# How to Turn Your PI Project into a Research Abstract or Poster

Judy N. Mikhail, PhD, MBA, RN Editor in Chief Journal of Trauma Nursing

# Objectives

- 1. Identify barriers to performing scholarly QI
- 2. Compare and contrast Research, EBP with QI
- 3. Review SQUIRE 2.0 Guidelines
- 4. Tips

## Anatomy of a Research Question (PICOTS)

- Patient/Population
- Intervention/Issue
- Comparison (optional)
- Outcomes

- Timing (optional)
- Setting (optional)
- May not always have all components

## Identify PICOT(S)

In hospitalized adult trauma patients, how does hourly rounding compare with no rounding affect fall rates?

- **P** = hospitalized adult trauma patients
- I = hourly rounding
- **C** = no rounding
- **O** = fall rates



# **QI** Studies





# QI Barriers



- Complex
- Context dependent
- Inadequate training
- Lacks single vocabulary
- Ethics→ ambiguous→ IRB?
- Weak research designs
- Tend to over-estimate benefits
  - Undervalued by scientists
  - Undervalued by publishers

- Health system engagement
  - Difficulty with complexity
  - Competing demands
  - QI exhaustion
  - Violation of trade secrets
  - Reputation

## Definitions

Quality Improvement	Research
Systematic, <u>data-guided</u>	Research is defined as
activities designed to improve	systematic investigation,
clinical <u>care</u> , patient safety	including research
and health care delivery at	development, testing, and
the local setting.	evaluation, designed to
	develop or <u>contribute to</u>
	knowledge.

Ann Intern Med 2007; 146:666-73

## Definitions

<b>Quality</b> Ir	nprovement
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Research

Systematic, <u>data-guided activities</u> <u>designed to improve</u> clinical care, patient safety and health care delivery at the <u>local setting.</u> Research is defined as systematic investigation, including research development, testing, and evaluation, designed to develop or contribute to knowledge.



	Quality Improvement	Evidence Based Practice	Research
Definition	Evaluate/improve a work process	<u>Combination</u> : Best evidence + Clinical expertise + Patient preference	Scientific investigation to generate new knowledge
Purpose	Improve existing process	Identify best practice	Generate new knowledge
Benefits	Clinicians $\rightarrow$ Patient	Clinicians → Patient	Scientific community
Risk	None	None	Potential

	Quality Improvement	Evidence Based Practice	Research
Analysis	Run/control charts, Quasi-exp	Search & Appraise Literature	Statistical testing
Driver	Data	Best evidence	Inquiry
Timing	Continuous cyclical	At this point in time	Single-time period
Example Designs	PDSA/PDCA Lean Six Sigma FADE TQM	PICO, PICOTS, ACE Star Model Johns Hopkins Model Iowa Model, Stetler's Model	Quantitative Qualitative

	Quality Improvement	Evidence Based Practice	Research
Bias	Accept bias	Appraise to reduce bias	Design to eliminate bias
Generalizability	Low, results specific to unit	Based on organizational context	Based on design
IRB	Required for dissemination	Na	Required
JTN Article	QI Article	Systematic Reviews	Research

	Quality Improvement	Evidence Based Practice	Research
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#### **Problem:**

### ↑ Central Line Associated Bloodstream Infections (CLABSI)

QI	EBP	Research
RN reviews hospital data revealing her units elevated CLABSI rate.	RN notes 个 CLABSI in her patients and nurses using inconsistent sterile technique to access central lines.	RN has idea to see if a dedicated trained "central line" nurse ↓ CLABSI rate.
<i>How can we fix the process(es)!</i>	What is the best evidence!	Does this intervention work?

### Problem: Inconsistent Discharge Instruction Process

QI	EBP	Research
RN collects unit data on discharge instructions for stroke patients and finds variability in the timing, content, process and documentation.	RN wants to identify Stroke discharge best practices. PICO, appraises literature, incorporates national guideline into her unit's discharge instructions.	RN designs research study to assess discharge instructions on frequency and timing of follow up PCP or ED visits.

*Improve the process* 

Find current best practice

*Does intervention work?* 

Figure 1. Depiction of the continuum of clinical research, quality improvement, and patient care activities. Examples are provided relating to care, improvement, and research for acute myocardial infarction (AMI).





Cioletti et al (2017). Institutional Review Board Checklist for Trainee Quality Improvement Project Approvals. J Grad Med Educ, 9(3), 371-372. George Washington University

Conditions for Determination of QA/QI Status	Yes	No
The primary intent of the project is not peer-reviewed publication, and if publication of the results was prohibited, the project would still have merit as a QA/QI effort.		
The purpose is to improve the quality of the program under investigation by assessing and encouraging standard medical care or educational goals.		
The principal investigator has both clinical supervisory responsibility and the authority to impose a corrective plan based on the outcomes of the project.		
The project does not involve prospective assignment of patients to different procedures or therapies based on a predetermined plan such as randomization.		
The project does not involve a "control group," in which therapeutic or study intervention is intentionally withheld to allow an assessment of its efficacy.		
The project does not involve the prospective evaluation of a drug, procedure, or device that is not currently approved by the Food and Drug Administration for general use (including "off-label" indications).		
Participants won't be exposed to additional physical, psychological, social, or economical risks or burdens (beyond patient satisfaction surveys) in order to make the results of the project generalizable.		
Adequate protections are in place to maintain confidentiality of the data to be collected, and there is a plan for who can access any data containing participant identifiers.		

Note: If all responses are "Yes," the project is approved as QA/QI status. If any response is "No," the project must be submitted to the Institutional Review Board for approval.

# **IRB** approval

MOST journals require approval for publication

# Types of IRB application

• Full application

- Expedited
  - Identifiable data, no or minimal risk to subject
- Exempt

Anonymous data, no risk to subject

# Types of IRB application

• Full application

• Expedited



# **SQUIRE Guidelines**

- Standards for QUality Improvement Reporting Excellence
- <u>www.squire-statement.org</u>

Framework for reporting QI projects
Published in 2008, Updated 2.0 2015
Required by many journals that publish QI

# SQUIRE 2.0 http://www.squire-statement.org

#### RESEARCH AND REPORTING METHODOLOGY



#### SQUIRE 2.0 (*Standards for QUality Improvement Reporting Excellence*): 2015 revised publication guidelines from a detailed consensus process

Greg Ogrinc,<sup>1,2,3</sup> Louise Davies,<sup>1,2,3</sup> Daisy Goodman,<sup>1,2</sup> Paul Batalden,<sup>2,3</sup> Frank Davidoff,<sup>3</sup> David Stevens<sup>3,4</sup>

For numbered affiliations see end of article.

#### Correspondence to

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This paper is being co-published in: American Journal of Critical Care, American Journal of Medical Quality, Canadian Journal of Diabetes, Journal of Continuing Education in Nursing, Journal of American College of Surgeons, Journal of Surgical Research, Joint Commission Journal on Quality and Patient

#### ABSTRACT

Since the publication of Standards for QUality Improvement Reporting Excellence (SQUIRE 1.0) guidelines in 2008, the science of the field has advanced considerably. In this manuscript, we describe the development of SQUIRE 2.0 and its key components. We undertook the revision between 2012 and 2015 using (1) semistructured interviews and focus groups to evaluate SQUIRE 1.0 plus feedback from an international steering group, (2) two face-to-face consensus meetings to develop interim drafts and (3) pilot testing with authors and a public comment period. SOUIRE 2.0 emphasises the reporting of three key components of systematic efforts to improve the quality, value and safety of less the second se

we will refer to as SQUIRE 1.0. The guidelines were developed in an effort to reduce uncertainty about the information deemed to be important in scholarly reports of healthcare improvement and to increase the completeness, precision and transparency of those reports.

In the intervening years, the reach of systematic efforts to improve the quality, safety and value of healthcare has grown. Health professionals' education worldwide now includes improvement as a standard competency.<sup>7–11</sup> The science of the field also continues to advance through guidance on applying formal and informal theory in the development and

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### SQUIRE Guidelines

- Framework for reporting QI studies
- Intended for reports that:
  - Describe <u>system level work</u> to improve care
  - Used methods to establish that observe outcomes were due to interventions
  - Scientific design (PDSA, Control charts, ...)
- Adaptable, flexible
- Use only sections that apply
- Cite SQUIRE when it is used to write a manuscript (Methods section)

## Title and Abstract

Section	Tips
Title	Indicate an initiative to improve healthcare: quality, safety, effectiveness, patient centeredness, timeliness, cost, efficiency, or equity <i>Clear, concise, descriptive to aid searching and indexing</i> <i>No abbreviations, avoid questions</i>
Abstract	Adequate information to aid <u>searching and indexing</u> Background, Methods (Intervention), Results, Conclusions <i>Concise, factually dense</i>

### Introduction Why did you start?

Section	Tips
Problem	Nature & significance of local problem The Problem
Available Knowledge	What is currently knownShortRelevant previous studiesNOT a lit reviewThe Gap
Rationale	Framework, model, concept, theory: explain problem Ref
Specific Aim	<i>The purpose of this study</i> Primary, secondary
Length	3-4 paragraphs, 1-1/2 page

## Methods What did you do?

Section	Tips
Context	Contextual elements considered important at the outset of introducing the interventions <i>TC Level, Location, Size, Team, etc</i>
Intervention	a. Describe in sufficient detail that others could replicate b. Specifics of the team involved in the work <i>"Doing the intervention" "What you did"</i>
Study of Interventions	<ul> <li>a. Approach chosen for assessing intervention impact</li> <li>b. Approach used to establish whether the observed outcomes were due to the interventions</li> <li><i>"Studying the intervention" "Focus on whether and why</i> <i>intervention works" State research design (PDSA, etc)</i></li> </ul>

## Methods cont. What did you do?

Section	Tips
Measures	<ul> <li>a. Intervention measures:</li> <li>rationale, operational definitions, validity, reliability</li> <li>b. Description ongoing assessment of contextual elements that contributed to the success, failure, efficiency, and cost</li> <li>c. Methods to assess completeness and accuracy of data</li> </ul>
Analysis	<ul> <li>a. Data analysis method: qualitative, quantitative</li> <li>b. Method for understanding variation and time within data</li> </ul>
Ethical	IRB statement End of methods section

## Results What did you find?

### Section Tips Results a. Initial steps of the interventions and their evolution over time (timeline, flowchart) b. Details of the process measures and outcomes c. Contextual elements that interacted with the interventions d. Observed associations between outcomes, interventions, and relevant contextual elements e. Unintended consequences such as unexpected benefits, problems, failure, or costs associated with the interventions f. Details about missing data

### Discussion What does it mean?

Section	Tips
Summary	<ul> <li>a. Key findings, relevance to the rationale and specific aims</li> <li>b. Strengths of the project</li> <li><i>Do not over state your findings</i></li> </ul>
Interpretation	<ul> <li>a. Association between interventions and outcomes</li> <li>b. Compare results to relevant literature</li> <li>c. Impact of the project on people and systems</li> <li>d. Reasons for differences between observed &amp; anticipated outcomes, including context</li> <li>e. Costs and strategic trade-offs, including opportunity costs</li> </ul>

Discussion section is where your individual voice is finally heard

## Discussion What does it mean?

Section	Tips
Limitations	<ul> <li>a. Limits to generalizability <i>Be hard on yourself</i></li> <li>b. Factors that might have limited <u>internal validity</u> such as confounding, bias, imprecision in the design, methods, measurement, or analysis</li> <li>c. Efforts made to minimize and adjust for limitations</li> </ul>
Conclusions	<ul> <li>a. Usefulness of the work</li> <li>b. Sustainability</li> <li>c. Potential for spread to other contexts</li> <li>d. Implications for practice, further study, suggested next steps</li> </ul>
Funding	Acknowledge any funding that supported this work

### DESIGNS

Quality Improv	Research	
Non-Experimental	Quasi-Experimental	Experimental
Measure outcomes Before and after program Participants only No control group	No randomization Measure outcome -study participants -nonstudy participants (control)	IV-Treatment <u>manipulated</u> Participants <u>randomized</u> to treatment or control Compare outcomes
TNCC Class pre vs post test	TNCC class vs ICU nurses	100 RNs randomized to -in person TNCC class -on line TNCC class
Weak causal inferences	Moderate causal inferences	Strong causal inferences
	Increasing Rigor	

# Study Designs

# Statistical Process Control (measurement over time) Time Series Design

- Plotting measurements over time turns out, in my view to be one of the most powerful devices we have for systemic learning.
- If you follow only one piece of advice from this lecture, pick a measure you care about and begin to plot it regularly over time.
- Don Berwick, MD
- Plenary Speech Institute for Healthcare Improvement (IHI)

#### **Donald Berwick**



Former Administrator of CMS Former President of IHI (Institute for Healthcare Improvement)

## **TIME SERIES DESIGN**



## Run Charts

- Graphical display of data in time sequence
- Considered the simplest of QI graphs
- Data are plotted in time order with median
- Used to identify process improvement or degradation
- Interpretation best when >=25 data pts

### <u>Caution</u>:

- Ability to detect data signals visually is limited
- You may think you are seeing a signal (change), when in reality you are seeing normal process variation.



### Primary Uses of Run Charts

- 1. Display data to make process performance visible
- 2. Determine whether a change is an improvement
- 3. Determine whether we are continuing the improvement

### Example Run Chart



Percent Successful Resuscitations by Month

Figure 3. A run chart for successful resuscitation of patients within 1 hour. Each month, 1 point is plotted for the percent successful resuscitations. A median line is drawn to determine if the process has shifted to a new level. In this example, 6 successive points above the median indicate that a new process has been created that is fundamentally improved and stable.

### Control Charts (Shewhart Charts)

- Like run chart, it is a graph displaying how a process changes over time
- Can be created in Excel
- A run chart with upper & lower control limits computed from existing data
- Control limits help focus your review to find areas of concern
- When a data point violates upper or lower limits, it's called special cause



### Example Control Chart





Figure 4. A control (Shewhart) chart for successful resuscitation of patients within 1 hour. Each month, 1 point is plotted, and once 10 to 20 points are available, the control chart software can define expected limits of variation (± 3 standard deviations [SDs] for the distribution type). The point in July 2015 is above the upper control limit and suggests that something unusual occurred that month (in this case, something good), which should be investigated to determine what led to system improvement.

### **Control Charts**

- Control charts help differentiate variability
- Serve as early warning system
- <u>Common cause variability (normal) vs special cause variability (due to an event)</u>
- The control chart provides a formal way to decide whether observed variation is attributed to changes made or to other causes of variation in the system



#### FIGURE 4.7 Depicting Variation Using a Run Chart Versus a Shewhart Chart

### Pareto Charts

- Vertical bar chart -values are plotted in categories in decreasing order
- Helps focus improvement efforts and is a manifestation of the 80/20 rule
- 80% of problems are related to 20% of the categories
- Ex: Problems, errors, defects, adverse drug events, patient complaints, are organized into categories or classifications



#### FIGURE 4.36 Example of Pareto Chart

# Posters

## Poster Tips

### Tell a story

### Simple is better

- Flow: L $\rightarrow$ R, Top $\rightarrow$ Bottom
- White space up to 40%
- Minimal text
- Left justified
- Bullets
- Readable from 6 feet (>24pt)
- Limit fonts

- Background: White
- Use of color
  - Limit to 3-5
  - Avoid too bright or those print poorly
- Titles: concise, interesting
- Charts/Figures
  - Simplify
  - Titles
  - Arrows to guide reader

# Poster Tips

- QR code
  - Link to abstract, paper, website
- Apps Linked to Videos
  HP Reveal, DAQRI
- Handouts
  - Pocket size versions of abstract
  - Pocket of business cards

### • Format

- Paper vs Fabric vs Electronic
- Continued Sharing
  - Online open-access repository (figshare)
  - Websites (ResearchGate)
- Display poster trauma hallway
- Include poster presentation on CV

#### **Title** Authors

#### Intro



#### Methods



#### Results



#### Discussion

More research is needed, but...





Main finding goes here,translated into plain english.Emphasize the importantwords.



Extra Tables & Figures



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### Anatomy of a *#betterposter*.



Concentrated summary of your intro, methods, and results that can be skimmed in 1-5 minutes. Located intentionally far away from the presenter's personal space. For when an attendee wants more detail but the presenter is busy (or they just don't feel like interacting).

**WHY:** Centralizing and succinctly summarizing the study details in a single column is fast & easy to scan without having to hunt around the poster for each section.



Title



Discussion

Main finding goes here, translated into plain english. Emphasize the wopgstant

#### QR Code to full paper

Point your phone camera at this and instantly download the full paper, a copy of the poster, the presenter's contact details...and/or even the dataset powering the study.

#### Main finding

Take a picture to download the full

The key 'takeaway' of the study is central, translated into plain english. Research on usability writing suggests that casual language is interpreted faster than formal language.

#### Focus area

Hardly "wasted", negative space maximizes signal-to-noise ratio and helps attendees quickly find the takeaway.

**Extra Tables** 

& Figures

#### Ammo Bar

For all the figures and tables that you feel like you need to be able to point to if somebody asks you a hard question. Leave it messy! It's just for you to reference.

#### WHY:

1. Lets you get the worries out of the way, so you can focus the rest of the poster on clearly communicating the need-toknow info to attendees.

2. Keeps the detail you need for questions closest to where you're standing, so you don't have to reach across the poster and block the view.



## Central Layout



How Should Social Media Be Used in Transplantation? A Survey of The American Society of Transplant Surgeons



Stronger belief in social media's influence on living organ donation associated with ASTS members who:



Are younger



Have fewer years of experience in the field

Henderson et al., Transplantation, April 2018

Follow us @TransplantJrnl



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### 10 Tips for Writing

- 1. Journal selection
- 2. Author guidelines
- 3. Find similar articles
- 4. Organize thoughts (cards, bullets)
- 5. Organize Tables and Figures first
- 6. Simple sentences, correct tense
- 7. One idea per sentence, passive voice
- 8. Edit, Edit, Edit
- 9. Don't plagiarism
- 10. Proofread and revise
- 11. Have others read your paper
- 12. Read and be responsive to reviewer comments



#### American Journal of Infection Control 46 (2018) 758-63



Contents lists available at ScienceDirect

#### American Journal of Infection Control

journal homepage: www.ajicjournal.org

Major Article

#### Effectiveness of a bundled approach to reduce urinary catheters and infection rates in trauma patients



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Key Words: Catheter-related infections urinary catheters urinary tract infections infection **Background:** Catheter-associated urinary tract infections (CAUTIs) are common nosocomial infections. In 2015, the Centers for Medicare and Medicaid Services began imposing financial penalties for institutions where CAUTI rates are higher than predicted. However, the surveillance definition for CAUTI is not a clinical diagnosis and may represent asymptomatic bacteriuria. The objective of this study was to compare rates of urinary catheterization and CAUTI before and after the implementation of a bundled intervention. **Methods:** This retrospective review evaluated trauma patients from January 2013-January 2015. The bundled intervention optimized the urinary catheterization process and culturing practices to reduce false positives. The CAUTI rate was defined as a positive surveillance CAUTI divided by total catheter days multiplied by 1,000 days.

**Results:** A total of 6,236 patients were included (pre: n = 5,003; post: n = 1,233). Fewer patients in the post bundle group received a urinary catheter (pre: 25% vs post: 16%; P < .001). After bundle implementation, the CAUTI rate reduced over one third (pre: 4.07 vs post: 2.56; incidence rate ratio, 0.63; 95% confidence interval, 0.19-2.07).

**Conclusions:** Although the number of patients exposed to urinary catheters and catheter days was decreased, optimization of culturing practices was essential to prevent the CAUTI rate from increasing from a reduced denominator. Implementation of a CAUTI prevention bundle works synergistically to improve patient safety and hospital performance.

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## Reducing Use of Restraints in Intensive Care Units: A Quality Improvement Project

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<u>BACKGROUND</u> Use of physical restrainst is scrutinized in intensive care units today. Usage rates for the 5 intensive care units in the Christiana Care Health Services, Newark, Delaware, were higher than the National Database of Nursing Quality Indicators mean rate of 9.61% to 15.43% for many months during fiscal years 2013 and 2014.

<u>OBJECTIVE</u> To reduce and sustain the restraint rates to less than the national database mean rates for all 5 intensive care units.

<u>METHODS</u> A quality improvement process was used that included forming a multiunit restraint collaborative; reviewing restraint data, including self-extubation rates; surveying staff nurses to examine alignment with evidence-based practice; and selecting a new restraint-alternative product.

<u>RESULTS</u> All 5 intensive care units were able to successfully decrease restraint rates to less than the national database mean for the majority of the months since the start of the restraint collaborative in September 2012.



Figure 1 Mean restraint rate in the medical intensive care unit versus mean rate of the National Database of Nursing Quality Indicators (NDNQI) for fiscal years 2013 through 2015.



Figure 2 Mean restraint rate in the medical-surgical intensive care unit versus mean rate of the National Database of Nursing Quality Indicators (NDNQI) for fiscal years 2013 through 2015.

### Preventing **Catheter-Associated Urinary Tract Infections** in the Pediatric Intensive Care Unit

Megan D. Snyder, MSN, RN, ACCNS-P, CCRN Margaret A. Priestley, MD Michelle Weiss, BSN, RN Cindy L. Hoegg, BSN, RN, CIC Natalie Plachter, MSN, RN, CPNP Sarah Ardire, BSN, RN, CCRN Allison Thompson, MSN, RN, RD, CRNP

<u>BACKGROUND</u> Catheter-associated urinary tract infections are common health care–associated infections and have been associated with increased mortality, morbidity, length of stay, and cost. Prevention strategies are grouped into bundles focused on reducing unnecessary catheter use and promptly removing urinary catheters. Before intervention in the study institution, no urinary catheters were unnecessarily used and compliance with the catheter-associated urinary tract infection bundle was 84%.

<u>OBJECTIVE</u> To increase bundle compliance by using targeted rounds specifically focused on eliminating dependent loops in drainage tubing and ensuring appropriate catheter use to reduce the incidence of catheter-associated urinary tract infections.

METHODS A multidisciplinary team was formed to identify misperceptions, highlight best practices, and eliminate barriers to success over 1 year in a single pediatric intensive care unit. The team completed a quality improvement project of daily targeted rounding for patients with an indwelling urinary catheter. The goals were to assess appropriateness of catheterization, increase bundle compliance, and decrease catheter-associated urinary tract infection risk. Targeted rounds were conducted in addition to the medical team rounds.

<u>RESULTS</u> Bundle compliance supported by targeted rounding increased from 84% to 93% and helped reduce the overall catheter-associated urinary tract infection rate from 2.7 infections per 1000 catheter-days at baseline to 0. This change was sustained for 1 year.

CONCLUSION Targeted rounding for pediatric patients with an indwelling urinary catheter is an effective



Figure Catheter-associated urinary tract infection (CAUTI) rate (left axis) and bundle compliance (right axis) in the pediatric intensive care unit, calculated monthly from July 2014 through June 2017.

#### Reduction in Venous Thromboembolism Events: Trauma Performance Improvement and Loop Closure Through Participation in a State-Wide Quality Collaborative

David A Machado-Aranda, MD, FACS, Jill L Jakubus, PA-C, MSc, Wendy L Wahl, MD, FACS, Jill R Cherry-Bukowiec, MD, MSc, FACS, Kathleen B To, MD, FACS, Pauline K Park, MD, FACS, Krishnan Raghavendran, MD, FACS, Lena M Napolitano, MD, FACS, Mark R Hemmila, MD, FACS

- **BACKGROUND:** The Michigan Trauma Quality Improvement Program (MTQIP) is a collaborative quality initiative sponsored by Blue Cross Blue Shield of Michigan and Blue Care Network (BCBSM/BCN). The MTQIP benchmark reports identified our trauma center as a high outlier for venous thromboembolism (VTE) episodes. This study outlines the performance improvement (PI) process used to reduce the rate of VTE using MTQIP infrastructure.
- **STUDY DESIGN:** Trauma patients admitted for > 24 hours, with an Injury Severity Score (ISS)  $\ge 5$ , were included in this study. We performed a preliminary analysis examining prophylaxis drug type to VTE, adjusted by patient confounders and timing of first dose, using MTQIP data abstracted for our hospital. It showed that patients receiving enoxaparin had a VTE rate that was half that of those receiving unfractionated heparin (odds ratio 0.46, 95% CI 0.25 to 0.85). Guided by these results, we produced the following plan: consolidation to single VTE prophylaxis agent and dose, focused education of providers, initiation of VTE prophylaxis for all patients—with clear exception rules—and dose withholding minimization. Results were monitored using the MTQIP platform.
- **RESULTS:** After implementation of our focused PI plan, the VTE rate decreased from 6.2% (n = 36/ year) to 2.6% (n = 14/year). Our trauma center returned to average performance status within MTOIP



**Figure 2.** Stepwise phase implementation of venous thromboembolic event (VTE) Action Plan at the University of Michigan Trauma Service showed a favorable outcome in VTE rates. (A) Impact on crude VTE rates per Michigan Trauma Quality Improvement Program (MTQIP) feedback reporting period. (B) Risk-adjusted observed-to-expected VTE (O/E) ratio of performance of the University of Michigan within the MQTIP collaborative. Light gray box, investigation phase, design, education, and promotion; gray box, implementation of VTE Action Plan. \*p < 0.05 logit-MTQIP analysis.

#### Evaluation of a Practice Improvement Protocol for Patient Transfer From the Emergency Department to the Surgical Intensive Care Unit After a Level I Trauma Activation

Authors: Sarah Stankiewicz, BS, Craig Larsen, MD, Francesca Sullivan, BSN, RN, Cristina Zullo, MSN, RN, CCRN, Suzanne and Miroslav Kopp, DO, Flushing, NY

#### **CE** Earn Up to 8.0 Hours. See page 231.

#### **Contribution to Emergency Nursing Practice**

- The purpose of this practice improvement project was to improve the transfer time from the emergency department to the surgical intensive care unit after a level I trauma activation.
- The primary outcome of this practice improvement project was a statistically significant reduction in time to transfer and subsequent patient throughput time.
- Key implications for emergency nursing practice based on this project are that efficient patient throughput is possible through the efforts of a multidisciplinary

**Methods:** In an attempt to improve patient flow time spent in the emergency department requiring admission to the surgical intensiv (SICU), the emergency department, trauma SICU collaborated on a guideline. The protoco focused on level I trauma-activated patients admitted directly from the emergency depart SICU. We compared the transfer times before was initiated (January 1, 2016 to December 31 the transfer times after initiation (January December 31, 2017) using a paired Students' outcome variables analyzed were hospital a





# Questions