Keywords: asymptomatic bacteriuria, quality improvement and patient safety, urine cultures

LO39
Using an ambulatory zone to improve physician initial assessment times in a tertiary care hospital emergency department
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Background: Increasing Emergency Department (ED) stretcher occupancy with admitted patients at our tertiary care hospital has contributed to long Physician Initial Assessment (PIA) times. As of Oct 2019, median PIA was 2.3 hours and 90th percentile PIA was 5.3 hours, with a consequent 71/74 PIA ranking compared to all Ontario EDs. Ambulatory zone (AZ) models are more commonly used in community EDs compared to tertiary level EDs. An interdisciplinary team trialled an AZ model for five days in our ED to improve PIA times.

Aim Statement: We sought to decrease the median PIA for patients in our ED during the AZ trial period as compared to days with similar occupancy and volume. Measures & Design: The AZ was reserved for patients who could walk from a chair to stretcher. In this zone, ED rooms with stretchers were for patient assessment only; when waiting for results or receiving treatment, patients were moved into chairs. We removed nursing assignment ratios to increase patient flow. Our outcome measure was the median PIA for all patients in our ED. Our balancing measure was the 90th percentile PIA, which could increase if we negatively impacted patients who require stretchers. The median and 90th percentile PIA during the AZ trial were compared to similar occupancy and volume days without the AZ. Additional measures included ED Length of Stay (LOS) for non-admitted patients, and patients who leave without being seen (LWBS). Clinicians and patients provided qualitative feedback through surveys.

Evaluation/Results: The median PIA during the AZ trial was 1.5 hours, compared to 2.1 hours during control days. Our balancing measure, the 90th percentile PIA, was 3.7 hours, compared to 5.0 during control days. A run chart revealed both median and 90th percentile PIA during the trial were at their lowest points over the past 18 months. The number of LWBS patients decreased during the trial; EDLOS did not change. The majority of patients, nurses, and physicians felt the trial could be implemented permanently. Discussion/Impact: Although our highly specialized tertiary care hospital faces unique challenges and high occupancy pressures, a community-hospital style AZ model was successful in improving PIA. Shorter PIA times can improve other quality metrics, such as timeliness of hospital style AZ model was successful in improving PIA. Shorter PIA times can improve other quality metrics, such as timeliness of patient flow, physician initial assessment, quality improvement and patient safety

Keywords: anticoagulation, atrial fibrillation, quality improvement and patient safety

LO41
Safe anticoagulation initiation for atrial fibrillation in the emergency department (the SAFE pathway)
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Background: Atrial fibrillation (AF) is a risk for stroke. The Canadian Cardiovascular Society advises patients who are CHADS65 positive should be started on oral anticoagulation (OAC). Our local emergency department (ED) review showed that only 16% of CHADS65 positive patients were started on OAC and that 2% of our patients were diagnosed with stroke within 90 days. We implemented a new pathway for initiation of OAC in the ED (the SAFE pathway). Aim Statement: We report the effectiveness and safety of the SAFE pathway for initiation of OAC in patients treated for AF in the ED. Measures & Design: A multidisciplinary group of physicians and pharmacist developed the SAFE pathway for patients who are discharged home from the ED with a diagnosis of AF. Step 1: contraindications to OAC, Step 2: CHADS65 score, Step 3: OAC dosing if indicated. The pathway triggers referral to AF clinic, family physician letter and follow up call from the ED pharmacist. Patients are followed for 90 days by a structured medical record review and a structured telephone interview. We record persistence with OAC, stroke, TIA, systemic arterial embolism and major bleeding (ISTH criteria). Patient outcomes are fed back to the treating ED physician. Evaluation/Results: The SAFE pathway was introduced in two EDs in June 2018. In total, 177 patients have had the pathway applied. The median age was 70 (interquartile range (IQR) 61-78), 48% male, median CHADS2 score 2 (IQR 0-2). 19/177 patients (11%) had a contraindication to initiating OAC. 122 patients (69%) had no contraindication to OAC and were CHADS65 positive. Of these 122 patients, 109 were given a prescription for OAC (96 the correct dose, 9 too high a dose and 4 too low a dose). 6 patients declined OAC and the physician did not want to start OAC for 7 patients. 73/122 were contacted by phone at 90 days, 15 could not be reached and 34 have not completed 90 days of follow up since their ED visit. Of the 73 who were reached by phone after 90 days, 65 were still taking an anticoagulant. To date, 1 patient who declined OAC (CHADS2 score of 2) had a stroke within 90 days and one patient prescribed OAC had a gastrointestinal bleed. Discussion/Impact: The SAFE pathway appears safe and effective although we continue to evaluate and improve the process.

Keywords: anticoagulation, atrial fibrillation, quality improvement and patient safety

LO40
The development of a standardized provincial massive hemorrhage protocol with a built-in continuous quality improvement framework
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Aim Statement: We aimed to implement a standardized MHP with uniform quality improvement (QI) metrics to increase uptake of evidence-based MHPs across 150 hospitals in Ontario between 2017 and 2021. Measures & Design: We performed ongoing PDSA cycles; 1) stakeholder analysis by surveying the Ontario Regional Blood Coordinating Network (ORBCoN), 2) problem characterization and Ishikawa analysis for key QI metrics based on areas of MHP variability in 150 Ontario hospitals using a web-based survey, 3) creation of a consensus MHP via a modified Delphi process, 4) problem characterization at ORBCoN for
the design of a freely available toolkit for provincial implementation
by expert working groups, 3) design of 8 key QI metrics by a modified
Delphi process, and 6) identification of process measures for QI data
collection by implementation metrics. 

**Evaluation/Results:**
PDSA1-2: 150-hospitals were surveyed. 33% of hospitals lacked
MHPs, mostly in smaller sites. Major areas for QI were related to activ-
tion criteria, hemostatic agents, protocolized hypothermia manage-
ment, variable MHP naming, QI metrics and serial blood work
requirements. PDSA3: 3 Delphi rounds were held to reach 100%
expert consensus for 42 statements and 8 CQI metrics. Major areas
for modification were protocol name, laboratory resuscitation targets,
cooler configurations, and role of factor VIIa. PDSA4: adaptable tool-
kit is under development by the steering committee and expert work-
ing groups. Implementation is scheduled for Spring 2020. PDSA5; the
8 CQI metrics are: TXA administration < 1 h, RBC transfusion < 15
min, call to transfer for definitive care < 60 min, temp >35°C at end of
protocol, Hgb kept between 60-110g/L, transition to group-specific
RBC by 90 min, appropriate activation defined by ≥ 6 units RBC in
the first 24 hours, and any blood component wastage. 

**Discussion/Impact:** MHP uptake, content, and tracking is variable. A standar-
dized MHP that is adaptable to diverse settings decreases complexity,
improves use of evidence-based practices, and provides a platform for
continuous QI. PDSA6 will occur after implementation; we will com-
plete an implementation survey, and design a pilot and feasibility study
for prospective tracking of patient outcomes using existing prospect-
ively collected inter-hospital and provincial databases. 

**Keywords:** massive hemorrhage protocol, quality improvement and
patient safety, resuscitation systems 

**LO42**

A systematic review of short-term use of therapeutic opioids for
children and future opioid use disorders

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**Introduction:** Despite an overall decline in opioid prescriptions in
Canada, healthcare visits, hospitalizations, and deaths due to
opioid-related harms continue to rise for children. Clinicians urgently
require high quality synthesized evidence to inform personalized deci-
sions regarding opioid use for children. The objective of this system-
atic review was to examine the association between short-term
therapeutic exposure to opioids and development of opioid use dis-
order. 

**Methods:** A medical librarian conducted a comprehensive
search of 10 databases from inception to May 2019. Two authors inde-
pendently assessed studies for inclusion. Studies were eligible if they
reported primary research in English or French, and study participants
had short (<14 days) or non-specific duration of therapeutic exposure to
opioids before age 18 years. Primary outcome was the development of an
opioid use disorder; secondary outcomes included opioid addiction,
dependence, misuse, and abuse. Data extraction involved two independ-
ent reviewers utilizing a standardized form. Methodological quality
was assessed using the NIH tools for observational studies. Results are
described narratively. 

**Results:** The search identified 4,072 unique cita-
tions; 82 were selected for review, and 17 were included (3 retrospec-
tive cohort, 4 prospective cohort, and 10 cross-sectional). All studies took
place in the USA. A total of 1,562,503 participants were analyzed.
Nine studies were administered in schools, 3 used administrative data.
While most settings were non-specific, 1 study examined opioid use in
dentistry, 1 in trauma, and 1 in organized sports. One comparative
study showed an association between short-term therapeutic use and
opioid misuse. Two studies showed opioid related adverse events (e.g.,
overdose) among cohorts exposed to short-term use. The remaining
14 studies did not specify duration of exposure; therefore, confirming
whether misuse was due to short-term therapeutic exposure was not pos-
sible. 

**Conclusion:** A small number of studies in this review suggest an
association between short-term opioid use and opioid misuse; however,
further analysis is underway with consideration of methodological lim-
itations of the individual studies (final results pending). Careful consid-
eration of the risk and benefits of short-term opioid use should be
undertaken prior to prescribing opioids. PROSPERO Registration
Number: 122681. 

**Keywords:** narcotics, opioid misuse, opioid use disorder 

**LO43**

First Nations emergency care visits in Alberta: Descriptive
results of a retrospective cohort study

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**Introduction:** Emergency care serves as an important health resource
for First Nations (FN) persons. Previous reporting shows that FN
persons visit emergency departments at almost double the rate of
non-FN persons. Working collaboratively with FN partners, aca-
demic researchers and health authority staff, the objective of this
study is to investigate FN emergency care patient visit statistics in
Alberta over a five year period. 

**Methods:** Through a population-
based retrospective cohort study for the period from April 1, 2012
to March 31, 2017, patient demographics and emergency care visit
characteristics for status FN patients in Alberta were analyzed and
compared to non-FN statistics. Frequencies and percentages (%) de-
scribe patients and visits by categorical variables (e.g., Canadian
Triage Acuity Scale (CTAS)). Means and standard deviations (medi-
ans and interquartile ranges (IQR)) describe continuous variables
(e.g., distances) as appropriate for the data distribution. These descrip-
tions are repeated for the FN and non-FN populations, separately.

**Results:** The data set contains 11,686,288 emergency facility visits
by 3,024,491 unique persons. FN people make up 4.8% of unique
patients and 9.4% of emergency care visits. FN persons live further
from emergency facilities than their non-FN counterparts (FN
median 6 km, IQR 1-24; vs. non-FN median 4 km, IQR 2-8). FN visits
arrive more often by ground ambulance (15.3% vs. 10%). FN visits are
more commonly triaged as less acute (59% CTAS levels 4 and 5, com-
pared to non-FN 50.4%). More FN visits end in leaving without com-
pleting treatment (6.7% vs. 3.6%). FN visits are more often in the
evening – 4:01pm to 12:00am (43.6% vs. 38.1%). 

**Conclusion:** In a collaborative validation session, FN Elders and health directors con-
textualized emergency care presentation in evenings and receiving
less acute triage scores as related to difficulties accessing primary
care. They explained presentation in evenings, arrival by ambulance,
and leaving without completing treatment in terms of issues accessing
transport to and from emergency facilities. Many factors interact to
determine FN patients’ emergency care visit characteristics and out-
comes. Further research needs to separate the impact of FN identity
from factors such as reasons for visiting emergency facilities, distance
traveled to care, and the size of facility where care is provided. 

**Keywords:** First Nations