

## **Statement Collaboration: AAEM Clinical Practice and Wellness Committees**

### **INTERRUPTIONS IN THE EMERGENCY DEPARTMENT – A COLLABORATIVE STATEMENT**

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Every day, we manage many complicated patients in the fast-paced environment of the Emergency Department (ED). This work includes making phone calls, answering questions (from physicians, students, patients, and families), charting, and reviewing clinical data. The 2020 Position statement from the Academy of Academic Emergency Medicine (AAEM) supports recognizing and reducing interruptions in the ED workplace as patient safety and physician wellness issues.<sup>1</sup> While some interruptions are necessary, work is needed to clarify when interruptions are best made and how to make them less intrusive.

#### **How often do interruptions occur in clinical practice?**

According to a study observing 3 urban EDs, Emergency Physicians (EPs) were interrupted an average of 12.5 times per hour.<sup>2</sup> EPs are interrupted more often than other specialties, and physicians in academic settings have been found to have twice as many interruptions as community-based physicians.<sup>3,4</sup> Interruptions most often arise from other patient care staff<sup>2</sup> and usually occur while performing non-communication-based tasks such as documenting or reviewing data.

While we often pride ourselves on being a specialty of multi-taskers, interruptions lead to task-switching rather than multi-tasking. Multi-tasking typically involves doing two tasks simultaneously, whereas task-switching involves disrupting one task to switch to another task rapidly.<sup>5</sup> The initial task is usually suspended and often not directly resumed after completing the new task.<sup>6</sup> Each time a physician is interrupted and switches tasks, there is a decrease in efficiency and an increased risk that an error can be made.<sup>7</sup>

There is limited ED-based research on the best or most dangerous times for interruptions. There are likely specific times during a task that are more vulnerable to safety issues. For example, when a clinician is writing an order and about to select a medication, an interruption from a nurse to write a different medication on a different patient could result in the clinician writing the order on the wrong patient. Furthermore, there is limited research clarifying which interruptions are necessary and appropriate versus those that are distractions and detrimental to physicians and patients. For example, EMS calls for a patient in respiratory distress or STEMI that can give the ED time to prepare equipment and staff are necessary and appropriate. On the contrary, an EM physician being interrupted by multiple EMS calls for stable patients that do not require intervention while placing electronic orders on a critical patient could lead to delays or missed orders.

### **How do interruptions affect clinical care?**

The impact of interruptions on clinical care is not completely clear. Several studies have examined the effects of interruptions on physician task completion, patient care, and patient satisfaction. Interruptions in the workflow have increased prescribing errors and decreased physicians' situational awareness.<sup>7</sup> There is also evidence that interruptions negatively impact patient satisfaction.<sup>8</sup> A 2010 study from the University of Sydney found that ED physicians failed to return to 18.5% of interrupted tasks.<sup>9</sup>

Some interruptions are necessary and may positively affect patient care, such as the provision of critical information. However, the literature on interruptions in the clinical setting offers conflicting points. A study on the impact of interruptions on chest radiograph interpretation<sup>10</sup> found that in viewing subtle cases, interruptions reduced accuracy, but during typical cases, interruptions increased accuracy. We want to know whenever new critical patient issues arise. Therefore, it is essential to consider efforts to reduce interruptions in the context of when they are appropriate and needed to prevent unintended deleterious effects on psychological safety and the functioning of the ED team.<sup>11</sup>

### **How do interruptions affect physician well-being?**

Interruptions do not only affect patient care, but they also have detrimental effects on physician well-being. Interruptions negatively affect one's energy levels as repeated interruptions can be exhausting and physically and mentally draining.<sup>12,13</sup> Frequent task switching, often as a result of interruptions, causes physicians to perceive higher stress levels.<sup>14</sup> Because interruptions lead to more errors, there is an associated greater sense of responsibility and guilt<sup>15</sup>, often because these are perceived as preventable errors. These events can be traumatizing for physicians who want to provide the best medical care possible and, instead, are now responsible for the medical harm resulting from interruptions. This phenomenon is considered an example of a moral injury, which is a strong cognitive and emotional response as a traumatic result of the betrayal of one's moral or ethical code. Furthermore, unfinished tasks lead to a lower sense of satisfaction and increased cognitive load and rumination. Interruptions affect well-being on several levels-- from the impact of near misses to adverse patient outcomes to responding to quality improvement communications to risk management.

It is, however, also important to note that there is room for interruptions in the workplace. Interruptions can foster social interaction that primes connections with team members and develop a sense of belonging.<sup>12</sup> When and how interruptions occur continues to be an area that requires further attention that needs to be discussed at the individual department level.

## How do we minimize the impact of interruptions in the ED?

There are several strategies that a clinician and department can take to minimize the impact of interruptions, including reducing the number of interruptions, modifying the types of interruptions to be less intrusive, and lastly, reducing the impact on physician well-being and patient care.

### 1. Reduce the number of interruptions

- a. **Anticipate certain interruptions to minimize its impact in the ED.** One approach to minimize the effects of interruptions in the ED is to reduce the overall number of interruptions. EM physicians can anticipate interruptions and complete tasks in advance. For example, completing orders and note writing while in the room with the patient prevents these tasks from being “interrupted” when the physician returns to their computer workstation, the most common site of interruptions.<sup>16</sup>
- b. **Review protocols on contacting physicians about diagnostic results.** At the institutional level, a department may review the protocols and processes around the lab and radiology teams contacting attending physicians to review clinically relevant alert thresholds or having a designated Non-Physician Provider triage phone calls regarding patients admitted or discharged from the ED.
- c. **Create a culture of proactive rounding or huddles.** Huddles or “rounds” with EM nursing colleagues about their patients proactively support team-based patient care and closed-loop communication. Rather than wait for the nurse or tech to ask if a patient can eat, round with the nurse in advance and discuss the anticipated plan of action for the patient to eat after the CT read or anticipated discharge after ambulating. Some institutions may use signs or vests to indicate high-risk periods, like zone signout, to signal to other team members only to interrupt for critical issues.
- d. **Lead by example.** As EM physicians, we should lead by example and limit the interruption of others, including when we receive signout from our colleagues.

### 2. Modify the types of interruptions

- a. **Develop escalating ways of interruptions.** Changing interruptions to less intrusive methods can help minimize the impact of interruptions. For less critical or less time-sensitive communications, the EM team may utilize asynchronous communication techniques to reduce the intrusiveness of the communication. For example, using an EHR embedded messaging application or other approved application allows for the EM physician to respond when more time-sensitive tasks are completed. This could take the form of the EM physician messaging an admitting team to admit a patient and then fielding questions via text instead of a direct phone call to the EM physician that may cause an interruption in their current task.

### 3. Reduce the potential negative impact of interruptions.

- a. **Manage expectations surrounding interruptions.** Interruptions are part of practicing EM as a specialty. Interruptions help EM physicians effectively triage and communicate with the various team members. However, several things can be done to reduce the potential negative impact of interruptions. An example includes EM physicians asking or taking a few moments to complete their primary task. Interruptions while writing electronic orders are a hazard for writing the correct order on the wrong patient, a known hazard in the EHR.<sup>17,18</sup> Taking a few seconds to complete the

order before taking a phone call, reading an ECG, or answering a question will mitigate potential risk to the patient.<sup>19</sup>

4. **Recognize the unintended consequences of reducing interruptions.**

- a. **Not all interruptions are bad.** While managing interruptions is critical, EM physicians need to understand the critical role interruptions play and encourage nurses, techs, and clerks to ask questions, raise concerns, and interrupt when necessary. Rigid rules or unprofessional behavior after an interruption can potentially reduce team communication and delay patient care due to a lack of willingness to interrupt physicians. For example, a department trying to have ECGs read within 10 minutes may struggle to reach the benchmark if techs are reluctant to interrupt clinicians, even when the ECG reads “\*\*\*\*\*STEMI\*\*\*\*\*”. Understanding the reasons around the interruption and thoughtful discussions and/or systems-based approaches at appropriate times should be considered as key to reducing harmful impacts from well-intentioned policies to reduce interruptions.

Interruptions are part of working in the dynamic environment of the ED. While some interruptions are critical to helping triage patients and respond to changing conditions, many interruptions can impact physician efficiency and safety. The included recommendations seek to reduce the overall number of interruptions, modify the intrusiveness of the interruptions, and reduce the potential negative impact of interruptions that do occur. Particular attention should be made to mitigate any unintended consequences of reducing interruptions. Addressing interruptions in the ED should be a multidisciplinary effort and individualized to the institution's culture. This includes careful consideration at the physician level, department level, and the larger system level to reduce healthcare worker burnout and improve patient safety.

**Citations:**

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