by practice setting

To help our clients determine the best place to focus their diagnostic improvement efforts, we begin by analyzing our medical liability claim data. We look at the settings in which care is delivered and the medical conditions for which allegations of diagnostic errors occur most frequently.

As you can see in the accompanying graphics, outpatient settings are the most frequent sites of origin of a diagnostic case.

Diagnostic Cases By Setting

N=484



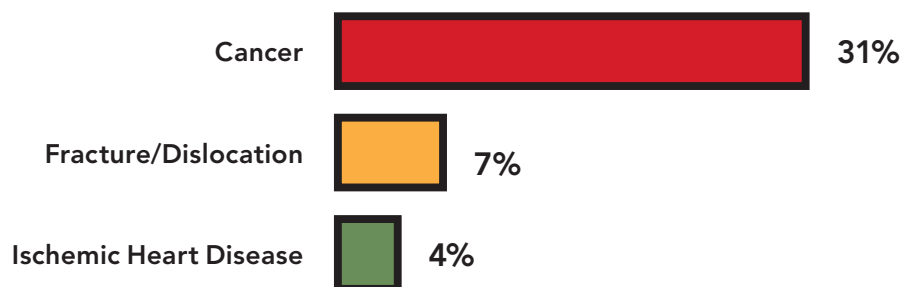
The diagnoses most commonly delayed include cancer, heart disease, stroke and fractures.

Once we've answered the question "What are we missing?" the next step is determining "Why are we missing it?" That requires a deeper dive into the data and a closer analysis of the specific factors that contribute to errors.

Top Missed Diagnoses By Setting

Outpatient

N=281

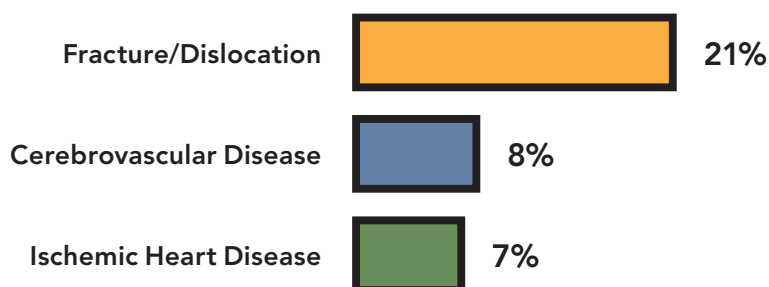


Top High-Severity Outcomes

- 53% Cancer
- 6% Ischemic Heart Disease
- 5% Cerebrovascular Disease
- 5% Circulatory
- 5% Heart Disease

Emergency

N=117

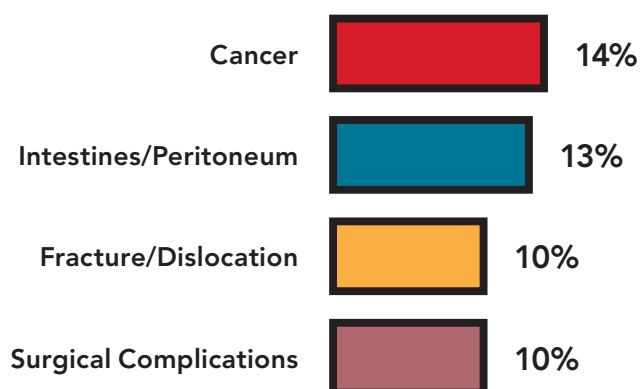


Top High-Severity Outcomes

- 15% Cerebrovascular Disease
- 12% Circulatory
- 12% Ischemic Heart Disease
- 6% Fracture/Dislocation
- 6% Meningitis
- 6% Heart Disease

Inpatient

N=86



Top High-Severity Outcomes

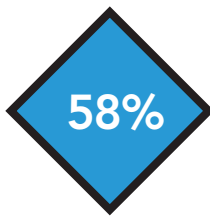
- 20% Cancer
- 10% Circulatory
- 8% Intestines/Peritoneum

The Outpatient Diagnostic Process

How contributing factors can drive your improvement plan

Diagnostic Error In The Outpatient Setting

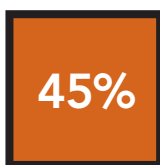
N=281



Initial Diagnostic Assessment



Testing and Results Processing



Follow-Up and Coordination

To get actionable information from claim data requires looking beneath the surface to identify the specific factors that create environments where errors happen.

To do this, we leverage the Harvard-based CRICO Strategies Comprehensive Risk Intelligence platform. Each case is codified using a proprietary clinical coding taxonomy that captures more than 600 discrete data points. Analyzing this data enables us to identify clinical and causal patterns that lead to patient injury, adverse events, and malpractice claims and suits. Contributing factors range from clinical judgment errors to communication failures to system-related gaps.

Contributing factors are categorized within three main phases of the diagnostic process:

- ✓ Initial assessment
- ✓ Testing and results processing
- ✓ Follow-up and care coordination

Our analysis of MMIC claim data shows the relative contribution of each phase to diagnostic error. Almost half of all diagnostic error in the outpatient setting begins with issues that arise during the initial diagnostic assessment (58%). Additional issues arise during diagnostic testing and results processing (35%) and during follow-up and coordination of further care (45%). (Note that a single case can have errors in more than one phase.)

CRICO has broken these stages down further to show the issues involved in each phase.

Analyzing the Diagnostic Process

Each of the 12 steps described on the next page presents focal points for more detailed analysis and opportunities for provider training and system improvements.

Note that a single case can have multiple factors across phases.

Percentages cited reflect MMIC cases occurring in outpatient setting only, N=281.

INITIAL DIAGNOSTIC ASSESSMENT

58%

- 1 **Problem Noted, Care Sought**—2% of cases
Issues: Access, scheduling, or waiting issues impede the patient from raising a relevant health problem, or delay him or her from seeking care for a recognized problem.
- 2 **History and Physical Conducted**—6% of cases
Issues: The patient's (personal and family) history is not fully recorded or updated; the physical examination is absent or inadequate.
- 3 **Patient Assessed and Symptoms Evaluated**—21% of cases
Issues: The patient's complaints or symptoms are not thoroughly addressed.
- 4 **Differential Diagnosis Established**—38% of cases
Issues: A narrow diagnostic focus, failure to establish a differential diagnosis, or reliance on a chronic condition or previous diagnosis.
- 5 **Diagnostic Test(s) Ordered**—28% of cases
Issues: The ordering of appropriate tests/imagings/labs is impeded by an incomplete or biased assessment.

TESTING AND RESULTS PROCESSING

35%

- From the scheduling, performance, and interpretation of diagnostic tests, through the management of the test results. The factors that trigger malpractice allegations are primarily related to breakdowns in clinical systems for test result management, the cognitive skills related to interpretation, and communication of results to the ordering physicians.
- 6 **Tests Performed**—5% of cases
Issues: Ordered test/imaging is not performed, performed incorrectly, or specimen is mislabeled or mishandled.
 - 7 **Test Interpreted**—27% of cases
Issues: Report of findings is determined to be incomplete or inaccurate; abnormal findings not ruled out.
 - 8 **Test Results Transmitted to/Received by Ordering Physician**—5% of cases
Issues: Receipt/review of test result by ordering physician is not completed, or is significantly delayed.

FOLLOW-UP AND COORDINATION

45%

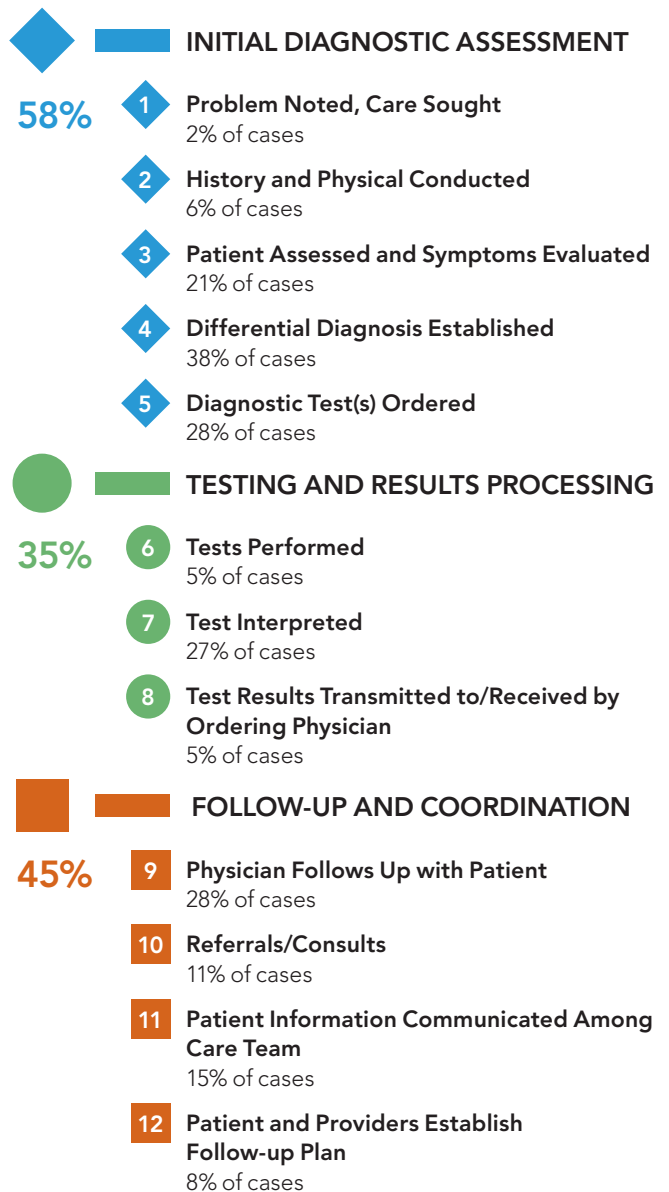
- Encompasses decisions made and actions taken after assessment and testing, including consultations and communication. The factors driving malpractice allegations are primarily related to failure to involve specialty consultation and breakdowns in communication among caregivers and between caregivers and the patient.
- 9 **Physician Follows Up with Patient**—28% of cases
Issues: Findings are not communicated to the patient, follow-up testing is not arranged, or follow-up is not documented.
 - 10 **Referrals/Consults**—11% of cases
Issues: Appropriate referrals to specialists (or consults) are not made or adequately managed, or identification of the physician responsible for ongoing care is unclear.
 - 11 **Patient Information Communicated Among Care Team**—15% of cases
Issues: Failure by one or more providers to fully review or share patient information that influences ongoing diagnostic process.
 - 12 **Patient and Providers Establish Follow-up Plan**—8% of cases
Issues: Patient fails to adhere to the follow-up plan, including appointments and treatment regimen.

Source: CRICO Strategies 2014 CBS report: Malpractice risks in the diagnostic process. Available at <https://www.rmfi.harvard.edu/Clinician-Resources/Article/2014/CBS-Intro>

From Analysis to Action

Leveraging outpatient case examples

MMIC's analysis shows that breakdowns in the diagnostic process are not evenly distributed across the 12 steps. Focusing on those areas where breakdowns are concentrated is a good place to start process improvement work.



“Improving the diagnostic process is not only possible, but also represents a moral, professional, and public health imperative.”

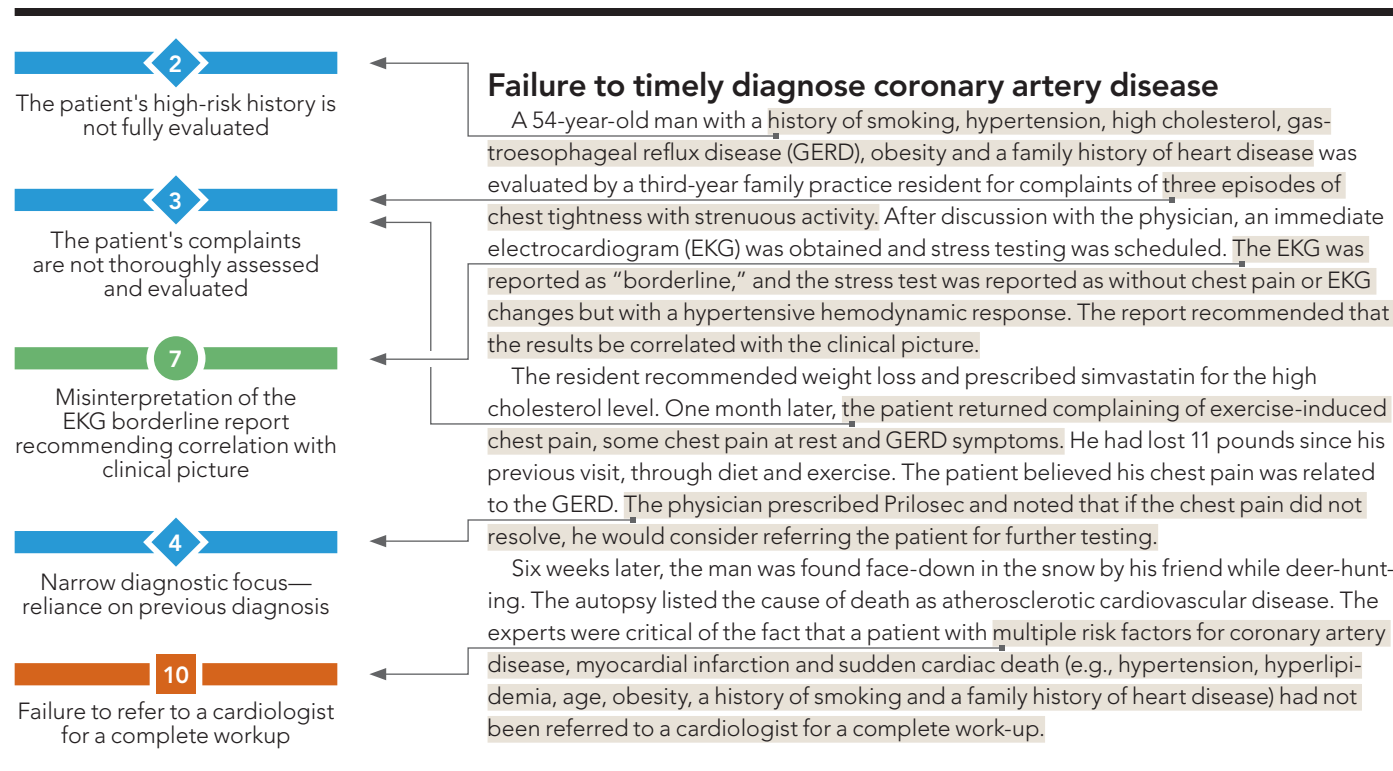
Improving Diagnosis in Health Care

Analyzing malpractice case examples to find opportunities

Throughout this issue of *Brink*, we will use examples from malpractice claim cases to identify issues that could be addressed in the future to improve the diagnosis process. We will point out the step at which a breakdown occurred, to help track where in the process issues—and thus opportunities—exist.

The case example in figure 1 shows how a particular instance of diagnostic error can be analyzed using this 12-step process. In this case, a patient dies after a physician fails to rule out a potentially fatal cardiac condition, despite the patient’s “red flag” history and symptoms of chest pain.

figure 1



Addressing vulnerabilities

The identification of breakdowns in a diagnostic encounter, like those called out in the case example, can help your team identify patient safety vulnerabilities and implement safer care practices.

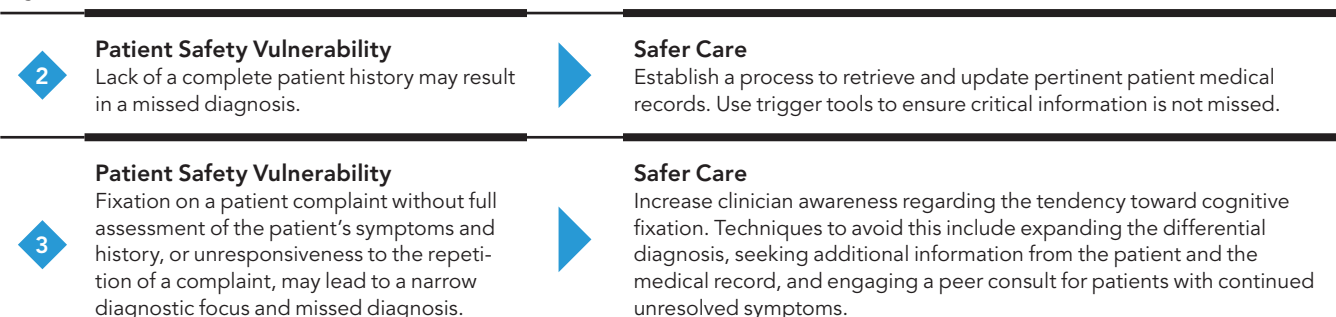
The examples in figure 2 of how to move from analysis to action are drawn from an excellent resource available on the CRICO Strategies website.¹ Called “Are You Safe?,” the site offers a library of case studies that can help care teams determine best practices

they can implement to reduce the risk of patient harm in the course of diagnosis and treatment.

In the pages that follow, we take a closer look at each of the three phases of the diagnosis process and share case studies, data, tools and solutions that you can use to make sure your patients are getting the very best from those they’ve entrusted with their care.

¹<https://www.rmfm.harvard.edu/Clinician-Resources/Article/2014/Safer-Care-Library>

figure 2



The Initial Assessment

Why listening, generating differential diagnoses, and ordering appropriate tests are key to mitigating diagnostic error.

In the initial assessment phase of the diagnostic process, 58 percent of our diagnosis-related cases in the outpatient setting exhibit contributing factors captured within steps 3–5. Therefore, it's important to ensure that:

- 3 the patient's complaints are heard and their symptoms are thoroughly addressed,
- 4 a differential diagnosis is established, in addition to a diagnosis reliant on existing chronic conditions in a patient, or a common or expected set of symptoms, and
- 5 appropriate tests are ordered, to confirm the diagnosis or rule out more serious conditions.

Generally, in outpatient care, it is the primary care physicians, nurse practitioners or physician assistants who must turn presenting symptoms into a practical puzzle that can lead to a correct diagnosis.


According to Chris Tashjian, MD, patient history is the most important place to start. "It can point you in the right direction, but only if you ask the right questions *and* you pay attention to the answers," says Dr. Tashjian, family and emergency medicine physician, and Constellation board chair.

It can be easy and often misleading to work directly from the intake team member's notes. While they indicate the patient's report and best guess at their situation, this is only the beginning of the information that must be gathered and evaluated.

Once you have an understanding of the situation from the patient's story and your evaluation, it's important not to make a quick decision. "It's easy to follow the path that is laid out for you, if you're really busy and distracted," says Lori Atkinson, RN, BSN, and research, development and education manager at MMIC. "This is where clinical decision tools can really help." Many use algorithms to find diagnoses they may not have considered otherwise. Clinical decision tools, whether paper or online, allow you to consider all the symptoms and to begin to weed things out, helping you move beyond your first guesses and allowing you to dig deeper. "It's incumbent on the physician to figure out what it is, but also to rule out what it isn't," says Dr. Tashjian.

When diagnosis of cancer is missed...

43%

of cases involve the failure to establish a differential diagnosis during the initial diagnostic assessment 

26%

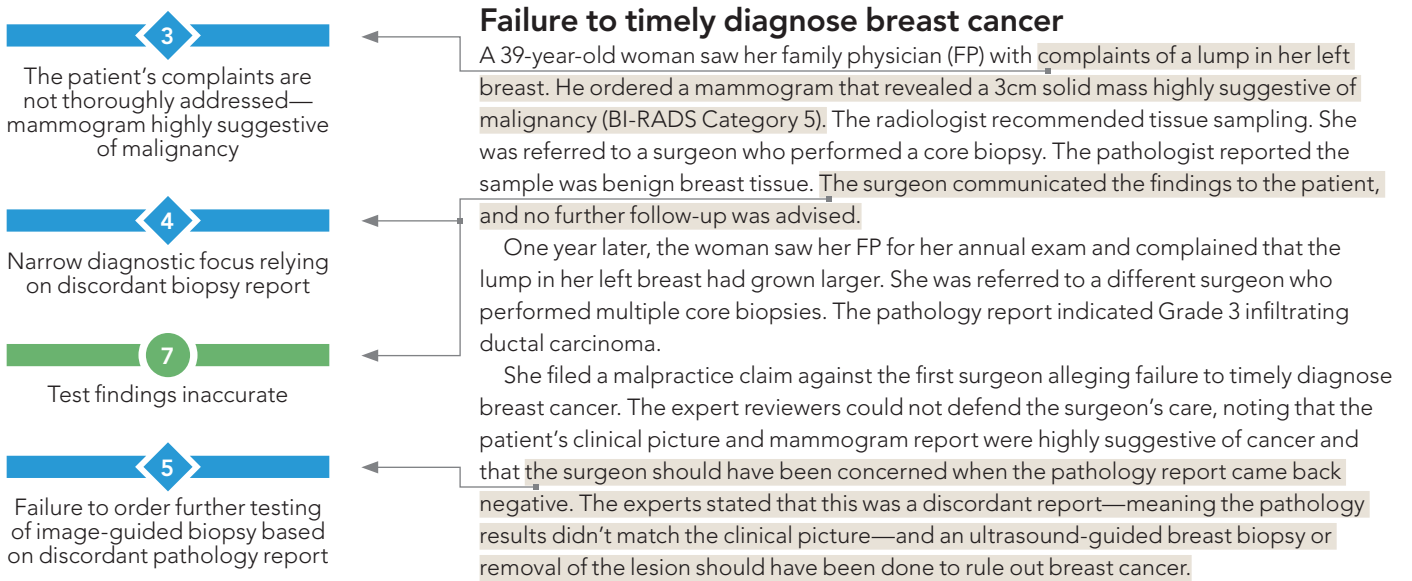
involve a failure/delay in ordering a diagnostic test 

N=90

Case example examined

In figure 3 we present a malpractice case example in which over-reliance on a negative pathology report causes a surgeon to miss a diagnosis of breast cancer. In this case, issues within steps 3, 4 and 5 contribute to the case, as well as step 7, which will be discussed in more detail in the Testing and Results Processing section of this issue (see pages 16–23).

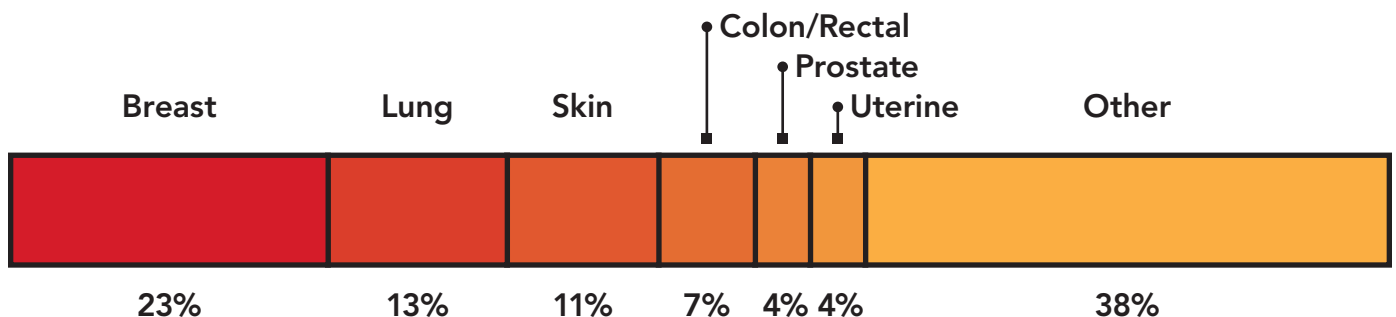
figure 3



Breast cancer is the #1 missed cancer diagnosis in the outpatient setting

Top Missed Cancer Diagnoses

N=90



Think Again

Analysis reveals opportunities to improve clinical judgment factors.

For steps 3, 4 and 5, the data further reveals insights on where we can improve diagnostic error. In step 3, during which the patient is assessed and evaluated, causative factors are found in 21 percent of outpatient cases. Of the cases within step 3, the top assessment factors were:

- ✓ Failure to respond to repeated concerns or symptoms—in 59 percent
- ✓ Over-reliance on negative findings with continued symptoms—in 26 percent

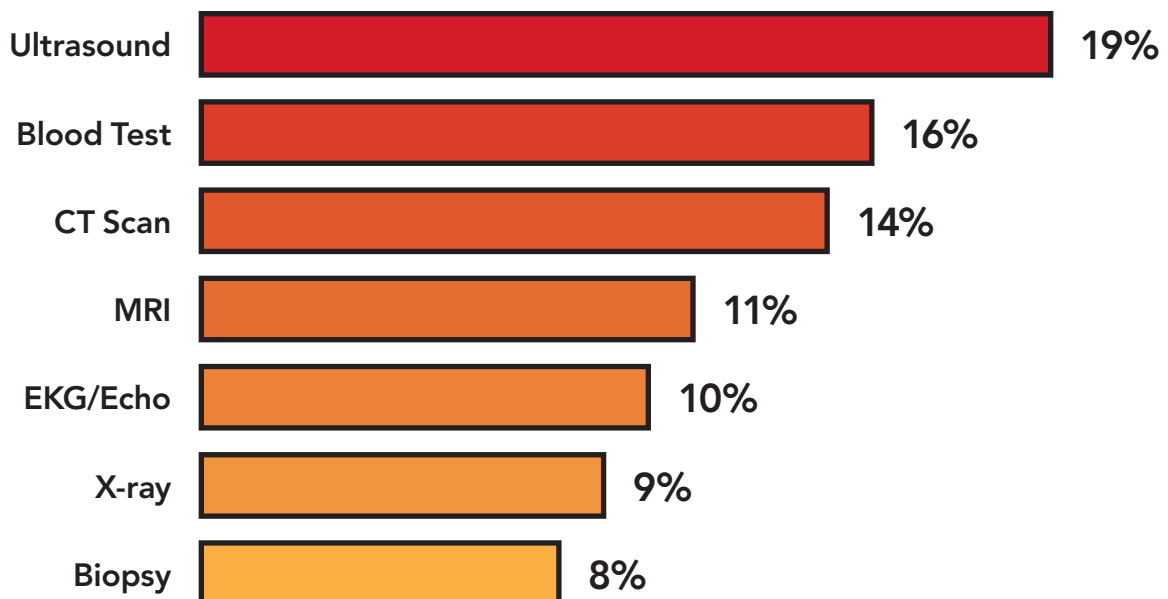
Step 4 reveals issues in 38 percent of cases in which a differential diagnosis should have been more effectively established. Of the cases within step 4, the most frequent factors involved were:

- ✓ Failure to establish a differential diagnosis—55 percent
- ✓ Reliance on a previous provider’s diagnosis—14 percent
- ✓ Chronic or previous diagnosis assumed—10 percent
- ✓ Atypical presentation of symptoms—10 percent

In step 5, the final step in the initial diagnostic assessment, the failure or delay in ordering a diagnostic test is found in 28 percent of diagnosis-related outpatient cases, often impeded by an incomplete or biased assessment. The most frequent diagnostic tests that are delayed or not ordered are shown in the chart below.

**Diagnostic Tests
Top Delayed/Failed To Order**

N=80 Outpatient Cases



When a Cough Isn't Just a Cough

Why we miss cancers, and how we can improve.

Of all missed, wrong, or delayed diagnoses in outpatient cases, cancer accounts for 31 percent. If we look only at those cases with high severity, cancer accounts for a whopping 53 percent of outpatient cases. It is no wonder, then, that we must focus attention on finding opportunities to diagnose cancers earlier to improve patient prognoses.

One issue with cancers is that they can be asymptomatic in the beginning, according to Chris Tashjian, MD, family and emergency medicine physician at Vibrant Health Family Clinics. Another is that the speed of growth of cancers can vary greatly—slow cancers may be detected only after symptoms get severe, and fast-growing cancers may be too aggressive to treat once discovered. Practicing with awareness and an open mind to all scenarios is key to getting cancer diagnosed early.

“We have to force ourselves to stop and think, and not just go down the rabbit hole and only think one thing,” counsels Dr. Tashjian. At Dr. Tashjian’s clinic, they use a template to help ensure differential diagnoses are fully considered. “We put in what we think the diagnosis is, and then we put in what we think it isn’t and our reasons why.”

When patients return with worsening or persisting symptoms, it’s important to question an original diagnosis and consider all possible alternate scenarios in order to rule out more serious conditions. Dr. Tashjian explains, “People come in with a cough all the time. We can see 100 coughs, and 99.9 percent of them will be cold and flu. So, how do you know when to order a chest X-ray or CT scan? We ask questions like does the patient have night sweats? Weight loss? We consider, does this patient smoke?”

“I always ask myself, how could I have caught this sooner?” says Dr. Tashjian

If further discovery leads to uncertainty, this can be a good time to do tests or to refer the patient to a specialist for further evaluation. “If someone comes in for the same problem three times, I’m

very likely to say, ‘It’s time for a second opinion,’” says Dr. Tashjian. “Being willing to refer sooner rather than later can make a big difference in finding a cancer sooner.”

But sometimes, cancer simply gets missed. “The problem is there are no hard and fast rules. And because of that, it’s easy to miss something,” adds Dr. Tashjian. “There may be no symptoms until a cancer is very far advanced.”

If you’re a primary care clinician, the best you can do is to remain vigilant. Use the tools you have, consult with colleagues, refer patients to specialists, and continually work to improve your systems to catch cancers earlier. But it’s important to know there are limits to our understanding. “When you’re a primary care physician, sometimes you find the cancer or someone else finds the cancer. When this happens, I always ask myself, how could I have caught this sooner?” says Dr. Tashjian. “Because we know that early detection is the best chance for a cure.”

Cancers account for

31%

of missed outpatient diagnoses and

53%

of high-severity outcomes

Engaging the Patient Early

Enlist your patients to help you get the diagnosis right.

For primary care physicians like Chris Tashjian, MD, getting diagnoses right as soon as possible is key to good patient care. But missed, delayed or wrong diagnoses can happen, despite physicians' best efforts. Here are some of Dr. Tashjian's tips for engaging patients to help get it right the first time.

"A thorough history can help you if you ask the right questions and you pay careful attention to the answers," says Dr. Tashjian

Get a complete patient history

Knowing the patient's medical history and gathering as much family and extended family information as possible can help you rule out and factor in key aspects of the patient's health. Encourage patients to talk to their extended families to find out more about medical concerns, including genetic factors, cancers, chronic conditions and surgeries.

Understand the patient's lifestyle

Habits, vices, living conditions, new stressors or major life changes—these and other lifestyle factors can play into the diagnostic picture. Be careful not to weigh any one factor too heavily. If you simply attribute a condition to an existing diagnosis or to factors such as obesity, smoking, or alcohol use, you may miss something important.

"It's important to ask the patient, 'What are you worried about?'" says Dr. Tashjian

Ask the patient to share their concerns

This may reveal worries or informal research the patient has done. They may not feel confident enough to bring these concerns

forward unless they are encouraged and empowered by their physician. As a clinician, the good news is patients look to you for decisions and trust your expertise. The bad news is they may conceal information they don't consider relevant or significant. Make sure you let them know you want to see them again if their symptoms worsen or persist.

Ask questions that help you process a differential diagnosis

Keep in mind there may be details the patient doesn't know are relevant and therefore won't mention. For example, to determine that a chronic cough is a result of a smoking habit and not a symptom of lung cancer, you can ask questions about other likely symptoms. Do they have a loss of appetite? Have they coughed up any blood? Additional questions can help you rule out a more serious condition or lead you to order further tests.

"Think of the worst case and then go backward to the most likely case," says Dr. Tashjian

Involve patients in their health care decisions

Keep an open mind to other possible diagnoses and never underestimate the patient's role in shared decision-making. It's important to rule out more serious conditions, to order tests or to refer the patient to a specialist, but to increase patient engagement it's important to let the patient know *why* you feel these actions are important.

Build trust with your patients

By establishing and cultivating open communication with your patients, you help to keep those patients coming back to your care. Remind your patients to schedule preventive visits and create systems in your practice that help patients get the routine care or other treatment they need. When you know a patient well, that knowledge can assist your ability to diagnose. But be careful—too much familiarity can make a provider too comfortable. It's important to keep an open mind to all possibilities.

CHRIS TASHJIAN, MD, IS A FAMILY AND EMERGENCY MEDICINE PHYSICIAN AT VIBRANT HEALTH FAMILY CLINICS, AND SERVES AS CONSTELLATION BOARD CHAIR

Five Tips to Reduce Evaluation and Cognitive Errors

- 1** Employ decision support algorithms, such as CRICO's Breast Care Patient Safety Decision Support, to manage both screening and symptomatic patients.¹
- 2** Use electronic decision support tools such as the Isabel Differential Diagnosis (DDx) Generator to help build differential diagnosis lists and rule in or rule out potentially serious conditions.²
- 3** Use general and symptom-based checklists to help rule in or rule out potentially serious conditions. The Society to Improve Diagnosis in Medicine (SIDM) offers several.³
- 4** Maintain a high state of alertness for patients who return with unresolved or worsening complaints. Broaden the differential diagnosis list. Seek a second opinion if necessary.
- 5** Encourage patients to become informed and activated, to ask questions and advocate on their behalf. Patients can use the National Patient Safety Foundation's Checklist for Getting the Right Diagnosis.⁴

Learn more:

¹<https://www.rmfi.harvard.edu/Clinician-Resources/Guidelines-Algorithms/2014/BCA-Decision-Support-Flow-Charts>

²<http://www.isabelhealthcare.com/>

³<http://www.improvediagnosis.org/page/Checklist>

⁴<http://www.npsf.org/?page=rightdiagnosis>



The Testing and Results Processing Phase

Reliable processes and systems can help close loops.

The testing and results processing phase of the diagnostic process, outlined in steps 6–8, identifies contributing factors in 35 percent of diagnosis-related outpatient cases. During this phase, it’s important to ensure that:

- 6 diagnostic tests are performed, labeled, and handled correctly
- 7 findings are complete and accurate, and abnormal findings are sufficiently addressed, and
- 8 the ordering clinician or delegate (in clinician’s absence) receives and reviews the test result within the acceptable timeframe.

Generally, in outpatient care, once the clinician orders a diagnostic study, team members handle the next steps. They will likely be in charge of performing the tests, labeling and handling specimens, or coordinating referrals to external provider organizations to execute the studies, such as pathology labs or imaging centers.

Errors at any point along this chain could lead to a diagnostic error. Tests may be ordered, but incorrectly interpreted, which can cause wrong turns down the diagnostic path. In many cases, these oversights come to light after the condition worsens over time, and through frustration a patient seeks care from another provider who is able to provide a correct diagnosis. In the event of a delayed diagnosis of a serious condition, this can lead to significant injury or even death.

As in the case example presented in figure 3 on page 11, test results came back negative despite clinical indications that suggested malignancy. Because the results were accepted and not questioned by the first surgeon, no further tests were ordered, and the case resulted in a diagnosis that was delayed unnecessarily for a year, during which the cancer progressed significantly.

Beyond interpretation of tests, the clinician may not receive or review the test result, or may significantly delay the communication of the result. “Back in the paper chart days, you’d see a report filed but not reviewed,” says Lori Atkinson, RN, BSN, and research, development and education manager at MMIC. “That can still happen today in an electronic health record (EHR) system. A test can come back abnormal, but if for any reason the clinician doesn’t see the report or isn’t notified, then the patient isn’t informed and there’s no follow-up. Nothing gets scheduled.”

Or it can be as simple as not assigning a delegate in a physician’s absence to receive incoming test results. “We’ve seen malpractice cases where a provider goes on vacation, or is out sick, and an abnormal report comes in when they are gone. Again, there’s no follow-up, and the patient doesn’t get the news,” says Atkinson.

What can be done?

Fortunately, both of these issues and more can be mitigated by leveraging EHR systems and improving processes. Important functions to implement for safer diagnosis include:

- ✓ setting appropriate notification criteria and thresholds,
- ✓ limiting or eliminating the ability to simultaneously sign off on multiple reports,
- ✓ automating reports highlighting unread results and outstanding orders,
- ✓ delegating physicians to receive results in another’s absence, and
- ✓ working through referral.

Each function should be tested periodically to ensure effectiveness.

(For tips on reducing system errors, see page 23.)

Chris Tashjian, MD, agrees. Like other primary care physicians, he sees 20 to 30 patients a day. “Without good systems and team support, there’s no person I know who is smart enough to keep all that in their head,” he says. “One of our team members looks at every lab test and X-ray and makes sure those results are communicated to the patient. And, as physicians, we are required to write down what we communicated. If we don’t add it to the notes, the system has ways to flag it and make sure we close the loop.”

It’s also helpful to engage patients to help make sure tests are done and the results are communicated. “It can be hard for patients to question their physician, so it’s important to encourage patients to ask questions, to call back if their symptoms are worsening, or to let their physician know if they haven’t heard about a test result,” says Atkinson.

Fractures are the

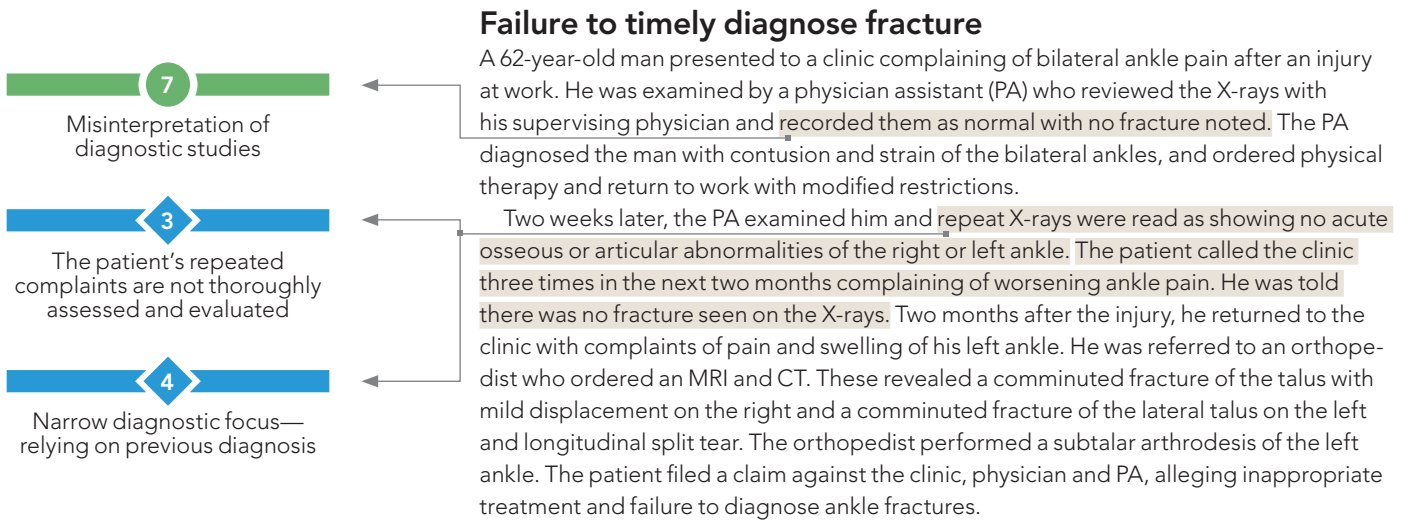
#2

most missed diagnosis in the outpatient setting

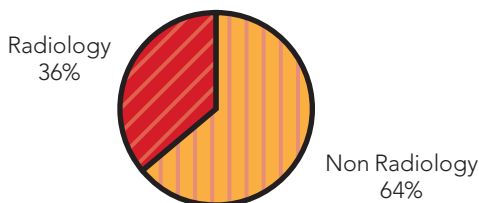
Case example examined

In figure 4 we present a malpractice case example in which a misread X-ray transmitted via EHR leads to a delay in the diagnosis of a fractured ankle. In addition to issues with the clinicians involved not fully assessing the repeated patient's complaints, and reliance on a previous diagnosis, misinterpretation of two X-rays taken on multiple occasions led to a significant delay in the diagnosis of a fractured ankle.

figure 4



Misread X-rays
N=22



X-rays are often read by primary care providers and specialists, but, when considering case rate against quantities of x-rays read by each, the data indicates consulting a radiologist can help to avoid misreads.

“It’s important to listen to the patient. Even if you think they’re exaggerating their symptoms, a high-tech test or a repeat X-ray is certainly worth it. If they have continued pain, it needs to be worked up and not dismissed,” says Sue A. Crook, MD, FACR.

Looking Closer

Five ways to close the gaps on imaging

Imaging can be key to a correct diagnosis but can be a part of diagnostic error as well. “Every step of the way, things can break down,” says radiologist Sue A. Crook, MD, FACR, and Constellation board member. “We need a lot of safety nets in place to make certain that the loops are closed.”

1. Seek help from a specialist

Diagnostic errors can occur in relation to any of steps 6–8, but step 7—incomplete or inaccurate interpretation of tests—is most impactful, as it’s involved in 27 percent of cases in the outpatient setting. When analyzing only the cases involving an error in the test results and processing phase, the chart below shows that misinterpretation of tests dominates this stage, accounting for 93 percent.

Test Results And Processing Breakdowns

N=84



“A family practice physician could look at a chest X-ray and feel very comfortable that the patient doesn’t have pneumonia, but they may miss a pulmonary nodule or pneumothorax,” says Dr. Crook. “If the imaging doesn’t get sent to a radiologist for interpretation, subtle findings could easily be missed.”

2. Better communication leads to better reads

When consulting with radiologists or specialists for their evaluation, include specific location, patient history, trauma details or other information to help focus their attention. “X-rays can be tough, especially on fractures. If a patient comes in with ankle pain,

but we have no additional detail, with all those little bones in the foot, it’s easy for us to miss a fracture,” says Dr. Crook.

“If someone gets a CT scan of the chest and pelvis because they have abdominal pain, it can be hard looking through the 1000 images generated to pinpoint a problem,” says Dr. Crook. “More specifics, for example, right lower quadrant pain, can help narrow our focus.”

The data in figure 6 indicates those tests at risk for misinterpretation where consultation by an appropriate specialist can be important in determining a correct diagnosis.

3. Read the report—don’t wait for a call

American College of Radiology (ACR) standards require that, if a radiologist finds what are defined as “critical results,” they must have a one-on-one conversation with the referring physician. Because “critical results” do not include all positive results, it’s important to read the report, and to close the loop with the patient, even if results are negative or benign.

4. Improve patient communication and encourage engagement

Help patients understand why a test is necessary and establish next steps. With higher-tech imaging, or imaging done outside the original provider’s office, the simple lapse in time, along with multiple locations and health IT systems, can make it harder to close the loop. “Breakdowns occur when there are delays, such as a test not being performed in the primary care clinic, or examinations where patient preparation is necessary,” says Dr. Crook. “In these examples, the exam may not occur for hours or days. There needs to be a system in place so that the results are reviewed by the ordering provider.”

5. Improve and continue to monitor systems and processes

Work toward establishing a system that supports testing and results processing. A good health IT setup that’s redundant, with a fast, reliable electronic connection, can help clinicians ensure loops are closed. Many systems use flags that alert the clinician that results are ready and require confirmation that reports have been read and communicated to the patient.

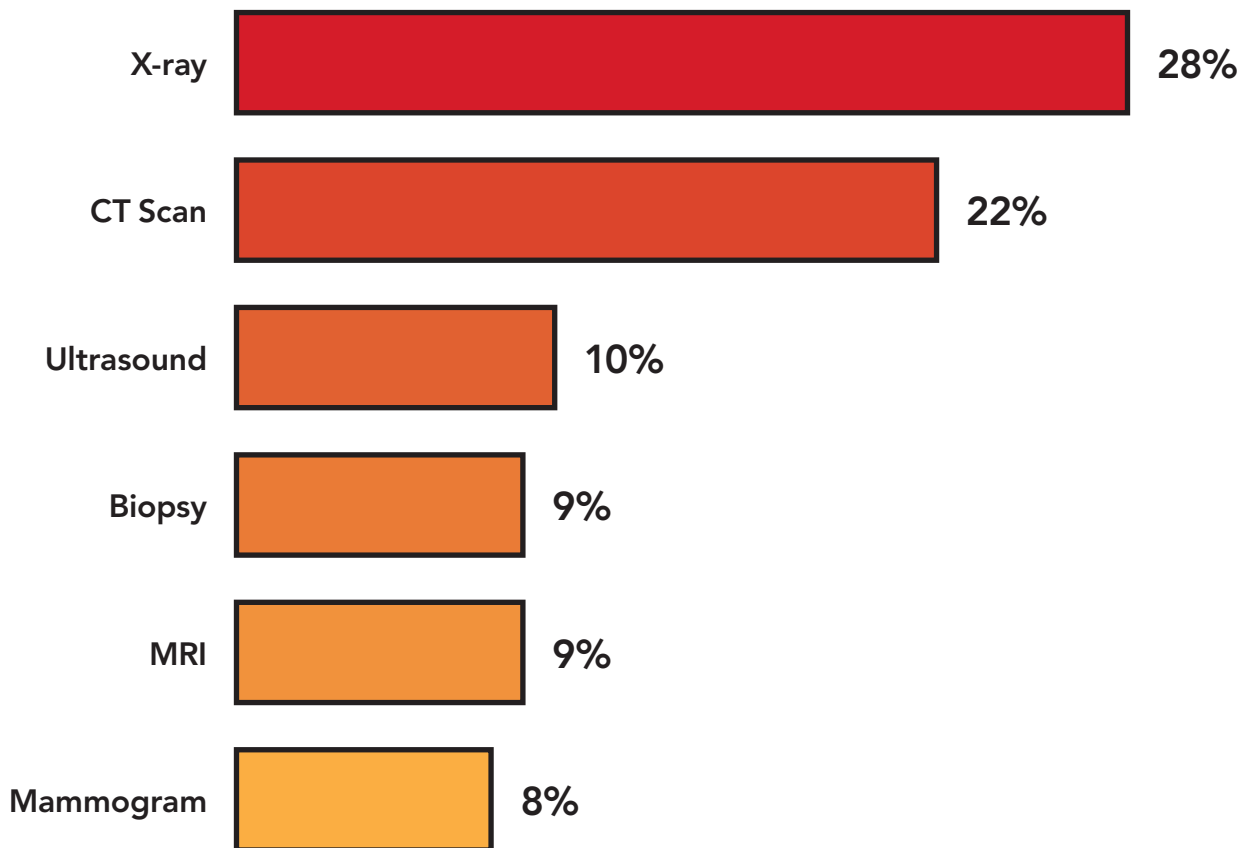
The trend in radiology, especially for X-rays or images taken in the clinic, is reading reports in real time. “This is going to help, as it becomes more common. Clinicians order the test, and the radiologist’s results are available virtually immediately so the care provider can determine next steps,” says Dr. Crook.

Because “critical results” do not include all positive results, it’s important to read the report, and to close the loop with the patient, even if results are negative or benign.

figure 5

Top Misinterpreted Diagnostic Tests

N=78 Cases



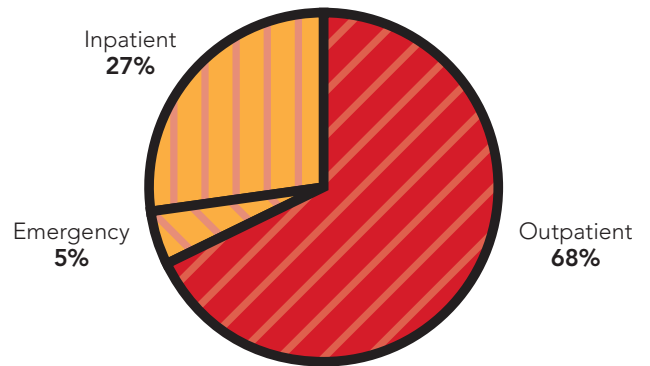
Debugging EHR Factors

EHR-related cases are few, but costly.

While technology is rarely the sole factor in a malpractice claim, evidence shows that electronic health record (EHR) factors—either user-related or system-related—can contribute to serious issues in the diagnostic process. Conversely, EHRs can help to improve gaps in the diagnostic process when well leveraged. Of 37 cases with EHR-related factors, 68 percent occur in the outpatient setting.

EHR-related Error By Setting

N=37



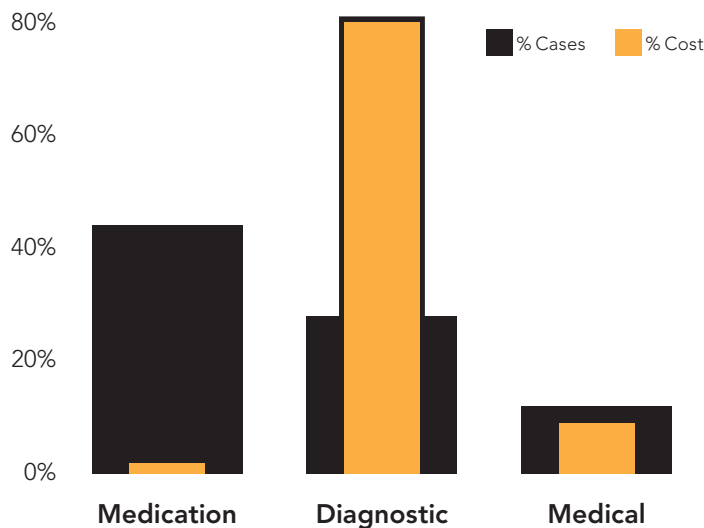
EHR-related cases account for

\$8.5 million

in total incurred costs from 2010-2015

Top Outpatient Allegations With EHR-related Factors

N=25



When diagnostic-related allegations are impacted by EHR factors, the most common contributors include:

- Hybrid records and conversion issues—missing patient risk factors, such as previous test results
- Failure to route electronic data
- Missing provider review of results—no notification, no review, or sign-off without review
- Communication failures between providers—review of other provider’s findings or documentation

Case in point: Cancer diagnosis delayed

A lung cancer diagnosis was delayed due to the implementation of a new EHR lab module. The module wasn’t configured to trigger a notification when the patient’s lab result was completed. The physician failed to review the result and continued to treat the patient for over a year without diagnosis. Eventually, another physician diagnosed the patient with cancer.

What could have been done?

Reflecting on how this process was managed prior to the new module, would an implementation checklist have helped to make sure all set-up tasks were completed? Would a low-tech solution, such as a phone call to the provider for important abnormal results, be effective to use in conjunction with the module? Would an automated report to monitor lab results not reviewed by a provider have helped?

Safer Diagnosis with EHR

Manage health IT risk and leverage technology to close the loops.

1. Strengthen collaboration between health IT, risk managers and clinicians

- ✓ Establish a common language to communicate health IT factors
- ✓ Collaborate on system design supporting the diagnostic process
- ✓ Increase engagement during implementation

2. Understand technology in context

- ✓ Understand how technology captures the clinical story
- ✓ Ensure that information flow presents the clinical story appropriately
- ✓ Leverage the safer diagnosis framework¹ to identify high-risk intersections where the diagnostic decision-making depends on effective technology

3. Understand and respond to diagnostic risks across skillsets

- ✓ Review known and new EHR risks in the context of the diagnostic process
- ✓ Build diagnostic test and result duration thresholds and reporting process
- ✓ Implement automated reports for monitoring open tests and results not reviewed

Resources:

¹BMJ Quality & Safety <http://qualitysafety.bmj.com/content/24/2/103>

HealthIT.gov SAFER guides www.healthit.gov/safer

ECRI Institute <https://www.ecri.org/resource-center/Pages/HIT-Safe-Practices.aspx>



Opening Up

Patients and physicians alike find that sharing medical notes leads to enhanced trust, improved communication and better patient care.

Thanks to a movement called OpenNotes, today more than 11 million patients across the country have electronic access to the medical notes their doctors write after a visit. OpenNotes began in 2010, with a pilot study of 20,000 patients that demonstrated several patient benefits to sharing notes—including helping patients feel more in control of their health and more prepared for visits. Follow-up research in 2013 and 2016 showed also that sharing notes can enhance patient engagement and safety in several ways, including increased adherence to prescribed medications, enhanced trust, and identification of documentation errors.

At the end of the
initial year-long study,

99%
of patients wanted
OpenNotes to continue,

and **none** of the doctors
discontinued the program.

“One of the challenges has been finding tangible ways to leverage patient engagement to improve safety,” says Sigall Bell, MD, associate professor of medicine at Harvard Medical School and director of patient safety and discovery for OpenNotes. “We are very excited to see that OpenNotes can serve that role.” By reading their notes, patients and families can become an active part of the diagnostic process, enabling them to alert their doctor to errors, clear up misunderstandings, or add missing pieces to their medical or family history.

Research is suggesting that when patients read their notes, it may serve as an extension of the time they spend with their

doctor—a key measure connected to patient satisfaction and trust.¹ It can also help patients get better care. “OpenNotes can help close gaps in the space between patient visits. This gap is more often where trouble brews, where medical errors or delay in diagnosis can happen—it’s the missed follow-up appointment, it’s the referral that doesn’t get completed, or the abnormal test result that isn’t followed up,” says Dr. Bell.

Bell’s research also suggests that patients are eager to partner with clinicians by reporting back on issues or errors they find in the notes, including misunderstandings, medication errors or incomplete family histories. “This allows the provider to follow up on these pieces and reconcile the record, so that the right things can happen for the patient in a timely manner,” says Dr. Bell. In fact, whereas 44 percent of doctors originally felt that patients would disagree with their notes, no doctors reported being defensive in response, and about half of the doctors felt patient satisfaction had increased because of shared notes.¹

In addition, physicians and patients found several relational benefits to sharing notes.^{1,2} They noted feelings of enhanced trust, increased transparency and better communication. Though many doctors feared an additional time burden and worried that patients would be offended or worried, few of these concerns materialized. At the end of the initial year-long study, 99 percent of patients wanted OpenNotes to continue, and none of the doctors discontinued the program. In fact, a large majority of the doctors reported that “making visit notes available to patients online is a good idea.”²

According to Dr. Bell, “Just by being invited to read the notes, it sends a very powerful message to patients and families about inclusivity, transparency, and partnership—all things that help build trust.”

Sources:

OpenNotes.org

¹Bell SK, Mejilla R, Anselmo M, et al. When doctors share visit notes with patients: a study of patient and doctor perceptions of documentation errors, safety opportunities and the patient-doctor relationship. *BMJ Qual Saf.* May 2016. doi:10.1136/bmjqs-2015-004697.

²Delbanco T, Walker J, Bell SK, et al. Inviting patients to read their doctors’ notes: A quasi-experimental study and a look ahead. *Ann Intern Med.* 2012;157(7):461–470.

³Bell SK, Folcarelli PH, Anselmo MK, et al. Connecting patients and clinicians: The anticipated effects of Open Notes on patient safety and quality of care. *Jt Comm J Qual Patient Saf.* 2015;41(8):378–84.



Four Tips to Reduce System Errors

- 1** Simplify and standardize the test and referral management processes. AHRQ's Toolkit for Rapid-Cycle Patient Safety and Quality Improvement¹ is a good option.
- 2** Implement a test management policy that includes the roles and accountabilities for each step in the process, the delegation of tasks to non-physician team members, the timeframes for responding to results, a process to compare addenda and final reports with initial or preliminary reports and to note discrepancies, and a back-up plan for review of results in the absence of the ordering provider.
- 3** Evaluate your test and referral management systems using a Failure Modes and Effects Analysis (FMEA)² and auditing EHR alert and system logs.
- 4** Use the Health IT Safety (HITS) measurement framework for health IT-related patient safety measurement, monitoring and improvement.³

Learn more:

¹<https://www.ahrq.gov/professionals/quality-patient-safety/quality-resources/tools/office-testing-toolkit/index.html>

²<http://app.ihl.org/workspace/tools/fmea/alltools.aspx>

³<http://qualitysafety.bmj.com/content/25/4/226.full>

Follow-up and Coordination

How establishing formal communication, improving processes and helping patients stay engaged can improve the diagnostic process.

In the follow-up and coordination phase of the diagnostic process, steps 9–12 offer additional checkpoints to help ensure:

- 9 findings are communicated to the patient and follow-up testing or care is arranged and documented,
- 10 appropriate referrals are made and adequately managed, and it is clear who is responsible for ongoing care,
- 11 patient information is reviewed and shared among the entire care team, and
- 12 a follow-up plan is established for both the patient and the providers, including appointments and a treatment regimen.

In this phase, the number of people involved can grow significantly and can include various care providers and clinicians; the patient, their caregiver(s) and family members; and specialists, referrals and consults.

In outpatient care, we see issues with poor communication between care team members, and between physicians and patients. Because there are so many moving pieces at this phase, it's easy for things to fall through the cracks or for the diagnostic process to fail.

Follow-up Systems Failures

45% of outpatient diagnosis cases involve a process breakdown after a diagnostic test has been performed and interpreted.

Top contributing factors in cases with follow-up systems failures are significantly less about

- ✓ patient assessment issues or workload,
- ✓ failure or delay in ordering diagnostic test, or
- ✓ misinterpretation of studies

and more about

- ✓ communication among providers,
- ✓ communication between providers and patient or family,
- ✓ patient factors such as noncompliance with follow-up call or appointment, or
- ✓ failure to report revised or new findings

Care teams need formal communication techniques like SBAR (see page 27 to learn more); better communication and coordination with patients; and health IT systems with flags and alerts, as well as tools that facilitate gathering and assimilating patient information from multiple sources.

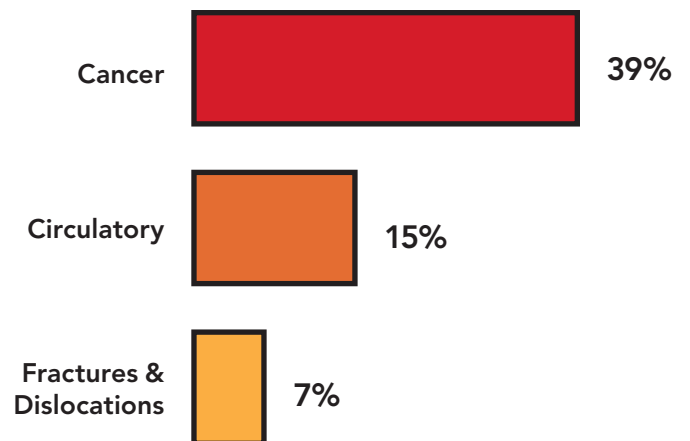
"Clinicians can rely on a good electronic health record (EHR) system, but they also need to talk to each other," says Lori Atkinson, RN, BSN, and research, development and education manager at MMIC. "And having those conversations with patients is important. Saying things like, 'Here's why I want you to see a specialist. We need to rule out a heart condition. And here's what could happen if you don't follow up.'"

In this final phase of the diagnostic process, patient engagement is critical. Patients need to step up and take responsibility to keep things moving forward—communicating their symptoms clearly and truthfully to their physician, returning if symptoms get worse, getting recommended tests, and following up on results and referrals.

"Sometimes patients don't come back for their follow-up. Maybe they didn't think it was a problem, their symptoms seem to go away, or they don't want to sit in the clinic for an hour," says Atkinson. "Whatever their reasons, you see patients who fail to follow through."

Top Missed Diagnoses Involving Follow-up And Coordination Failures

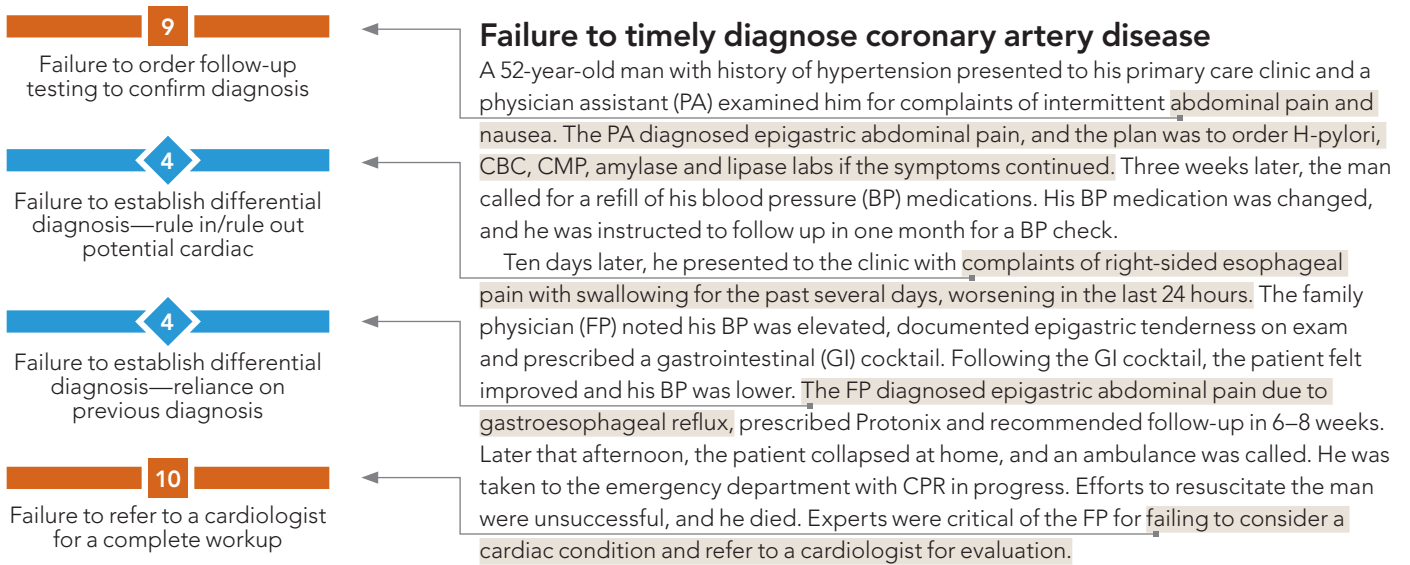
N=126



Case example examined

In figure 6 we present a malpractice case example in which a cardiac condition was missed despite repeated visits with worsening symptoms. Because a serious heart condition was not considered and ruled out with follow-up testing, the patient never received a referral to a cardiologist and ultimately died.

figure 6



Cardiovascular disease is the

#2

missed diagnosis in the outpatient setting



More Power to the Patient

Clinicians must take the lead in engaging patients, their families, and their care teams.

Of cases involving follow-up and coordination breakdowns

28%

involve deficient communication between care providers and patients

It's a familiar and frustrating scenario: a physician sends a patient home with instructions to screen, prevent, treat, or manage an issue, only to have those instructions ignored. Sometimes the patient ends up suffering the exact consequence feared, and sometimes the patient blames the physician.

Of the malpractice cases in the outpatient setting involving follow-up and coordination failures, 28% involve deficient communication between care providers and patients, and 8% involve issues where the patient fails to adhere to the follow-up plan, including appointments and treatment regimens.

Health care clinicians need to share decision-making with patients, but when it comes to follow-up and coordination, it's up to the provider to lead the process—both with the patient and with the patient's care team.

Patients have their own busy lives. So how can physicians and care providers work with patient lapses? What systems can be put in place to make sure nothing falls through the cracks?

3 ways to empower patients and ensure follow-up

- 1. Frame communication as shared decision-making rather than instruction.** Ensure treatment plans are the result of back-and-forth communication, questions and answers, and setting mutual expectations. Ask the patient to describe in their own words what's happening, what they need to do, and why the next steps are important.
- 2. Address economic and social factors.** Have an empathetic but frank conversation about life issues that get in the way. The patient may understand the importance of their own health, but may be facing child care limitations, financial concerns, or an unstable home environment. Clinicians can't talk through solutions if they don't know the issues.
- 3. Implement good follow-up systems.** Keep a record of orders for screenings, imaging and consultations. Watch for missed follow-ups. What systems are in place to track when results arrive and raise red flags when they don't? Missed appointments without a reschedule should trigger contact with the patient to assure they understand the significance or the danger.

In the end, it's about engaging the patient every step of the way so that nothing is a surprise when the treatment plan is implemented.



Four Tips to Reduce Communication Failures

1 Enhance communication and participation among providers—primary care, surgeons, radiologists and pathologists—so they do more than just exchange test results.

2 Conduct diagnostic rounds or huddles where input from the entire care team, including the patient and family, can be gathered.

3 Enhance the communication process between providers and the care team using tools such as SBAR¹ and I-PASS.²

4 Optimize teamwork skills and communication using TeamSTEPPS[®], which offers an evidence-based set of tools.³

Learn more:

¹<http://www.ihl.org/resources/pages/tools/sbartoolkit.aspx>

²<http://ipassstudygroup.com/home>

³<http://www.ahrq.gov/teamstepps/index.html>

Senior Living: Communicating Acute Change of Condition

Communication and follow-up monitoring can prevent adverse outcomes.

For senior living communities, effective communication among the health care team about follow-up care and monitoring is key to preventing adverse outcomes. Early recognition of a resident's acute change of condition and communication with the physician is the first step in diagnosing a problem.

Case example: Failed follow-up care leads to injury, then death

This case illustrates how breakdowns in communication and failed follow-up care can result in resident injury and death.

A physician initiated Coumadin® therapy for a 79-year-old senior living resident hospitalized for atrial fibrillation. After transfer back to the senior living community, she suffered bleeding gums and bruising for two weeks that staff failed to recognize as a complication of Coumadin therapy. The resident ultimately died from complications after her INR level became critically high.

The experts who reviewed the malpractice case criticized the physician for failing to effectively communicate the follow-up monitoring plan, and also criticized the senior living staff for failing to recognize and communicate the resident's acute change of condition.

Resources

Reliable communication processes and tools that have proven to enhance communication and teamwork are:

INTERACT—Interventions to Reduce Acute Care Transfers—includes Change in Condition File cards, Stop and Watch Early Warning Tools, SBAR Communication Tools available at www.interact2.net/

TeamSTEPS® Long-Term Care Version is a teamwork system to improve collaboration and communication among the health care team available at <https://www.ahrq.gov/teamsteps/longtermcare/index.html>

Additional Resources for Preventing Diagnostic Error

MMIC and UMIA Resources

You can find a robust set of resources on the MMIC and UMIA websites. These articles, assessments, and other tools will help you minimize the risk of, or reduce harm caused by, diagnostic error.

Preventing Diagnostic Error (for MMIC and Arkansas Mutual policyholders) www.mmicgroup.com Login > Risk Management > Bundled Solutions > Preventing Diagnostic Error

Preventing Diagnostic Error (for UMIA policyholders) www.umia.org Login > Risk Management > Bundled Solutions > Preventing Diagnostic Error

Other Resources

CRICO strategies 2014 CBS report: Malpractice risks in the diagnostic process. Available at <https://www.rmhf.harvard.edu/Clinician-Resources/Article/2014/CBS-Intro>

Diagnostic error measures worksheet. Pennsylvania Patient Safety Authority. Available at <http://patientsafetyauthority.org/EducationalTools/PatientSafetyTools/diagnosis/Pages/worksheet.aspx>

Improving diagnosis in health care. National Academies of Sciences, Engineering, & Medicine. Available at <http://nationalacademies.org/HMD/Reports/2015/Improving-Diagnosis-in-Healthcare>

Patient safety primer: Diagnostic errors. HHS Agency for Healthcare Research and Quality. Available at <http://psnet.ahrq.gov/primer.aspx?primerID=12>

Singh H, Schiff GD, Graber ML, Onakpoya I, Thompson MJ.

The global burden of diagnostic errors in primary care. *BMJ Qual Saf.* 2016. <http://qualitysafety.bmj.com/content/early/2016/08/16/bmjqs-2016-005401.full>

Singh H, Sittig DF. **Advancing the science of measurement of diagnostic errors in healthcare: the safer Dx framework.** *BMJ Qual Saf.* 2015; 24(2). <http://qualitysafety.bmj.com/content/24/2/103>

Society to Improve Diagnosis in Medicine. Available at <http://www.improvediagnosis.org/>



LAURIE C. DRILL-MELLUM, MD, MPH

Improving diagnosis: a goal we all can (and should) get behind

“Remember that patient you saw?” Those are five words we ER docs hate to hear when coming on to a shift because we know that the question will inevitably be followed by details of something we missed, and how a patient for whom we cared returned sicker, or worse, died. No matter what setting you practice in, getting diagnosis right can be wicked hard. That’s what prompted us to delve more deeply into the subject in this issue of *Brink*, and to share with you the results of our closer look at our data around the factors that contribute to diagnostic error. While there’s not a specific roadmap, we identified lots of paths to improvement that we hope will inspire you.

**No matter what
setting you
practice in, getting
diagnosis right can
be wicked hard.**

The very mention of diagnostic error strikes terror in the hearts of physicians and other health care providers; it conjures up feelings of failure and loss. This is because we chose medicine with the goal of perfectly serving those who seek our care. According to Dr. Glen Gabbard, we doctors rate exceptionally high when it comes to the triad of compulsivity: feelings of self-doubt, guilt,

and an exaggerated sense of responsibility. These traits most often serve our patients well, but when we miss or delay a diagnosis, the results can be devastating, for them and for us.

Diagnostic error is the third most frequent malpractice allegation we see, and the second-highest cause of loss. We believe we can impact the personal, professional, and financial fallout that occurs as a result of diagnostic error.

One of the ways we are working on this issue is co-leading a Diagnostic Error Collaborative in Minnesota. MMIC is partnering with Stratis Health, a Quality Improvement Organization, and the Minnesota Alliance for Patient Safety (MAPS) to convene a broad range of health care stakeholders, including patients, purchasers, health plans, insurers, hospital, medical and nursing organizations, medical educators, researchers, and, of course, those on the frontlines of care delivery.

Our first initiatives will be an awareness campaign and a project focused on improving follow-up after diagnostic testing, including communication of test results. We are collaborating with national experts in diagnostic error and using detailed analysis of our claim data, some of which we have shared in this issue, to inform our work. We will continue to share as we learn more.

If greater awareness of the leading causes of diagnostic error and the leading follow-up system failures helps just one of you establish an accurate and timely explanation of your patient’s health problem and communicate that explanation to your patient, we will have made an important difference. Of course, the more the better!

Thank you for all that you do to care for your patients, and for letting us serve you in that mission.

LAURIE C. DRILL-MELLUM, MD, MPH

Chief Medical Officer

Constellation

Laurie.Drill-Mellum@MMICgroup.com

Where are we missing diagnoses?

82% of diagnosis-related malpractice cases originate in ambulatory settings

Outpatient settings **58%**
Emergency Departments **24%**



What diagnoses are we missing in outpatient settings?



31%
Cancer
(breast, skin, lung)



8%
Cardiac Disease



7%
Fractures & Dislocations

Where do breakdowns occur in the outpatient setting?



58%
Initial Diagnostic Assessment



35%
Testing and Results Processing



45%
Follow-up and Coordination

Each case can have more than one factor.



To learn more, visit
ArkansasMutual.com

Source: MMIC data



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Minneapolis, MN 55435

Calendar

UPCOMING WEBINARS ON WEDNESDAYS

To register for a webinar, visit:

MMICgroup.com/resources/webinars/upcoming

All webinars are presented from noon–1 p.m. CT and are available on demand at MMICgroup.com after the initial presentation.

APRIL

12

EXCELLENCE IN PHASES: USING THE CMS RULE TO GUIDE YOUR LONG-TERM CARE COMMUNITY'S SUCCESS

Presenter: Michelle Kinneer, RN, MSN, JD, CPHRM, CHPC, CHC

MAY

31

DIAGNOSTIC ERROR: IMPACTS AND OPPORTUNITIES

Presenter: Laurie Drill-Mellum, MD, MPH

JUNE

14

REDUCING SURGICAL RISK FOR THE OBESE PATIENT: A MULTI-CENTER, MULTIFACETED PATIENT SAFETY PROGRAM

Presenter: Meg A. Rosenblatt, MD and David L. Feldman, MD MBA CPE FAAPL FACS

PFEATURED ON-DEMAND WEBINARS

www.MMICgroup.com Login > Risk Management > Education > Webinars > On-demand > Diagnosis Error

DIAGNOSIS ERRORS CONTRIBUTING FACTORS AND INTERVENTIONS: SYSTEM ISSUES

DIAGNOSIS ERROR AND THE CHANGING HEALTH CARE ENVIRONMENT

RECOGNITION AND MANAGEMENT OF SEVERE SEPSIS AND SEPTIC SHOCK

DIAGNOSTIC ERROR – THE NEW KID ON THE BLOCK



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