After Action Reviews in the Emergency Department: The Positives of Real-Time Feedback

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This article discusses the need for a timely, structured, and focused tool in the emergency department to improve learning and patient outcomes. The "After Action Review" (AAR) is a tool already established in the military to correct deficiencies and improve communication and performance. This tool is a guided, reflective question and answer process used after significant events. This article begins with a patient scenario demonstrating the need for AARs, differentiates between different types of reflective tools used after significant events, provides strategies to overcome barriers to implementing AARs, and outlines the "nuts and bolts" of AARs in the emergency department. Many opportunities exist for emergency departments to adapt this postevent discussion process to meet its learning needs and improve patient outcomes.

Patient Scenario

A 21-year-old African American male college student presented to the local emergency department with flu-like symptoms. He had a known history of asthma, Crohn's disease, and human immunodeficiency virus. He had been seen earlier in the week (2 to 3 days prior to this visit) in the emergency department and was discharged home with "viral illness" and upper respiratory infection. He received prescriptions for prednisone, acetaminophen, and azithromycin. He recently had finished a longer course of low-dose prednisone for a Crohn's flare-up. He was instructed to hydrate, treat fever and symptoms, let the episode run its course, and return if his symptoms worsened. He returned this night with worsening symptoms, continued malaise, headache, fever, nausea, and vomiting.

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His presenting vital signs were as follows: blood pressure, 107/59; heart rate, 109; respiratory rate, 22; temperature, 38.6°C (101.6°F); and oxygen saturation as measured by pulse oximetry (SpO_2), 96%. He was not feeling better and was actually feeling worse, with some evidence of episodic periods of confusion as reported by friends and family. His care began in a general ED examination room by a registered nurse (RN) and physician's assistant who were both competent but not the seasoned experts who are more likely to have a deep understanding of the total situation. The patient was alert, oriented, calm, and interactive, but noticeably fatigued. Gradually over the course of his stay, approximately 3 to 5 hours in duration, the patient became increasingly lethargic and eventually obtunded. Despite administration of acetaminophen and fluids (1 L normal intravenous [IV] saline solution) and nondefinitive diagnostic testing (basic metabolic panel and complete blood cell count with differential), staff were not able to prevent his decline. He was moved to a larger trauma bay for a critical care consult, code sepsis, insertion of a central line, and possible intubation. Unfortunately, his condition escalated into a resuscitation and quickly thereafter into a code situation. Several nurses were in and out of the room assisting with tasks. Suitable IV access was lacking, and multiple attempts to achieve IV access had failed. It was a long code. The mother and other family members were brought into the room during the resuscitation to view staff efforts. Resuscitation efforts continued until the patient's mother asked that they be stopped.

The nurses who were present asked similar questions and made similar statements: "I'm still not sure what happened or why. What were we treating? What were we chasing? What was ordered earlier? Did they order a lactate? Was care timely? Did they get repeat vital signs frequently enough? Did they start getting aggressive with treatment too late? How many liters of fluid did he get? Is that 22-g IV all he had? What could have been done differently? What didn't happen that should have?" One emotional nurse shrieked in the hallway during the resuscitation, "This isn't supposed to happen; they need to do something."

We have all had that one unforgettable, negative case, patient experience, or critical event. In our minds, we continually return to it and repeatedly ask the same questions. We struggle to understand what really happened,

why did we not succeed, why it turned out all wrong, why it felt so bad, why it did not flow, and why it was so difficult. For new nurses and sometimes even for experienced nurses, such experiences can be fraught with shame, confusion, anger, resentment, and even burnout. The experiences and questions that surface need to be visited and processed so we can take meaningful information with us into future events, enabling us to learn, teach, share, and therefore improve. If our questions are not answered, we won't learn from the experience. Currently, however, on the rare occasions that such experiences are addressed, it often happens weeks or months later in some future conference or meeting with a distant reference to vague details picked out from a patient's chart and an E-mail, decreasing the opportunity for learning. Worse yet, the first opportunity to address the questions surrounding the event often catches everyone off guard when risk management calls with questions they themselves now have.

Need for AARs in the Emergency Department

We need to develop a tool in the emergency department to improve learning and processes and therefore improve patient outcomes—a tool that is timely, structured, sharply focused, and brief. Ideally, this tool would be used during or directly after key events. For years physicians have tried to improve learning and patient outcomes through transparent communication in their mortality and morbidity (M&M) conferences. These conferences are peer reviews by physicians, for physicians, of mistakes that occur during the care of patients. These reviews were developed specifically to learn from complications and errors, modify behavior and judgment based on experience, and prevent repetitious errors. They often occur weekly, biweekly, or monthly. They also can discover systems issues such as outdated policies or inoperable algorithms.

Root cause analysis is another formal, structured method used retroactively to tease out systems errors and their causes and effects to mitigate undesirable patient consequences and outcomes. The common denominator among all these beneficial quality improvement/quality assurance methods, however, is a great deal of time, preparation, and delay. This delay can lead to lost details and poor outcomes. Decades of research support the need for immediate debriefing. The National League for Nursing (NLN)[1] rates the evidence for debriefing so strongly that they state it should accompany every faculty-student-patient interaction. The NLN also points out that the evidence clearly shows that without debriefing, there are few or no lasting changes in critical thinking, learning about context, or active learning.

Comparing Critical Incident Debriefing and AARs

Although it is not used for the primary purpose of improved learning and patient outcomes, one well-known postevent tool is used for a therapeutic purpose. A critical incident stress debriefing (CISD) is a supportive, crisis-focused discussion of a traumatic event (frequently called a "critical incident"). It has been developed for persons in small homogeneous groups who have encountered a powerful traumatic event. The CISD aims to reduce distress and restore group cohesion and unit performance. It is a structured group story-telling process combined with practical information to normalize group member reactions to a critical incident and facilitate their recovery.[2] The CISD is designed to be used in real time or near real time precisely because of the significance of timely therapeutic team recovery and restoration.

All branches of the military conduct postevent reviews, which they call AARs.[3] An AAR is short, clear, and concise. It is performed "on the spot" in real time and is planned and structured, yet unprepared. This focused review generally concentrates on 5 specific questions after a significant event or training exercise. It is not a time to complain or argue. It does not place blame or lecture. An AAR focuses on tasks and goals and encourages employees to learn important lessons in the discussion and discover why things did or did not happen. An AAR is not meant to be comprehensive. Ideally, it involves immediate action items that are ready to use and share. The military benefits from valuable opportunities for feedback and loop closure of performance improvement issues through real-time, or near real-time, interactions.[4] One of the authors of the current article (JC) found AARs extremely valuable during his military service and believes this postevent review process could be a valuable tool for emergency departments.

Such tools exist and are used effectively in other critical care settings such as ICUs and the operating room. ED personnel need a medium, tool, or model that allows such immediate learning and correction for those involved in the incident, at the time of the incident. Such timely learning has many benefits, including more accurate recall and memory of event details, immediate, honest, and nonpunitive feedback, avoidance of self-doubt, answering of questions, learning from others' viewpoints, reinforcement of positives, and assertion of a proactive approach that boosts the morale and learning of new employees through shared perspectives, immediate application, and much more. AARs offer the benefits of root cause analysis without the delay and preparation. In fact, a primary deterrent and obstacle to such beneficial and necessary improvement programs is the time and cost it takes to implement such processes.