HATRICC: HANDOFFS AND TRANSITIONS IN CRITICAL CARE, A STUDY FOR THE IMPROVEMENT OF PATIENT CRITICAL CARE

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WHAT IS A HANDBOFF?

The Patient

The OR Provider

The ICU Provider

The Patient
A BETTER PICTURE
WHAT IS A HANDOFF?

- Transition of responsibility for patient care from one provider to another in the healthcare system
  - Types of handoffs:
    - ICU to OR
    - OR to PACU
    - Radiology to ICU
    - Physician to another Physician
    - ER to ICU, etc.

- HATRICC focuses on OR to ICU handoffs
WHY ARE HANDOFFS IMPORTANT?

- Handoffs in critical care play a huge role in the continuation of care, quality of care, reduction of risks and errors, and the protection of patients to avoidable harm that they might be susceptible to while in the ICU.

- Sentinel Events

- Previous literature is limited and it’s been only recently that research has began in this field.
WHY OR TO ICU HANDBOFFS?

- Potential problems
  - Transfer of patient
  - Transfer of technology
  - Communication

- Consequences
  - Injury
  - Medication errors
  - Function

“YOU ARE FREE TO CHOOSE, BUT YOU ARE NOT FREE TO ALTER THE CONSEQUENCES OF YOUR DECISIONS.”

~Ezra Taft Benson
PREVIOUS LITERATURE

- Has shown that about 80% of sentinel events can be attributed to miscommunication and errors when a patient is changing providers.

- Some measured handoff quality based on aspects of handoff such as the transfer of technology.

- Not enough information about clinical outcomes to make definitive conclusions.

- Recommended more research, broader population, and other delivery formats.

- Sample sizes too small to produce statistical significance.
PREVIOUS LITERATURE

- Standardization of the handoffs increase information transfer
- Time for handoff tends to trend downwards following standardization
- State a gap in the literature relating handoff quality to clinical outcomes
- Needed more varied surgical population.
RELATIONSHIP BETWEEN HANDOFFS AND PATIENT OUTCOMES

Teamwork

Communication

Appropriate care
Continuity of care
Provider outcomes

Patient outcomes
WHAT IS HATRICC?

Sorry...
WHAT IS HATRICC?

- HATRICC stands for “Handoffs and Transitions in Critical Care
  - Three goals:
    - 1. Understand current critical care handoff practices
    - 2. Develop best practices for critical care handoffs
    - 3. Implement handoff improvement interventions
UNDERSTANDING THE CURRENT PROCESS

Observations:
We will directly observe bedside OR-to-ICU handoffs

Chart reviews:
We will review patient medical records to understand what information is and is not transmitted during handoffs

Focus groups, interviews:
We will talk to clinicians about their impressions of the current handoff process

needs assessment

ADAPTATION, SIMULATION, IMPLEMENTATION

Adaptation:
Working with ICU clinical leadership, we will customize published processes and tools to meet the needs of each ICU

Simulation:
We will test the customized process with small groups of clinicians to determine whether the process works

Implementation:
We will work with ICU clinical leadership to roll out the new handoff process

quality improvement

STUDYING THE NEW PROCESS

Observations:
We will directly observe bedside OR-to-ICU handoffs

Chart reviews:
We will review patient medical records to understand what information is and is not transmitted during handoffs

Focus groups, interviews:
We will talk to clinicians about their impressions of the new handoff process

evaluation
IMPLEMENTATION

- Involved clinicians and introduced them to the process

- Our role:
  - Resource for anyone with questions about HATRICC
  - Received feedback from staff/clinicians regarding the new process
  - Gave out gift cards and candy!
POST-OP HANDOFF PROCESS

1. Introductions of providers led by primary nurse

2. Stabilization of patient in ICU room, mechanical ventilation resumed

3. Transfer of monitors by secondary nursing staff

4. Huddle of Providers: surgery, anesthesia, primary nurse, ICU provider. Nurse asks if everyone is ready for handoff

5. Surgery: patient identifiers, past medical history, procedure, intraoperative events, lines/tubes/drains

6. Anesthesia: anesthetic, airway issues, hemodynamic issues, ins and outs

7. ICU provider: leads systems-based discussion of immediate postoperative concerns

8. Short Physical Examination of Patient

9. Exchange of Contact Information

10. Questions

POST-OP HANDOFF INFORMATION

who

- PATIENT NAME:
- DATE OF BIRTH/AGE:
- SURGEON:
- ANESTHESIOLOGIST:

what

- PROCEDURE & DATE:
- DRAINS/LINES:
- PATIENT HISTORY:
- SURGERY CONTACT:
- ANESTHESIA CONTACT:
- FAMILY CONTACT:

plan

- OUTS

allergies

- INS

contact

Penn Medicine

Handoffs and Transitions in Critical Care (HATRICC)

For questions, feedback, or more information please contact:
HATRICC@uphs.upenn.edu | www.HATRICC.com
NO CUTTING CORNERS

- Interviews/focus groups
- Perspectives on each phase
- Online Qualtrics Surveys
- RedCap
- Open-ended questions
- ICU Handoff Tool
THE OPERATING ROOM (OR)

- Location of surgical operations

- Many hands involved
  - Composed of:
    - Surgery team
    - Anesthesia team
    - Both have different goals
    - Don’t always communicate
THE INTENSIVE CARE UNIT (ICU)

CONSIST OF:

- Physicians (i.e. Attending, Fellows, and Residents)
- N.Ps – Nurse Practitioners
- P.As – Physicians Aides
- R.Ns – Registered Nurses

TYPES OF ICU:

- TSICU
- SICU
- HVICU (etc…)
- Specific to patient’s needs
WHERE WE WORKED

**Hospital of University of Pennsylvania**

- Rhoads 5 SICU
- Different services
- Green/Gold teams

**Pennsylvania Presbyterian Medical Center**

- TSICU/HVICU
- Smaller/Newer
- Level 1 Trauma
- Neuro patients
- Culture change
OUR JOB AS OBSERVERS

- We worked in the TSICU in PPMC and in the SICU at HUP Rhoads 5.

- Tasks:
  - Phase 3 of the Project
  - We observed the handoffs from the OR to the ICU
    - Focused on both content and the actions of the “Big Four”:
      - Anesthesia representative, Surgery Representative, ICU Physician, ICU RN
  - Collected qualitative and quantitative data
WHAT WE USED

Create a new REDCap Project

You may begin the creation of a new REDCap project on your own by completing the form below and clicking the Create Project button at the bottom.

Project Title:

Title to be displayed on project webpage

Purpose of this project:

How will it be used?

-- Select One --

Design your project:

STEP 1: Choose the type of project you want to build

- Single Survey
- Data Entry Forms (e.g., traditional database)
- Single Survey + Data Entry Forms
  (e.g., pre-screening survey with follow-up data capture)

STEP 2: Choose collection format for data entry forms

- Classic (each form available for use once for each subject/record)
- Longitudinal / repeating forms (each form available for use one or more times for each subject/record)

Enable the scheduling feature? (select one)
Handoff observation open-ended questions
Do not feel limited to these probes! Include any information that you think is relevant.

(Before discussion)

1) **Describe the interactions between handoff participants.** (Did people seem to know each other? How do you know? Did the participants use each other’s names? Were people paying attention? How do you know?)

2) **Describe provider engagement with the new process.** (Did the participants seem interested, engaged, paying attention? How do you know?)

3) **Describe the actors in the handoff scene.** (Who was present? What was their role? How do you know what each person’s role was? Consider body language, attire, interactions with others.)

4) **How was handoff information relayed?** (How was the information organized? How would you describe the communication styles used? How much information was offered by handoff provider vs. prompted by recipient?)
TIME FOR YOU TO GET TO WORK

- **Task:**
  - Take note of:
    - Focus on the info
    - Who is who
    - Body language
VIDEO SIMULATION
REPORT

Follow-up Questions:
• What did you see?
• Anything stand out to you?

CONGRATULATIONS
YOU DID A GREAT JOB!
When comparing observed handoffs in the ICU that use the HATRICC standardized process to handoffs in ICU’s that do not have any standardized process:

- It is evident that the handoffs with the HATRICC standardized process seem to omit less critical patient information
- Those handoffs with the standardized process also appear to result in overall better teamwork between different clinical teams
- Clinicians seem to be satisfied with the new process, as it makes the handoff more efficient and easier for them when compared to the unstandardized handoffs

There may be a possible correlation between teamwork and communication rating and number of questions
THE FUTURE OF THE STUDY

- Observations will continue to be recorded until the ideal sample size is reached before reaching thematic saturation.

- We will also be providing immediate feedback to the participating clinicians about their strengths and weaknesses during handoffs.

- After the observations and chart reviews are finished, we will conduct more focus groups and interviews with various clinicians to assess their opinion on the new HATR ICC process.

- We will also compare the results of the effectiveness of HATR ICC in improving clinical outcomes for patients (HATR ICC is the only study to look clinical outcomes for patients thus far!)

- For more information or to follow the study, you can visit: http://www.hatricc.com/
REFLECTIONS
THANK YOU

- Dr. Lane-Fall
- Joanne Levy
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- Laura Di Taranti (Project Manager)
- The rest of the HATRICC Team
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- Penn Medicine
- Anesthesia and Critical Care