Managing Medical Errors in Emergency Departments

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In the high stakes environment of emergency departments (EDs), unintentional medical errors will likely be inevitable. Busy, noisy, and often simply chaotic, EDs are fertile grounds for diagnostic, procedural or medication errors that may place patient care at risk[1]. This intricate environment inherently lends itself to potential situations which may place clinicians at risk of receiving a complaint resulting in a civil claim, investigation and/or regulatory action by AHPRA, the Medical Board or one of the State-based Health Care Complaint Commissions.

The first step to decreasing medical mishaps in the ED is to understand how and when they are more likely to occur. The literature asserts there are cognitive and non-cognitive (system based) factors at play, which synergistically combine to make EDs particularly prone to medical errors[2]. The inherently fast and unpredictable nature of emergencies, technical failures and equipment problems, frequent interruptions, policies, and procedures that may actively create error-prone situations or unnecessary delays, as well as failed oversight of system related issues, are all potential scenarios where things can go wrong.

At the same time, cognitive errors due to flaws in critical thinking, clinical reasoning and decision-making can be at play[3].

System related factors[4]

- Policy and procedures
  - Policies that fail to account for certain conditions
- Inefficient processes
  - Absence of expedited pathways
- Teamwork or communications
  - Failure to share needed information or skills
- Management
  - Failed oversight of system issues
- Expertise unavailable
  - Required specialist not available in a timely manner
- Training and orientation
  - Clinicians not made aware of correct procedures or policies

Cognitive factors[5]

- Faulty knowledge
  - Knowledge o diagnostic skills for certain conditions
- Faulty data gathering
  - Ineffective or incomplete history taking and physical information, failure to screen.
- Faulty synthesis & information processing
  - Lack of awareness or consideration of relevant factors in a patient's situation, under or overestimating the salience of a finding, failed heuristics, misidentification of a symptom or sign, faulty interpretation of a test result.
- Faulty verification
  - Premature closure (failure to consider other possibilities once a diagnosis has been made), failure to order or follow up a test, failure to gather other useful information to verify diagnosis.

Strategies to minimise cognitive and non-cognitive errors and mitigate your medico-legal risk[6,7]

- **Firstly, remember that mistakes happen**. We are only human; errors will inevitably occur.
- **Use checklists, guidelines and algorithms**. Cognitive function is affected by levels of stress and fatigue. Checklists reduce the reliance on memory and thus minimise cognitive errors. They can:
  - Assist Diagnosis
  - Ensure standardisation
  - Provide reminders of evidence-based practice
- **Obtain additional expertise through consultation**. Consulting and learning from more senior clinicians give you access to the collective wisdom gained through group decision-making.
- **Develop a reflective practice**. Also known as a diagnostic "time out," this strategy aims to foster metacognition, whereby a practitioner re-evaluates an experience and considers alternatives to produce insights that may lead to change in behaviours in future practice.
- **Develop an understanding of the clinical reasoning process and its inherent flaws** . This strategy involves knowing the major heuristics and biases and how they may lead to cognitive error.
- **Adopt Heuristic-based strategies**. Also known as 'cognitive forcing strategy', this debiasing techniques encourages you to deliberately choose analytic reasoning in situations where an intuitive approach may lead to error.
- **Avoid counterproductive responses**. Circular thinking, emotional repression and avoiding a patient that has suffered an adverse event are unhelpful and do not change what happened. Recognize what is happening and take action to break the cycle.
- **Take positive steps**. Accept responsibility where appropriate and avoid blaming others. Recognizing your part in the mishap is an important step in moving forward. Talk to trusted peers, and be sure you have social support outside of work. Remember that mistakes are part of every medical career, and while painful, can be an opportunity to learn and improve your practice.
- Maintain contemporaneous patient health records. This includes updating a patient's medical and family history to assist with the communication of information among multiple clinicians.
- Contact your medical defense organisation (MDO) early with any issues. Note that MDO advisers are exempt from mandatory reporting to AHPRA.

Relevant MIPS resources

Webinars

- Diagnostic Error in Medicine
- Diagnostics: Improvements in healthcare
- Diagnostics: A team sport
- Safety, Quality, and improvements in Diagnosis
- COVID-19 – Diagnosis and pathology

Articles

- Diagnostic errors in medicine
- Diagnostics - A Team Sport

- How to avoid diagnostic errors in the ED
- Dental - Express yourself clearly!

[1]Westbrook, J. I., Raban, M. Z., Walter, S. R., & Douglas, H. (2018). Task errors by emergency physicians are associated with interruptions, multitasking, fatigue and working memory capacity: a prospective, direct observation study. BMJ quality & safety, 27(8), 655-663

[2] Croskerry, P., & Sinclair, D. (2001). Emergency medicine: a practice prone to error?. Canadian Journal of Emergency Medicine, 3(4), 271-276.

[3] Hartigan, S., Brooks, M., Hartley, S., Miller, R. E., Santen, S. A., & Hemphill, R. R. (2020). Review of the basics of cognitive error in emergency medicine: Still no easy answers. Western Journal of Emergency Medicine, 21(6), 125.

[4] Graber ML, Franklin N, Gordon R. Diagnostic Error in Internal Medicine. Arch Intern Med. 2005;165(13):1493–1499. doi:10.1001/archinte.165.13.1493

[5] ibid

[6] Tessa Davis (2017). Coping with errors, Don't Forget the Bubbles. Available at: https://doi.org/10.31440/DFTB.11227

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