Ten Reasons Your Emergency Department May Not Be As Safe As You Think It Is

The Emergency Medicine Risk Initiative (EMRI) is a proven System Solution designed to reduce risk and improve patient safety in the emergency department. The Sullivan Group's work with over 600 hospitals in the United States and extensive research have disclosed a number of critical risk and safety issues of which you may not be aware.

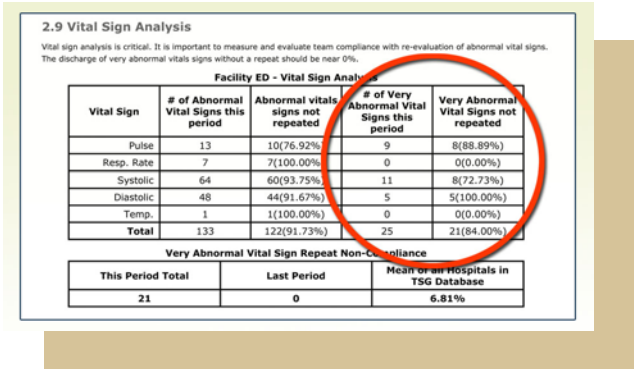
The issues and comments below represent observations based upon an analysis of thousands of emergency medicine medical malpractice cases and TSG published research on over 170,000 high-risk patients in several hundred U.S. emergency departments. The data is powerful and compelling, and probably represents the profile of care in your facility. Unless you have implemented a System Solution in the following areas, then this is your department!

1 The ED Is Sending Patients Home With Very Abnormal Vital Signs

TSG conducted a large study on emergency department vital sign re-evaluation that demonstrates a significant problem in EDs across the nation.[1] **The bottom line is that if your department does not have a System Solution for re-evaluation of abnormal vital signs, your patients are at risk.**

This was a study of over 90,000 high-risk patients. Approximately 10% of patients had a very abnormal vital sign. Of the 9,000 patients with at least one very abnormal vital sign, 16% were discharged without a single re-

evaluation of that abnormal vital sign. Retrospective case analysis clearly indicates the association between patients discharged with abnormal vital signs and morbidity or mortality. These are medical errors, and your patients are at risk.



2.9 Vital Sign Analysis

Vital sign analysis is critical. It is important to measure and evaluate team compliance with re-evaluation of abnormal vital signs. The discharge of very abnormal vitals signs without a repeat should be near 0%.

Facility ED - Vital Sign Analysis

Vital Sign	# of Abnormal Vital Signs this period	Abnormal vitals signs not repeated	# of Very Abnormal Vital Signs this period	Very Abnormal Vital Signs not repeated
Pulse	13	10(76.92%)	9	8(88.89%)
Resp. Rate	7	7(100.00%)	0	0(0.00%)
Systolic	64	60(93.75%)	11	8(72.73%)
Diastolic	48	44(91.67%)	5	5(100.00%)
Temp.	1	1(100.00%)	0	0(0.00%)
Total	133	122(91.73%)	25	21(84.00%)

Very Abnormal Vital Sign Repeat Non-Compliance

This Period Total	Last Period	Mean of all Hospitals in TSG Database
21	0	6.81%

During the initial EMRI audit at many emergency departments, the number of patients discharged without a re-evaluation of very abnormal vital signs can reach 20, 30, or even 40 percent or greater. How is your department doing? You need to know.

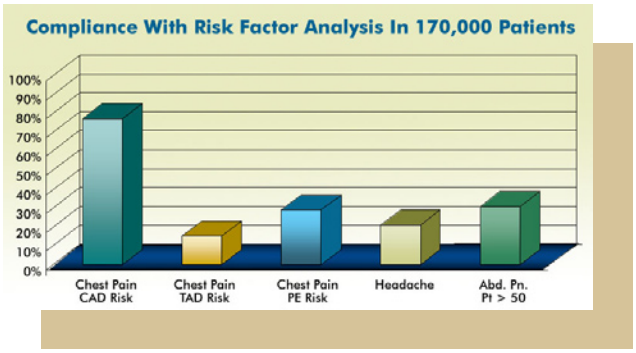
This is a high-risk area that must be addressed in order to reduce medical errors and keep your patients safe.

2 Risk Factor Analysis - Poor Compliance, Missed Opportunities

the first-degree relative risk factor was key in this case

The TV sitcom star John Ritter presented to an emergency department with chest pain. The practitioners considered the possibility of coronary artery disease. They did not ask about nor did they consider the fact that there might have been a family history of thoracic aortic dissection. In fact, Mr. Ritter's father died of a dissection, as did Mr. Ritter; the first-degree relative risk factor was key in this case. If the practitioner had asked the question, he would have considered the possibility of thoracic aortic dissection and he would have discovered that Mr. Ritter's father died of the disease. It is likely that the physician would have ordered a CT scan and discovered the dissection.

This is a story told time and again in the nation's emergency departments. A large TSG study demonstrates extremely poor compliance with risk factor analysis across several high-risk clinical entities.[2] In a study of over 170,000 high-risk patients, TSG has demonstrated that emergency practi-



tioners often provide inadequate care with regard to risk factor analysis.

When dealing with an adult chest pain patient, the emergency practitioner may consider coronary artery disease, pulmonary embolism, and thoracic aortic dissection, among other things. There are over 20 individual risk factors that should be considered. It is simply not possible to keep them all front of mind. As a result, emergency practitioners consistently fall short in this important part of the medical history.

The EMRI Program keeps these issues front of mind; it provides clinical decision support at the point of care and an unprecedented level of compliance with risk factor evaluation. The result is numerous EMRI Program testimonials regarding lives saved based upon careful risk assessment at the bedside.

3 Charts Are Missing A Complete Examination Of The Relevant Organ System

The practitioner must examine the organ system that is the subject of the patient's complaint. This is the standard of care. Careful documentation of the exam is evidence of a quality evaluation. This documentation is missing in a surprisingly large number of emergency department medical records.

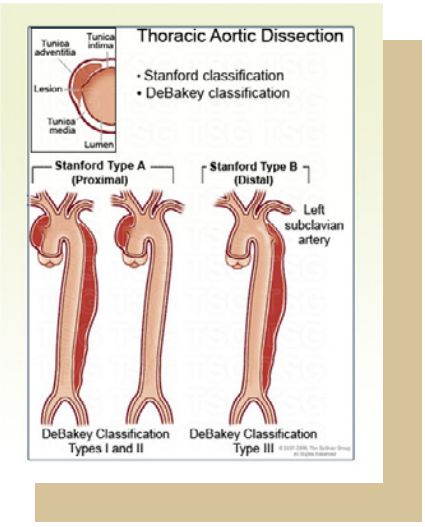
This examination typically involves the abdomen and the neurologic system. There are significant issues with careful and complete documentation of the abdominal exam in patients presenting with abdominal pain; the same is true of the neurologic system in patients with headache, head injury, or possible cervical spine injury.

TSG's work in more than 300 emergency departments as well as extensive research indicate that this is a significant issue in many emergency departments.[3] In some cases, the examination of the neurologic system is missing in up to 10% of medical records. This is simply unacceptable. It either represents inadequate patient evaluation or indefensible documentation.

The EMRI Risk and Safety Computer-Based Training libraries, the Point-of-Care Clinical Decision and Documentation support, and the ongoing Risk and Safety Performance Evaluation ensure that practitioners are 100% compliant with documentation of the relevant organ system. Thus, the chart reflects a high-quality examination, and adverse outcomes are more defensible.

4 Radiation Of Pain – Key History Is Missing From Many Examinations

Pain radiation is an essential component of the patient history in certain patient presentations, including chest pain and abdominal pain. The failure to evaluate whether a patient with chest or abdominal pain is experiencing radiation of the pain is a medical error, represents inadequate care, and may result in patient injury.



pain radiation is an essential component of the patient history

Evaluation of pain radiation may help distinguish between coronary artery disease and thoracic aortic dissection in a chest pain patient. Radiation of pain to the back or flank in patients presenting with abdominal discomfort may be the key clue to the presence of an abdominal aortic aneurysm. Obtaining the radiation history provides a critical opportunity to consider or make a diagnosis.

In a TSG study of over 20,000 patients over the age of 50 with abdominal pain, there was no documentation of this key historical issue in 30% of the

medical records; that's over 6,000 charts. In our chest pain study of 25,000 patients, documentation of the presence or absence of radiation of pain was missing in over 10% of medical records.[4]

This represents either inadequate care or inadequate documentation; both are critically important issues. The EMRI System Solution completely resolves this practice of documentation deficiency.

5 Patients In Severe Pain Are Not Getting Pain Meds Within One Hour

The EMRI Performance Evaluation identifies patients in significant pain, and then determines whether patients received any pain medication within 60 minutes of arrival. The data is dismal. Looking at hundreds of EDs, patients with moderate to severe pain receive a pain med within 60 minutes in less than 10% of all cases.

TSG initially set the cutoff at 30 minutes on the EMRI Performance Evaluation, **but no one got a pain med in our audit within that time frame**. Therefore, we changed it to 60 minutes; compliance remains terrible. It is hard to believe that as a nation we cannot do better!

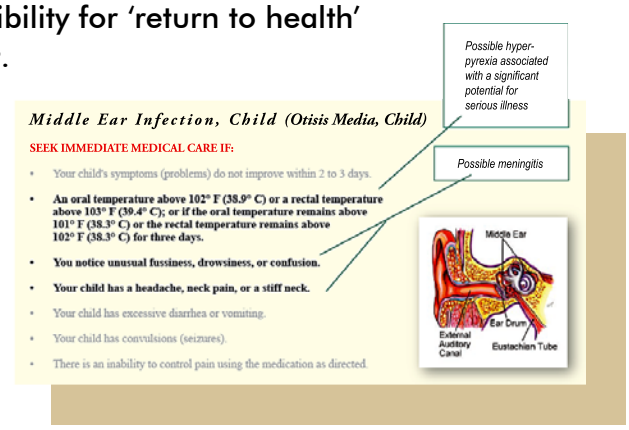
Knowledge is power. The knowledge that your department is not expediting pain management is the first step. This leads to an action plan and a System Solution. The physician and nurse team want to do a great job, but without knowledge and direction, they don't know what's broken. 'Time to pain med' is broken. EMRI provides the knowledge and the System Solution to fix this problem.

The result is a satisfied, less litigious patient.

6 The ED Is Not taking Full Advantage Of The Power Of Discharge Instructions

Great discharge instructions represent high-quality care and are a powerful risk management tool. The patient's discharge is not the end of the visit; it is simply a step on the road toward a return to good health. A well-written discharge instruction is absolutely key to providing the patient with the information necessary to achieve wellness. Also, a carefully crafted discharge instruction will insulate the physician and the facility from exposure to malpractice liability. Great discharge instructions appropriately place some of the responsibility for 'return to health' where it belongs – with the patient.

a discharge instruction warning could have protected the patient and the driving public



Here is a great example from an actual case. A patient presented to an ED with an eye injury; something got into his eye while riding his motorcycle. The physician diagnosed an abrasion and ordered an eye patch and discharge. The patient got back on his motorcycle to drive home. Because of his impaired vision, he hit a car, killing a mother and three children. A discharge instruction warning about driving with impaired vision could have protected the patient and the driving public. There are many other examples and opportunities.

The fact is that most discharge instructions don't accomplish these goals. The EMRI Risk and Safety library teaches appropriate discharge, integrates those instructions into the medical record, and measures the administration of appropriate discharge instructions. In addition, TSG created a strategic relationship with the ExitCare Corporation, working together to create discharge instructions fortified with risk and safety. The use of the ExitCare Program represents an outstanding System Solution.

7 The Analysis Of Immunization Status Of Febrile Children Is Inadequate

This came as quite a surprise. It is unlikely that most emergency practitioners would guess that this is an issue. Practitioner evaluation of a child's immunization status is a critical part of the patient history. This is not the physician's obligation nor is it the nurse's obligation; it is everyone's obligation - a team obligation. It does not matter where the information comes from; immunization information must be elicited and documented on the medical record.

TSG research on over 20,000 febrile children under the age of 6 with a body temperature of 102° F or greater indicates that this information is missing in over 10% of cases.[5] Although most children are properly immunized, there is a significant number that is not. In addition, immunization status in children from other countries is a significant issue.

This information is key. In the properly immunized child, there is very little concern about a number of highly virulent organisms. Without knowing the child's immunization status, it would be easy to fail to recognize the risk of a life-threatening infection.

EMRI Computer-Based Training educates physicians and nurses about this critical issue, creates a reminder to ask and document inside the medical record, and measures appropriate clinical behavior. EMRI provides a System Solution to creating certainty around obtaining immunization information in febrile children.

8 The Patient Re-Evaluation - A Missed Opportunity

Patient re-evaluation is absolutely key to high-quality care and avoiding the 'failure to diagnose.' This is particularly important in the high-risk presentation. The EMRI Risk and Safety Evaluation indicates that ED physicians and nurses nationwide are not taking advantage of this opportunity or are failing to document critical information.

TSG carefully monitors patient re-evaluation, particularly after an intervention such as the administration of a parenteral pain medication in patients with abdominal pain or headache. The TSG Web-Based Courses stress the importance of the re-evaluation and the power of this documentation. The medical record should make it exceedingly simple and straightforward to enter a re-evaluation. The EMRI Performance Evaluation provides a department and an individual practitioner with an analysis of re-evaluation compliance. Departments utilizing the EMRI Program demonstrate a re-evaluation compliance rate above 80%; those that do not are typically between 20% and 30%.

9 The Unequivocal, Unassailable Medical Conclusion - The Power Of The Pertinent Negative

Certain elements of medical documentation are so powerful that they can stop a lawsuit in its tracks. The fact is that emergency practitioners don't miss the diagnosis of meningitis; children typically develop the problem after discharge. Abdominal aortic dissection is often subclinical on initial presentation; the practitioner never had a chance to make the diagnosis. But something goes wrong following the visit, and the search begins to find someone at fault.

With this understanding in mind, certain elements of documentation can make it completely clear that the care provided was high quality and that there was no failure to diagnose. Unfortunately, TSG data clearly indicates that practitioners don't often take advantage of this powerful tool.

the physician should document that the child had no meningeal signs

For example, most children who present with fever have a viral syndrome and are otherwise well. In every case, the physician should document that the child had "no meningeal signs." The statement "normal neck exam" leaves the door open to a challenge such as, "Well doctor, did the child have any meningeal signs?" The correct approach is to state the **medical conclusion** that there are "no meningeal signs." This position is unequivocal and unassailable. Coupled with documentation that the "child is active, happy, and playful," it is clear to all that this child did not have a serious problem during this ED visit.

Similarly, the statement "there is no abdominal mass" in a 60-year-old presenting with abdominal pain is a medical conclusion that there is no abdominal aortic aneurysm. The statement "normal abdomen" leaves the door open to attack and does not demonstrate high-quality care. Once again, the specific statement "no mass" or "no pulsatile mass" is unequivocal and unassailable. The EMRI Program provides a medical record tool that makes it easy for the practitioner to document appropriate medical conclusions.

This type of documentation is so important that it is highlighted in the EMRI Web-Based Education, the point-of-care medical record tools, and the Performance Evaluation. The EMRI Program hard-wires this type of documentation into the ED environment.

10 Your ED Is Not Looking To The Future Of Patient Safety And Risk Reduction

This document has addressed a number of today's patient safety and risk management issues. What about tomorrow? What is on the horizon? What issues will hit the risk and safety radar screen in the future?

TSG has its finger on the pulse of evolving patient safety and risk issues. We have the great fortune of evaluating claims for several of our larger clients. When we see a trend occurring, we build new computer-based education, integrate new issues into the medical record and point-of-care tools, and change the EMRI Audit to monitor these new issues.

Here are a few examples:

- There is an increased incidence of perispinal abscess. This entity used to occur in drug addicts and was related to blood-borne staph from injections with contaminated needles. Today it appears that community MRSA is spontaneously making its way into the perispinal space and establishing infection. This is incredibly important. These patients present to the ED with severe back pain and no mechanism of injury. Practitioners aren't thinking about spontaneous perispinal abscess, so the patient is discharged with "back pain – musculoskeletal strain."
- Patients are bleeding into the perispinal space. Why? So many patients are on blood thinners and platelet inhibitors that there are simply more bleeding events. But the big morbidity issue is the bleed into the perispinal space. Once again, the knowledge base is critical. The practitioner must recognize the significance of the spontaneous onset of severe back pain with no apparent mechanism of injury **and** the fact that the patient is on certain medications.
- Septic patients are severely under-treated. The benefits of early goal-directed therapy are well researched and documented. The number of patients needed to treat to save a life is between 6 and 10, far fewer than stroke patients getting lytics or even chest pain patients going to the cath lab for intervention. The failure to implement the basic elements of early goal-directed therapy should be a serious consideration for every emergency department.

once again, the knowledge base is critical

Conclusion

TSG constantly monitors risk, safety, and risk management concerns

This list could go on, but the point is that TSG addresses risk and safety today and constantly monitors risk, safety, and risk management concerns for the future. At the first indication of a trend or safety problem, these issues are built into the EMRI Program and are available in the Web-Based Educational Modules, built into paper and electronic medical records for support at the point of care, and monitored through the Web-Based Performance Evaluation.

Thank you for your time. For a web demonstration of the EMRI Program or for more information, please contact us at The Sullivan Group at 630-268-1188.

To view the Impact Movie, simply click on the following hyperlink: Emergency Medicine Risk Initiative - 3 Minute Overview Movie.

(Endnotes)

1 Hafner JW, Parrish SE, Hubler JR, Sullivan DJ/University of Illinois College of Medicine at Peoria, Peoria, IL; The Sullivan Group; Cook County Hospital/ Rush Medical College. "Repeat Assessment of Abnormal Vital Signs and Patient Re-Examination in US Emergency Department Patients," Abstract # 211 in *Annals of Emergency Medicine*, Vol. 48; Number 4; October 2006.

2 Risk Factor Study. Hafner JW, Parrish SE, Hubler JR, Sullivan DJ/University of Illinois College of Medicine at Peoria, Peoria, IL; The Sullivan Group; Cook County Hospital/ Rush Medical College. "Risk Factor Documentation for Life-Threatening Disease in US Emergency Department Patients." Abstract # 209 in *Annals of Emergency Medicine*, Vol. 48; Number 4; October 2006.

3 Hafner JW, Parrish SE, Hubler JR, Sullivan DJ/University of Illinois College of Medicine at Peoria, Peoria, IL; The Sullivan Group; Cook County Hospital/ Rush Medical College. "Quality in Emergency Department Care: Results of the Sullivan Group's Emergency Medicine Risk Initiative National Audit." Abstract # 72 in *Annals of Emergency Medicine*, Vol. 46; September 2005.

4 Ibid.

5 Ibid.