

of respondents (57.14%) reported that they “often” prescribe opioids for the treatment of acute pain in the emergency department, and an equal number of respondents reported doing so “sometimes” at discharge. Eighty-five percent of respondents reported most commonly prescribing intravenous morphine for acute pain in the emergency department, and over thirty-five percent reported most commonly prescribing oral morphine upon discharge. Patient age and risk of misuse were the most frequently cited factors that influenced respondents’ prescribing decisions. Only 4 of the 22 respondents reported using evidence-based guidelines to tailor their opioid prescribing practices, while an overwhelming majority (80.95%) believe there is a need for evidence-based opioid prescribing guidelines for the treatment of acute pain. Sixty percent of respondents completed additional training in safe opioid prescribing, yet less than half of respondents (42.86%) felt they could help to mitigate the opioid crisis by prescribing fewer opioids in the emergency department. **Conclusion:** Emergency physicians frequently prescribe opioids for the treatment of acute pain and new evidence suggests that this practice can lead to significant morbidity. While further research is needed to better understand emergency physicians’ opioid prescribing practices, our findings support the need for evidence-based guidelines for the treatment of acute pain to ensure patient safety.

Keywords: acute pain, opioid prescribing guidelines, opioid prescription

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Barriers and facilitators affecting implementation of a decision aid for the diagnosis of acute aortic syndrome: a qualitative study

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Introduction: Acute aortic syndrome (AAS) is an uncommon, life-threatening emergency that is frequently misdiagnosed. The Canadian clinical practice guidelines for the diagnosis of AAS were developed in order to reduce the frequency of misdiagnoses and number of diagnostic tests. As part of the guidelines, a clinical decision aid was developed in order to facilitate clinician decision-making based on practice recommendations. The objective of this study was to identify barriers and facilitators among physicians to implementation of the decision aid. **Methods:** We conducted semi-structured interviews with emergency room physicians working at 5 sites distributed between urban academic and rural settings. We used purposive sampling, contacting ED physicians until data saturation was reached. Interview questions were designed to understand potential barriers and facilitators affecting the probability of decision aid uptake and accurate application of the tool. Two independent raters coded interview transcripts using an integrative approach to theme identification, combining an inductive approach to identification of themes within an organizing framework (Theoretical Domains Framework), discrepancies in coding were resolved through discussion until consensus was reached. **Results:** A majority of interviewees anticipated that the decision aid would support clinical decision making and risk stratification while reducing resource use and missed diagnoses. Facilitators identified included validation and publication of the guidelines as well as adoption by peers. Barriers to implementation and application of the tool included the fact that the use of D-dimer and knowledge of the rationale for its use in the investigation of AAS were not widespread. Furthermore, scoring components were, at times, out of alignment with clinician practices and understanding of risk factors. The complexity of the decision aid was also identified as a potential barrier

to accurate use. **Conclusion:** Physicians were amenable to using the AAS decision aid to support clinical decision-making and to reduce resource use, particularly within rural contexts. Key barriers identified included the complexity of scoring and inclusion criteria, and the variable acceptance of D-dimer among clinicians. These barriers should be addressed prior to implementation of the decision aid during validation studies of the clinical practice guidelines.

Keywords: decision tool, acute aortic syndrome, aortic dissection

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Improving the diagnosis of pulmonary embolism in the emergency department

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Background: Emergency physicians (EPs) can choose from several evidence-based pathways to diagnose pulmonary embolism (PE), however literature suggests that EPs frequently use computer tomography (CT) scanning as a stand-alone test for PE. This is a program of research to improve adherence to evidence-based PE diagnosis in the emergency department (ED). **Aim Statement:** To create a novel approach to PE diagnosis in the ED based on a framework explaining EP diagnostic PE behaviour and barriers to using evidence-based PE testing. **Measures & Design:** We conducted two types of qualitative interviews: 1). EPs in 5 Canadian cities watched videos of 2 simulated cases and then explained how they would test the patient. 2). Semi-structured EP interviews using the theoretical domains framework (TDF). The results of our analyses informed the construction of an explanatory framework for common EP diagnostic PE behaviours. Barriers to evidence-based behaviour were classified into domains.

A Canadian EP expert group reviewed these results along with the existing evidence on ED PE diagnostic implementation. We developed a new approach to diagnosis of PE in the ED which addresses each of our domains. **Evaluation/Results:** We conducted 71 interviews. We identified 4 domains, each addressed in our pathway. ‘PE in a mythical and deadly beast’ PE kills and can masquerade so EPs look for PE in places where it does not exist and are rewarded for ‘over-testing’. Response: Creating a departmental conversation about missing PE, talking about the facts, busting the myths. EP feedback on PE testing including positive rate. ‘The end goal is CTPE’ PE creates anxiety for EPs and ordering a CTPE hands over responsibility to the radiologist. Response: A departmental protocol for PE testing which starts with D-dimer for every patient. Shifting focus to ruling out PE with D-dimer. Protocol is automated once initiated by EP. ‘PERC eases anxiety’ PERC is documented when it is negative and allows EP to stop. Response: EPs can choose to use and document PERC. ‘No-one has been fighting for the Wells score’ Poor understanding of purpose and function. Often at odds to Gestalt. Response: Protocol does not use Wells score. **Discussion/Impact:** We have developed a new diagnostic PE pathway which addresses current barriers to evidence-based practice which we will evaluate further.

Keywords: computer tomography scan, pulmonary embolism, quality improvement and patient safety

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Colder, but no less safe: A comparison of bicycle related traumas in winter compared to summer cyclists

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