

# Clinician's Capsules for *CJEM* 20(4)

## Quality improvement primer part 2: executing a quality improvement project in the emergency department

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doi: 10.1017/cem.2017.393

### What is known about the topic?

Conducting an effective quality improvement (QI) project requires strategic planning steps, presented in the first article of this Primer Series.

### What did this study ask?

This article focused on the execution of a QI project.

### What did this study find?

We introduced the Model for Improvement, including aim statements, measurements, change concepts/ideas, and implementation using Plan-Do-Study-Act (PDSA) cycles.

### Why does this study matter to clinicians?

An enhanced understanding of QI methodology will enable emergency medicine clinicians to drive improvements in patient care processes and outcomes.

## Evaluating physician awareness of common health care costs in the emergency department

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doi: 10.1017/cem.2017.43

### What is known about the topic?

Health care costs are on the rise and sustainability is at risk. Physicians have a direct impact on the costs to care but likely have limited awareness of these costs.

### What did this study ask?

What is the current level of physician awareness of common healthcare costs?

### What did this study find?

ED physicians have limited awareness of common healthcare costs used in day-to-day practice.

### Why does this study matter to clinicians?

There is a need for cost awareness education programs and better access to cost information that would equip physicians to manage hospital resources more effectively.

## Cannabinoid hyperemesis syndrome presentation to the emergency department: a two-year multi-centre retrospective chart review in a major urban area

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doi: 10.1017/cem.2017.381

### What is known about the topic?

Patients with cannabinoid hyperemesis syndrome (CHS) often present multiple times to the Emergency Department and are discharged with various misdiagnoses.

### What did this study ask?

What is the epidemiology of CHS cases presenting to two urban Tertiary Care Centre EDs and one Urgent Care Centre.

### What did this study find?

CHS may be an overlooked diagnosis for nausea and vomiting, which can possibly contribute to unnecessary work-ups in the ED.

### Why does this study matter to clinicians?

There is a lack of screening for the diagnostic criteria of CHS, especially in quantifying cannabis use, and symptoms of the syndrome.

## Randomized Controlled Trial of Emergency Department Initiated Smoking Cessation Counselling and Referral to a Community Counselling Service

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doi: 10.1017/cem.2017.345

### What is known about the topic?

Smoking tobacco is the leading cause of preventable disease and death. However, best practices for ED smoking cessation counselling are unclear.

### What did this study ask?

Does an "ask, advise, and refer" approach increase 12 month 30-day quit rates in the stable adult ED smoking population.

### What did this study find?

In this randomized controlled trial, there was no statistically significant difference in 12 month 30-day quit rates with the intervention.

### Why does this study matter to clinicians?

Although not statistically significant, there was a trend towards increased smoking cessation with the intervention over 12 months of follow-up.

### Impact of Premix Antimicrobial Preparation and Time to Administration in Septic Patients

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doi: 10.1017/cem.2017.33

#### What is known about the topic?

Strategies to reduce time to antibiotic administration are imperative amongst ED patients presenting with severe sepsis and septic shock.

#### What did this study ask?

Does the availability of pre-mixed antimicrobial (PMA) formulations in the ED improve time to antimicrobial administration?

#### What did this study find?

Utilization of PMAs significantly reduced the time to administration of the first antimicrobial agent in ED patients with sepsis.

#### Why does this study matter to clinicians?

Our study helps establish PMAs as an independent factor in antimicrobial administration time for septic patients in the ED.

### Uncomplicated urinary tract infections in the emergency department: a review of local practice patterns

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doi: 10.1017/cem.2017.39

#### What is known about the topic?

Despite being commonly encountered in the ED, there is little consensus on the diagnosis or management of uncomplicated UTIs in young, healthy women.

#### What did this study ask?

What proportion of women with symptoms of an uncomplicated UTI have urine cultures performed, and does the culture result impact subsequent management?

#### What did this study find?

Urine cultures are frequently ordered for ED patients who are treated for uncomplicated cystitis; however, the results rarely (0.5%) change clinical care.

#### Why does this study matter to clinicians?

For the majority of young female patients with an uncomplicated UTI, urine cultures did not change management in the ED setting.

### Return Visits to the Pediatric Emergency Department: A Multi-Center Retrospective Cohort Study

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doi: 10.1017/cem.2017.40

#### What is known about the topic?

Pediatric emergency returns (RTED) occur frequently, add to healthcare utilization, and are used as a measure of quality of care.

#### What did this study ask?

We explored how frequently RTED occur at other EDs in the region, in addition to the original site of visit.

#### What did this study find?

Nearly 8% of all visit to a pediatric have an RTED, 13% of those occurred at another site.

#### Why does this study matter to clinicians?

Pediatric ED managers and researchers who use only local data to assess RTED rates underestimate the true burden of RTED.

### Epidemiology of Electrical And Lightning Related Injuries Among Canadian Children and Youth from 1997-2010: A CHIRPP Study

Madeleine Böhrer, BSc; Samuel A. Stewart, PhD; Katrina F. Hurley, MD, MHI

doi: 10.1017/cem.2017.49

#### What is known about the topic?

Previously, most pediatric electrical injuries occurred at home, precipitated by contact with electrical cords, wall sockets and faulty electrical equipment.

#### What did this study ask?

What is the epidemiology of electrical injuries in children who presented to Canadian Emergency Departments from 1997 to 2010?

#### What did this study find?

The number of electrical injuries per year has decreased, with most injuries still occurring at home.

#### Why does this study matter to clinicians?

Injury prevention strategies should continue to target home safety, particularly surrounding electrical outlets.

### Retrospective evaluation of the BIG score to predict mortality in pediatric blunt trauma

Charlotte Grandjean-Blanchet, MD; Guillaume Emeriaud, MD; Marianne Beaudin, MD; Jocelyn Gravel, MD, MSc

doi: 10.1017/cem.2017.379

#### What is known about the topic?

The BIG score is a recently developed trauma score composed of the base deficit, INR and GCS.

#### What did this study ask?

Can the BIG score predict in-hospital mortality among children with blunt trauma admitted to a pediatric emergency department?

**What did this study find?**

A BIG score of <16 identified children with a high probability of survival.

**Why does this study matter to clinicians?**

The BIG score is a simple tool rapidly available and provides important information about the severity of the patient's injuries.

### Cut and Rip and Cut Alone techniques versus Usual Practice in the removal of trauma patient clothing

Aaron K. Sibley, MD; Trevor N. Jain, MD, MSc; Brent Nicholson, BA, ACP; Paul Atkinson, MB, MA

doi: 10.1017/cem.2017.346

**What is known about the topic?**

Currently no standard exists with regard to clothing removal techniques in trauma care.

**What did this study ask?**

How do two specific clothing removal techniques using trauma scissors compare to standard paramedic practice in time to expose a simulated trauma patient?

**What did this study find?**

A technique using a combination of cutting and ripping clothing with hands was the fastest method to remove patient clothing.

**Why does this study matter to physicians?**

Rapid exposure of critically ill trauma patients may allow early discovery and management of life threatening injuries.

CJEM-17-0022

1700389

### Factors Associated with Delay in Trauma Team Activation and Impact on Patient Outcomes

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doi: 10.1017/cem.2017.389

**What is known about the topic?**

Trauma teams improve mortality of severely injured trauma patients and delayed team activation is a quality measure of trauma systems.

**What did this study ask?**

What are the factors associated with delay in activation of trauma teams and is delay associated with worse clinical outcomes?

**What did this study find?**

Older patients were more likely to experience delay in team activation with no statistically significant difference in patient outcomes.

**Why does this study matter to clinicians?**

Emergency physicians should be aware that the extent of injuries in elderly trauma patients is often initially underestimated

### Risk factors for adverse outcomes in older adults with blunt chest trauma: a systematic review

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doi: 10.1017/cem.2017.377

**What is known about the topic?**

There is little research examining risk factors and outcomes of blunt chest wall trauma in patients aged  $\geq 65$  years.

**What did this study ask?**

To systematically review risk factors related to adverse outcomes in older adults who sustained blunt chest wall trauma.

**What did this study find?**

While included studies were heterogeneous increasing number of rib fractures was associated with increased morbidity, mortality and length of stay.

**Why does this study matter to clinicians?**

Given the aging population and likely future increases in ED presentations of older aged patients, additional high-quality studies are indicated.