Addressing the opioid crisis in the era of competency-based medical education: recommendations for emergency department interventions

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INTRODUCTION

In Canada, opioid-related deaths continue to rise at an alarming rate. In 2017, there were 3,996 apparent opioid-related deaths (33% increase from 2016), significantly greater in magnitude as compared with deaths caused by previous public health crises, e.g., H1N1 in 2009 (428 deaths).[1,2] Opioid-related emergency department (ED) visits have also increased. From 2012 to 2017, the age-adjusted rate of ED visits because of opioid poisoning increased by 136% in Alberta (from 37.6 to 88.6 per 100,000 population) and 47% in Ontario (from 23.5 to 34.6 per 100,000 population).[3]

Because of stigma and social instability, the ED is often the main source of healthcare for patients with substance use disorders.[4] An ED visit may be the only, or last, point of contact with the health care system prior to an individual experiencing a fatal overdose. Patients with opioid use disorders have a life-threatening medical condition, and emergency medicine (EM) physicians and residents play a critical role in preventing future morbidity and mortality.

The transition to competency-based medical education offers opportunities for residents to apply public health interventions within the scope of EM training,[4] identify patients with opioid use disorders effectively, reduce harms associated with opioid use, initiate treatment, and refer patients for ongoing management. In this paper, we highlight relevant entrustable professional activities and key interventions that should be targeted for learning by residents and faculty on shift.

OPIOID USE DISORDER AND COMPETENCE BY DESIGN

Competency-based medical education focuses on outcomes that are organized within a framework of predefined abilities or *competencies*.[5] The Royal College's model of Competence by Design was designed to address evolving societal health needs and patient outcomes.[6] It incorporates the CanMEDS Framework to ensure that residents have the knowledge, skills, attitudes, and willingness to meet societal needs (such as social determinants of health) in a responsible and accountable manner.[6]

Entrustable professional activities are specialty-specific tasks that require demonstrated competence by a resident prior to training completion.[5] There are three entrustable professional activities that directly relate to the management of opioid use disorders[7]: 3.8) "Managing patients with acute toxic ingestion or exposure"; 3.9) "Managing patients with emergency mental health conditions or emergencies"; and 3.10) "Managing and supporting patients in situational crisis to access health care and community resources."

Notably, they represent 3 of 15 entrustable professional activities listed in the *Core of Discipline* stage of training, which focuses on more advanced competencies.[5]

RECOMMENDATIONS

A literature review of ED-based interventions for opioid use disorders was performed and mapped onto

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entrustable professional activities along with associated milestones to generate the following list of recommended competencies for EM residents.

1. Screen for opioid and other substance use disorders

Residents should screen for substance use in a patient-centred and non-judgmental manner while maintaining a high degree of clinical suspicion. Numerous screening tools exist to help identify patients with a high risk of alcohol, opioid, and other substance use.[9] Patients who report opioid use (prescribed or illicit) or who present with complications related to opioid use (e.g., overdose, withdrawal, abscess, bacteremia, or trauma) warrant further assessment.[9]

2. Initiate first-line opioid agonist treatment

Buprenorphine-naloxone reduces the risk of death in patients with opioid use disorders.[8,10] Residents should be comfortable and competent in initiating buprenorphine-naloxone, both in the ED or as take-home induction, for patients with an opioid use disorder. Residents should be able to avoid precipitated withdrawal by correctly evaluating opioid withdrawal severity based on clinical exam and history and only administering buprenorphine-naloxone in the setting of moderate opioid withdrawal.[9] This correlates with entrustable professional activities 3.8 and 3.9, in which the associated milestones promote the initiation of medical treatment with appropriate and timely referral for ongoing management.[7]

Most provinces and territories no longer require special training to prescribe buprenorphine-naloxone.[8] ED-initiation of buprenorphine-naloxone is effective and has been shown to engage up to 78% of patients in addiction treatment at 30 days.[10] If buprenorphine-naloxone is not appropriate or desired, patients should be referred for urgent specialist assessment either in the ED (if available) or after discharge.[8,9] Other opioid agonist treatments available in Canada such as methadone and slow-release oral morphine should not be initiated in the ED without specialist consultation as they take much longer to reach therapeutic doses, as compared with buprenorphine-naloxone, and require frequent monitoring by a prescriber.[8]

3. Provide overdose prevention education, take-home naloxone, and other harm reduction interventions

Patients at risk of opioid overdose should be provided with take-home naloxone and education on its use early in their ED stay.[8,9] Patients with an opioid use disorder are at high risk of leaving before treatment completion and may leave the ED to use opioids during the assessment. Residents should be vigilant for the possibility of an overdose to occur while the patient is in the ED.

Milestones associated with entrustable professional activity 3.10 highlight the importance of management plans that consider all patient needs.[7] Patients who reported intravenous (IV) drug use should be offered sterile injection-related supplies (needles, syringes, alcohol swabs, etc.) and directed to community needle-exchange and harm reduction services. All patients should receive education on overdose prevention and information on local supervised consumption services.[8,9]

4. Ensure transition of care and social stabilization

Residents should address social determinants of health that affect health care access, in particular, housing, income, and medication coverage, as well as whether patients have photo identification and a provincial health card. This is in keeping with the milestones of entrustable professional activity 3.10 that emphasize the development of comprehensive treatment plans.[7] Milestones under entrustable professional activity 3.9 promote appropriate referral to social work and other medical services. Residents should be familiar with locally available resources for social stabilization and addiction treatment.

5. Reduce opioid-related harm

As regular opioid prescribers, residents must identify patients at higher risk of opioid-related harm and effectively counsel all patients about the risks of opioid medications. Residents should ascertain if patients have a primary opioid prescriber or treatment agreement in place. If available, the provincial prescription monitoring program may demonstrate signs of potential opioid misuse, such as having multiple opioid prescribers.[9] Structured prescribing and close follow-up should be arranged when appropriate, e.g., limiting the duration of ED prescriptions, requiring family physician reassessment prior to refill, and prescribing opioids as daily dispensed doses with witnessed ingestion.[8] Patients should be instructed to dispose of unused opioids appropriately to minimize the risk of medication diversion. Entrustable professional activity 3.10 includes milestones that

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encourage residents to identify opportunities for patient education and implement comprehensive management plans that include all health issues.[7]

CONCLUSION

Emergency physicians play a critical role in reducing deaths because of opioid poisoning. The transition to Competence by Design has made explicit that EM residents must develop competencies in addiction medicine, pain management, toxicology, and public health. EM residents may not be able to meet all the recommendations listed in this paper because of local ED policy, practice variation, or unavailability of take-home naloxone or community follow-up. However, they should still be able to identify and understand the indications and benefits of the interventions outlined above.

Program directors and competency committees should strive to ensure that residents acquire these competencies during their training. Developing partnerships with local addiction medicine clinics may facilitate access to training opportunities for residents and create robust referral pathways from the ED. Faculty and residents have flexibility in deciding which entrustable professional activities are assessed during each shift and should consider the interventions outlined in this paper. In this growing opioid crisis, the role of the emergency physician must extend beyond the resuscitation bay. Relevant skills fundamental to specialist practice in EM include initiating opioid agonist treatment, reducing the harms associated with opioid use, coordinating urgent follow-up, and facilitating access to social supports.

Keywords: Harm reduction, medical education, opioids, substance use

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