

Communication Breakdowns Drive Diagnostic Failure in Emergency Medicine

By Susan Carr
Newsletter Editor

Communication problems are known to contribute to preventable adverse events of all kinds, including those caused by diagnostic error. The Joint Commission identified inadequate communication as the leading root cause of all reported sentinel events in 1995 through 2007.¹ In 2011 and 2012, communication ranked a close third, behind human factors and leadership, and in January through June 2013, rose to second place, behind human factors.² In 2002, The Joint Commission issued a *Sentinel Event Alert* on delays in treatment in which it reported that the most common among varied reasons for delay was misdiagnosis, which was found in 23 of 55 cases. More than half (29 of 55) of the events took place in emergency departments (EDs), and 84 percent of hospitals reporting these events identified “communication breakdowns” as a contributing root cause.³

Having studied diagnostic failures in emergency departments for more than five years, CRICO Strategies—a division of the Risk Management Foundation of the Harvard Medical Institutions (a CRICO Company)—has also found that communication failures lead to diagnostic failures in emergency medicine, a leading cause of malpractice claims.

At the 2013 conference of the American Society for Healthcare Risk Management (ASHRM), two directors from CRICO Strategies—Dana Siegal, RN, CPHRM, director of patient safety; and Gretchen Ruoff, MPH, CPHRM, program director—discussed the results of a recent study of diagnostic errors in emergency departments.⁴

CRICO reviewed more than 10,000 cases asserted between 2004 and 2008, which appear in its Comparative Benchmarking System (CBS), a database of more than 275,000 medical malpractice claims from academic and community health care systems across the United States. The review showed that diagnostic failures cause the most

frequent and costly claims against emergency departments.

According to Ruoff, CRICO researchers were surprised to find that the diagnoses missed were not of rare diseases or unusual presentations. Rather, they were often seemingly basic and straightforward: myocardial infarctions, fractures, and gastrointestinal issues. Ruoff reported that missed diagnoses were “happening to healthy patients with uncomplicated histories, and we had significant issues with clinical judgment and communications. We weren’t getting all the right information, we were focused too narrowly and taking the patient down the wrong pathway, sending them out the door oftentimes with something very dangerous.”

Leadership Council Survey

In 2010, CRICO and CRICO Strategies convened the Emergency Medicine Leadership Council (EMLC) to address these diagnostic failures and resulting malpractice liability in emergency departments among hospitals affiliated with CRICO’s Harvard members and Strategies’ national client organizations. Review of the CBS database yielded 479 claims of diagnostic

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failure (among 872 ED claims between 2004 and 2008), of which the EMLC chose 200 for more extensive study.

The EMLC found that missed or delayed diagnoses were often attributable to missing information—to information that existed at the time of service but was not available to physicians for a variety of reasons when they needed it to inform diagnostic decision-making. In a white paper published in 2011, the EMLC described the range of possible information gaps:

- *the availability of prior historical information from the medical record or referring physician,*
- *a change in the patient's status or a persistently abnormal vital sign,*
- *the timeliness of laboratory or radiology data,*
- *communication from the consultant physician,*
- *miscommunication at patient hand offs, and*
- *barriers to effective communication between the nurse and physician caring for the patient.*⁵

In their ASHRM presentation, Ruoff and Siegal described the next phase of work undertaken by the Emergency Medicine Leadership Council. Understanding that missing information and communication gaps were the primary contributors to diagnostic failure, members of the Council led self-assessment surveys in their own hospitals to better understand points of weakness and opportunities for improvement. At the next meeting of the EMCL, members developed strategies to address problems revealed in the surveys, which were then implemented as 4-month-long pilot programs at their hospitals, including diagnostic timeouts, physician-nurse huddles, trigger alert systems, vital sign audits, team training, and simulation exercises.

Real-Time Communications

Among communication gaps, Siegal identified inadequate real-time communication among nurses and physicians as the biggest problem. More than a few respondents to the self-assessment survey reported that they

might work an entire shift without ever speaking directly with the RN or MD on their team. According to Siegal, these were the most “concerning” statements in the survey results.

Ironically, electronic medical records (EMRs) contribute to the problem. While there are advantages to recording clinical information in the EMR, it is not effective for communicating critical information in real time. Especially in the ED environment, there's no replacement for direct, one-to-one communication. Tremendous energy goes into acquiring real-time data and assessments and tracking down patient histories, medication lists, test results, and so on. Those efforts are wasted if the information is not available to those who need it, when they need it, whether because the information is hidden away in the EMR or in another clinician's head. Siegal pointed out that it can be just as important to make sure the right individuals know what is *not known*, such as family history, prior treatments, imaging and laboratory results, especially before anchoring on a diagnosis.

In a recent article, Trowbridge, Dhaliwal, and Cosby position communication among other factors that contribute to diagnostic error and should be addressed in medical education.⁶ In addition to optimizing cognitive abilities and intuitive reasoning, they recommend increasing awareness of systems that affect communication and, therefore, diagnosis:

A systems view of diagnosis regards clinical reasoning as a cognitive process that is dependent upon a number of external factors that impact the ability to gather information, acquire tests and imaging, interpret results and communicate with others. From an educational perspective, a systems approach to teaching diagnostic skills must equip learners with the knowledge, skills and attitudes to interact with people and processes to make a reliable diagnosis.^{6(pii30)}

The experience of CRICO researchers working with many years of coded medical malpractice cases confirms recent research that shows cultural attributes contribute to communication problems.⁷⁻⁹ Rigid hierarchies, a history of disruptive behavior, or fear of punishment can discourage team members from speaking up or sharing crucial knowledge and information. From uninformed clinical consultations to lost radiology reports or unreported status changes, factors that contribute to diagnostic failures in the ED often involve issues of accountability and leader-

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ship among team members and in the organization in general.

Pilot Programs

The EMLC white paper describes improvement programs piloted at council members' hospitals, which Siegal also mentioned and updated in her presentation. The programs fall roughly into three categories:

- structured communication techniques such as Situation, Background, Assessment, Recommendation (SBAR) and huddles;
- operational improvements such as Lean; and
- education and training programs such as team training (i.e. TeamSTEPPS).

Among improvement programs, Siegal reports that CRICO's emergency medicine simulation program has been especially successful. It has gained traction at seven Harvard institutions, which have used the program voluntarily and were on track to have all 1,500 of their emergency providers complete the program by the end of 2013. The simulation program, which uses case studies from CRICO's collection of teaching abstracts built from the CBS database, focuses on improving communication. The simulations allow providers to navigate typical scenarios, such as managing the needs of multiple patients as a team, paying attention to how they gather and transmit information, and thinking about how that affects the diagnostic process. Siegal emphasized that departments can develop case studies based on their own experiences and don't have to have high-tech simulation labs to do this work. Siegal recommends, "Studying these cases and talking about how they interact and intersect with each other is a good place to start a conversation about what's going on in the ED."

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SAVE THE DATE

Diagnostic Error in Medicine 7th International Conference

The Diagnostic Error in Medicine 7th International Conference seeks to cultivate meaningful dialogue across disciplines on the subject of diagnostic error. Held in Atlanta in September, all health professionals and patients with an interest in improving diagnosis in medicine are encouraged to attend the premier event devoted to this important topic. Announcements regarding the planned program and how to register will be posted on the SIDM website soon. Please check back for more information in early spring.



A Year of Growth and Progress for SIDM

By Mark L. Graber,
Founder & President,
Society to Improve
Diagnosis in Medicine

2013 has been a year of remarkable growth and progress for SIDM (<http://www.improve-diagnosis.org/?page=Graber2013>). We now have a solid foundation for operations, a growing base of members and followers, and several important new projects on the launching pad:

- We are collaborating with the National Patient Safety Foundation to focus attention on diagnostic errors during National “Patient Safety Awareness Week,” March 2–8, 2014.
- We have engaged The Joint Commission in discussions to explore possible evaluation measures relating to diagnosis and diagnostic error, and the possibility of issuing small research grants
- We successfully petitioned the Institute of Medicine to undertake a major national report on diagnostic error that will be published in 2015 as part of the “Crossing the Quality Chasm” series.

- We have supported a new open-access research journal, *Diagnosis* (ISSN: 2194-802X) in partnership with DeGruyter Publishing. The first issue of the journal is now available online (<http://www.degruyter.com/view/j/dx.2014.1.issue-1/issue-files/dx.2014.1.issue-1.xml>).

And we are proud to announce our newest creation, *ImproveDx*—the newsletter of the Society to Improve Diagnosis in Medicine—of which this is the premier issue. Each of the 6 issues planned for this year will be anchored by a feature story on the quest to reduce diagnostic failure and will share summaries of valuable news, research, and industry activities. In addition, *ImproveDx* will provide updates on the work of SIDM and its programs with the intent of keeping our multidisciplinary audience engaged and informed.

We hope you enjoy the newsletter.

NEWS FROM THE FIELD

When Doctors are Led Astray by What They Know

Mamede S, van Gog T,
van den Berge K, van Saase
JL, Schmidt HG.

Why do doctors make
mistakes? A study of the
role of salient distracting
clinical features.

Acad Med. 2014;89(1):114-
120.

We may assume that when doctors make errors in diagnosis, it is because of something they don't know. A new study, however, reveals it is more likely the opposite; they are led astray by something they do know—salient distracting features. This occurs when something familiar leaps to mind, having the effect of aiding and abetting the doctor to premature closure on the wrong diagnosis. Premature closure is an error in cognition, meaning to prematurely lock on to an (incorrect) diagnosis and fail to consider or pursue evidence to the contrary. The distracting features may, for example, be associated with prior experience or trademark symptoms of certain diseases.

Researchers in the Netherlands studied the role of “salient distracting clinical features” in clinical reasoning to learn more about why doctors are sometimes led astray by what they know, rather than being led to the correct diagnosis. The study involved adding distinct but irrelevant features to patient histories, potentially leading doctors down the wrong diagnostic path. The study measured the effect of the *placement* of the distracting features, which were inserted either at the beginning, middle, or end of the history. The results show that the distracting features increased misdiagnosis due to premature closure, which is more likely to occur when the distracting feature appears early in the patient's history and when the condition being evaluated is complex.

Forewarned is forearmed. Clinicians and patients alike can benefit from reading this article and becoming aware of this effect. More information about this study is available on PubMed (<http://www.ncbi.nlm.nih.gov/pubmed/24280846>) and from the publisher (<http://dx.doi:10.1097/ACM.000000000000077>). For help accessing this and other materials, you may want to consult with your local or hospital librarian.