HARDWIRING TEAMSTEPPS INTO TRAUMA RESUSCITATIONS: OPTIMIZING TAR HEEL TRAUMA CARE

AHA Team Training Monthly Webinar
October 10, 2018
RULES OF ENGAGEMENT

Audio for the webinar can be accessed through your computer or through the phone

• **Please note:** Today’s presentation will include several videos. The audio of the videos will be played through the computer speakers. If you are dialed into the audio conference, please choose the drop down arrow located beside the speaker icon at the top of the webinar platform and select mute conference audio only.

A Q&A session will be held at the end of the presentation. Written questions are encouraged throughout the presentation and will be answered during the Q&A session

• To submit a question, type it into the Chat Area and send it at any time during the presentation
“Gaming in TeamSTEPPS: Where to Begin?”
November 9, 2018 | Orlando, FL | $400 registration fee

Learn how TeamSTEPPS tools can be applied to a group of activities to develop and implement team strategies that will achieve the successful transfer of knowledge. This specialty course is designed around active participation and is meant to provide TeamSTEPPS facilitators with alternative ways to deliver in-person TeamSTEPPS training and education.

Click Here to Register
Grab your cowboy boots and block your calendar - AHA Team Training is heading to San Antonio next June for our annual conference! We'll be sharing more conference information over the coming months, but first get ready to answer our Call for Proposals. Registration will open in January 2019.
UPCOMING TEAM TRAINING EVENTS

We have spots available in our Master Training Courses:

• November 8-9 in Durham, NC with Duke University
• December 6-7 in New Orleans, LA with Tulane University

Two more free webinars in 2018:

• November 14: “Improving TeamSTEPPS in Medical Education: A Student-Veteran Inspired Initiative to Improve Behaviors and Understand Barriers” with Rick Land and Tom Kuriakose, medical students at Rutgers University Robert Wood Johnson Medical School
• December 11: “Taking Stepps to Sustain a Just Culture” with Lynn Fricke, MPS, RN and Ronnie McKinnon RN, JD, CPHRM, CPSO, CPPS, Adjunct Professor Health Law, Loyola Law School, Beazley Institute for Health Law and Policy
CONTACT INFORMATION

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Email: TeamTraining@aha.org
Phone: 312-422-2609
TODAY’S PRESENTERS

Daryhl Johnson II, MD MPH FACS
Adult Trauma Medical Director
UNC School of Medicine

Elizabeth Schroeder, RN BSN TCRN CEN
Emergency Preparedness Coordinator
UNC Hospitals

Alberto Bonifacio RN BSN MHA CEN
Trauma Program Manager
UNC Hospitals
Monday Afternoon, September 2016
trauma

NOUN
Injury to human tissues and organs resulting from the transfer of energy from the environment
Objectives

1. Discuss how TeamSTEPPS and Kotter’s Model was effectively applied to conduct a multi-disciplinary, large-scale quality improvement project to improve trauma resuscitations.

2. Describe how simulation can be used to hardwire TeamSTEPPS into processes by model new processes, probe for systems gaps, and educate teams in teamwork, communication, and leadership.

3. Explore how our methodology can be used to improve performance of other crisis teams and conduct research in situational awareness.
Optimizing Tar Heel Trauma Care

BACKGROUND
- Improve adherence to trauma process
- Provide more trauma education
- Establish pre-arrival huddle

Ineffective Communication
- Electronic documentation problematic

Ineffective leadership
- Observers Disruptive

Trauma process not followed
Optimizing Tar Heel Trauma Care

METHODS
The UNC Institute for Healthcare Quality Improvement (IHQI) Seed Grant Program promotes the development of experience and expertise in quality improvement at UNC Hospitals, Faculty Physician practices and Physician Network practices.
Improve the consistency, reliability and efficiency of trauma resuscitation through the implementation of a standardized process in the Emergency Department.

- **Consistent Patient Assessment following ATLS @ UNC guidelines**
- **Consistent Education and Training**
- **Direct Observation and Performance Feedback**
- **Focus on Teamwork, Communication and Leadership**
- **Uniform Trauma Bay Preparation**
Consistent Patient Assessment following ATLS @ UNC guidelines

Direct Observation and Performance Feedback

Focus on Teamwork, Communication and Leadership

Uniform Trauma Bay Preparation

**Tar Heel Trauma Critical Path**

- **TRAUMA CAPTAIN**
  - Lead Team Huddle

- **AIRWAY PHYSICIAN**
  - Takes Report
  - Airway ▶ Breathing ▶
  - Circulation ▶ Disability ▶
  - Back

- **BEDSIDE PHYSICIAN**
  - Head to Toe*
    (Airway Physician May Help with Head)
  - Lead Shared Mental Model

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ATLS®
ADVANCED TRAUMA LIFE SUPPORT®
STUDENT COURSE MANUAL

V. 20190702
POC: carlhealtrauma@chhealth.unc.edu

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UNC HEALTH CARE

Tar Heel Trauma
Tar Heel Trauma Resuscitation Process

Phase: Sign-in / Preparation / Huddle

- Lead Team Huddle
- Takes Report
- Prep: airway equip, suction
- Prep resusc. equip
- Pre-report Manage Prep. Asst. Team Huddle
- Prep: IV, IVF, Bair Hugger, Meds
- Prep: Monitor, O2, Bed, Foley
- Prep Vent
- Pre-set Plates

Phase: Patient Arrival / Report Timeout

- Patient Comfort
- Assists Transfer
- Patient Comfort
- Assists Transfer
- VS (Manual BP)
- E Expose Pt Monitor
- Rectal temp.
- LSB Rectal Temp
- Secures ETT

Phase: Identify and Fix Shock

- Directs Interventions
- Determines Disposition
- A ▶️ B ▶️ C ▶️ D*

- Directs RN Care
- Documents
- VS q5; Blankets; Bair Hugger
- Asst. with Airway Breathing
- Chest X-ray
- Pelvis X-ray
- Rectal temp.
- LSB Rectal Temp
- Secures ETT

Phase: Secondary Survey

- FAST
- Other Procedures
- Log Roll
- Back
- Head to Toe*

- Directs RN Care
- Documents
- PIVx2; IVF; Blood; Meds
- PIVx2; IVF; Blood; Meds
- PIVx2; IVF; Blood; Meds
- PIVx2; IVF; Blood; Meds
- PIVx2; IVF; Blood; Meds

Phase: Disposition / Prepare for Transport

- Lead Shared Mental Model
- HUC and Family
- Prepare for Transport
- Prepare for Transport
- Prepare for Transport
- Prepare for Transport
- Prepare for Transport
- Prepare for Transport
- Prepare for Transport

* Airway Physician may assist with assessment of head per Bedside Physician / Trauma Captain
Optimizing Tar Heel Trauma Care

GUIDING PRINCIPLES
Combining QI Methodology
Guiding Principles: Kotter In Action

- Create a new culture
- Don’t let up—Be relentless
- Short-term wins
- Empower others
- Understanding & buy-in
- Develop a change vision & strategy
- Build the guiding team
- Create sense of urgency
Guiding Principles: Kotter In Action

“TQIP* benchmark rankings in the lower 50% for patients in shock”

I feel we provide the highest quality nursing care for trauma patients.

SENSE OF URGENCY IS DIFFERENT TO DIFFERENT PEOPLE
Guiding Principles: Kotter In Action

STAKEHOLDER ANALYSIS / CORE TEAM / VOICE OF PATIENT
Guiding Principles: Kotter In Action

Process modeling using in situ high fidelity simulation
Guiding Principles: Kotter In Action

- SUSTAIN WITH SIM
- OBSERVE SUPPORTIVELY
- DONUT POWER!!
Guiding Principles: Kotter In Action

STORIES, PRIDE AND OWNERSHIP MATTER
Teamwork, Communication and Leadership

Each individual behaviour will improve teamwork and performance

“Perceived rudeness is the KILLER of Teamwork”

Lead by calm example – emotions are contagious

Courage is grace under pressure.
- Ernest Hemingway

MEANS TO AN END

- **CUS:** “I’m Concerned...I’m Uncomfortable...STOP, this is a Safety Issue”
- **I NEED CLARITY:** Use when message is not 100% understood or received
- **2 CHALLENGE RULE:** Tactfully voice concern twice, then utilize chain of command

Language
Guiding Principles: “Just Try It”

<table>
<thead>
<tr>
<th>Year 1 (Pre-Grant): Pilot</th>
<th>Year 2 (Grant Cycle): Small Tests of change and Building Improvement Capacity</th>
<th>Years 3-5: Expansion</th>
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<tbody>
<tr>
<td>TARHEEL TRAUMA</td>
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Guiding Principles: “Just Try It”
Making It Stick

HARDWIRING
**Type in Chat**

**TOOLS and STRATEGIES**

**Communication**
- SBAR
- Call-Out
- Check-Back
- Handoff

**Leading Teams**
- Brief
- Huddle
- Debrief

**Situation Monitoring**
- STEP
- I'M SAFE

**Mutual Support**
- Task Assistance
- Feedback
- Assertive Statement
- Two-Challenge Rule
- CUS
- DESC Script

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"Perceived rudeness is the KILLER of Teamwork"

Lead by calm example – emotions are contagious

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"Courage is grace under pressure."

- Ernest Hemingway
Code Stork – Trauma Bay

Mon, Oct 9, 7:33 AM

Adult Red
SIMULATION 28 yr F High Speed MVC. 7mos pregnant rigid abdomen, bruising to chest. ETA 6 min ED room 2

Mon, Oct 9, 9:47 AM

Adult Yellow 19 Y F
transfer MVC Rt tib/ fib fx, ltr Elbow FX GCS 15 VSS ED
Code Stork Real Time Debrief (VIDEO)
Adult Trauma Positions

**ROLES**
- Emergency
- Surgery
- Support
- OB GYN
- NICU

**Emergency**
- ED Attending
- Airway MD
- RT
- Secondary RN (T2)
- NICU Resident
- NICU Attending
- NICU RN
- NICU Resident
- RRT
- Charge RN
- Primary RN (T1)
- NNP
- NNP
- NNP
- NNP

**Surgery**
- Air Care/EMS
- Air Care/EMS
- OB Attending
- Trauma Attending
- Procedure Physician
- OB Attending
- OB Resident
- OB Nurse
- OB Nurse
- Pharmacy
- Nursing Assistant
- Bedside Physician
- Trauma Captain

**Support**
- X-Ray 1
- X-Ray 2
- OB Attending
- OB Nurse
- OB Nurse
- OB Nurse
- OB Nurse
- OB Nurse
- OB Resident
- OB Resident

**OB GYN**
- OB Attending
- OB Nurse
- OB Nurse
- OB Nurse
- OB Nurse
- OB Nurse

**NICU**
- NICU Attending
- NICU RN
- NICU RN
- NICU RN
- NICU RN
- NICU RN
- NICU RN
- NICU RN

Hot Line

- HUC
- UNC PD
- Chaplain
- Air Care/EMS
- Air Care/EMS
- Air Care/EMS
- Charge RN
Debrief

“Perceived rudeness is the KILLER of Teamwork”

Lead by calm example – emotions are contagious

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TOOLS and STRATEGIES
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Language
RESULTS

Optimizing Tar Heel Trauma Care
Decreased Time to Log-Roll

INTERVENTION:
Lecture and Sim with Surgery

Reasons for time > 10 minutes

1. Only RN and ED Resident initially present; requires more staff for safe log-roll
2. Providing additional comfort measures to the patient prior to log-roll
3. Resuscitation is lacking defined leadership and direction
4. Delays in obtaining vital signs, which are required prior to log-rolling
**Decreased Time to Chest X-ray**

Reasons for delays

1. Obtaining central access on a critical patient
2. Change in radiology leadership and need for more education

**INTERVENTION:** Implementation of Radiology Stretchers
Sustainment of Tar Heel Trauma Standardized Process: Nineteen Months Later

- **Pre-Implementation**
- **Post-Implementation**
- **Sustainment (Nineteen Months Later)**

<table>
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<tr>
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<th>Post-Implementation</th>
<th>Sustainment (Nineteen Months Later)</th>
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<tbody>
<tr>
<td>Sequential Primary</td>
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<tr>
<td>Pre-arrival huddle</td>
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<tr>
<td>X-Ray w/ in 5 min</td>
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<tr>
<td>Vitals w/ in 5 min</td>
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<tr>
<td>Followed Leader</td>
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Preliminary Data: 24 months (N=12)
“I wanted to reach out to you because I remember the trauma/code stork simulation we did several months ago (while I was still in the ED) and I feel like that experience helped immeasurably with this one.

Overall, despite many teams and moving parts, this trauma ran extremely smoothly, communication was great, and teamwork was truly outstanding.”

Megan K. Seston, MSN, RN, CCRN-CMC, CEN | Nursing House Supervisor
Nursing Staffing Systems
UNC Hospitals
Eye Tracking in Trauma
Leadership and Teamwork in Trauma

Resident 1

Resident 2

Fellow
EHR in Trauma Documentation

ED Trauma Documentation Omissions
Blue - PreEPIC - July to December 2013
Red - PostEPIC July to December 2016

[Graph showing data]

[Heatmaps showing documentation omissions]
Eye Tracker Footage

(VIDEO)
Expanding QI Capacity: Geriatrics

GERIATRIC WORK GROUP

Pre-hospital
UNC Hospitals
Post Discharge
Prevention

Phase II
Phase I
Phase III
Phase II
Thank You!

We Are Tar Heel Trauma

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STAY IN TOUCH!

Visit [www.aha.org/teamtraining](http://www.aha.org/teamtraining) or email us at teamtraining@aha.org!