Poor ED Lab Tracking and Reporting System Results in Sepsis Treatment Delay

Abstract: A young woman with a complicated medical history, including Systemic Lupus Erythematosus (Lupus), presented to the Emergency Department (ED) with severe ankle pain, thought to be a partial Achilles tendon tear. She also had ulcers of both of her palms. The physician performed an examination and ordered routine blood work and blood cultures. The gram stain showed gram + cocci in clusters; the final blood culture report revealed staphylococcus aureus. The CBC with differential and urinalysis were abnormal. The lab called the results to the ED, but a new charge nurse skipped the physician’s review and the standard ED alert system. The patient went home, became septic, endured a prolonged hospital stay, and is now considered totally disabled.

The Case:

A young Florida woman with a complicated medical history, including Lupus, presented to the ED with severe right ankle pain. She also had ulcers of both of her palms. She stated that she strained her ankle while pulling her boots off. She was tachycardic and complained of chronic fever. Her medications included Prednisone and Plaquinil for Lupus. After examining the patient, the ED physician believed she had a partially torn Achilles tendon, unrelated to her underlying rheumatologic disease. The patient’s urinalysis and CBC with differential were abnormal; the gram stain of the blood showed gram positive cocci in clusters. The ED physician was unaware of the gram stain results and the final blood culture report, which showed Staphylococcus Aureus, non Methicillin Resistant Staphylococcus Aureus (MRSA). His discharge diagnosis was “pain-joint, ankle and systemic lupus”. The ED physician prescribed anti-inflammatory and pain medications, made a referral for physical therapy, and discharged the patient home.

72 hours post-ED discharge, the patient reported to the Family Practice (FP) Center for physical therapy. She was seen by a physician assistant (PA), who requested records from the hospital ED. The PA reviewed the ED records, but did not address the final blood culture report. Instead, the PA treated her for a urinary tract infection and prescribed Bactrim.

96 hours post-ED discharge, the patient was admitted to another hospital with Staphylococcus Aureus septicemia, and spent the months that followed battling complications.

Allegation: Failure to diagnose and timely treat a Staph infection.

Case disposition: The case settled for a very large amount on behalf of the hospital, the PA and the Family Practice organization.

Risk Management Commentary:

Defense experts were critical of the PA, the hospital and the ED nurses.
The Physician Assistant (PA)

- A proper examination of the ED culture reports and patient interview
  Once the PA saw the positive blood culture report, the experts opined he should have asked the patient if she had received antibiotics in the ED. The experts stated that if the PA had referred the patient back to the ED for IV antibiotic treatment, she most likely would not have suffered the serious complications of septicemia.

The Hospital

- Re-evaluating and reassessing the ED patient prior to discharge
  The ED nurses did not alert the ED physician to the last set of vital signs taken just before the patient was discharged. Failure to re-evaluate and address abnormal vital signs is a common finding in (ED) failure to diagnose cases.

- The Electronic Medical Record Notification System/ ED Call - Back Procedure
  Follow-up of abnormal outpatient laboratory test results is a major patient safety concern. Missed laboratory results or delayed recognition of results leads to a significant potential for diagnostic errors, adverse events and liability claims. Electronic medical records can potentially address this concern through automated notification. Unfortunately in this case, the new charge nurse did not use the automated notification, which would have alerted the ED physician about the abnormal laboratory results. Nor did she inform the ED physician of the critical lab reports. Thus, the ED callback system was not activated, and the patient was not notified of the need to come back for immediate IV antibiotic treatment.

- The ED Physician
  The records show the ED physician was unaware of the nurse’s recorded vital signs and unaware of the blood culture results. The vital signs, nurse’s notes and abnormal labs were recorded after the ED physician sent the patient home.

Summary

This case reminds us of the importance of having reliable systems in place to ensure that our ED’s have:

- Policies in place for re-assessing patients at discharge.
- A procedure describing how vital signs are assessed prior to disposition and how abnormal findings are addressed.
- A requirement to document the review of vital signs prior to disposition
- Documenting the rationale for continuing with the planned course of action, if the subsequently reported vital signs and lab reports are abnormal.
Patient re-evaluation is central to high quality care and to strengthen the physician’s ability to make accurate and timely diagnoses in the ED setting. It is important to understand the significance of ongoing patient monitoring and reassessment, maintaining reliable diagnostic tracking and reporting systems, managing timely call-back systems, and ensuring that the ED team of staff and physicians are well-trained and oriented to hospital policies, procedures, and technology.

The case report presented is composite drawn from MAG Mutual Insurance Company’s case files. Any similarity to a specific case is both coincidental and unintended. The risk management advice presented in the Claim Lesson is intended as general information of interest to physicians and other healthcare professionals. The recommendations and advice published herein do not reflect a legal opinion, establish a standard of care, and do not establish rules for the practice of medicine. Successful outcomes are not guaranteed. The publication of this information is not intended as an offer to insure such conditions or exposures, or to indicate that MAG Mutual Insurance Company will underwrite risks for the reader. Our liability is limited to the specific written terms and conditions of the actual insurance policies issued.

**Taxonomy:** Communication, Coordination of Care, Medical Records

**Resources:**

**CDC Launches Sepsis Prevention and Care Website**

The U.S. Centers for Disease Control and Prevention (CDC) has launched a new website with information on sepsis prevention and care. Created to improve early recognition, diagnosis, and treatment of the complication, the website’s information is broken down into six sections: basic information (fact sheets and questions and answers for patients), clinical guidelines and tools (guidelines, bundles, education resources, and tools), improving survival (quality improvement efforts by healthcare facilities to improve survival in sepsis), medical bibliography (selected sepsis chapters from medical textbooks), data reports (recent reports on the incidence of sepsis), and related links to additional information about sepsis. CDC explains that patients who develop sepsis have an increased risk of complications and death and face higher healthcare costs and longer treatment. Physician Practice Risk Management members can access the Guidance Article Infection Prevention and Control for more information.

**Clinical Guidelines and Tools**

The clinical practice guidelines for the management of sepsis, International Guidelines for Management of Severe Sepsis and Septic Shock: 2012, were recently updated by the Surviving Sepsis Campaign, which is a joint collaboration of the Society of Critical Care Medicine and the European Society of Intensive Care Medicine (read more about the Surviving Sepsis Campaign) [http://www.survivingsepsis.org/About-SSC/Pages/default.aspx](http://www.survivingsepsis.org/About-SSC/Pages/default.aspx)

Based on these guidelines, the Surviving Sepsis Campaign partnered with the Institute for Healthcare Improvement to create Bundles to help frontline providers implement the guidelines. Institute for Healthcare Improvement, [http://www.ihi.org/resources/Pages/ImprovementStories/WhatIsaBundle.aspx](http://www.ihi.org/resources/Pages/ImprovementStories/WhatIsaBundle.aspx)

**CDC Evaluation for Severe Sepsis Screening Tool:**

[http://survivingsepsis.org/SiteCollectionDocuments/ScreeningTool.pdf](http://survivingsepsis.org/SiteCollectionDocuments/ScreeningTool.pdf)

**Society of Critical; Care Medicine, Rapid Identification of Sepsis.** [http://www.sccm.org/Communications/Critical-Connections/Archives/Pages/Rapid-Identification-of-Sepsis—The-Value-of-Screening-Tools.aspx](http://www.sccm.org/Communications/Critical-Connections/Archives/Pages/Rapid-Identification-of-Sepsis—The-Value-of-Screening-Tools.aspx)

**The Sullivan Group.** Ten Reasons Your Emergency Department May Not Be As Safe As You Think It Is. The Sullivan Group, 2009.

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