A Process Model for Handovers
Aligning with the Consensus

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Failures in communication are the most common root cause for near misses and adverse events in the medical domain.
Handovers as an ubiquitous teaming activity

- Handoffs occur frequently and are a source of resilience and error
- Handoffs are a team activity
  - At least two individuals who are acting interdependently towards a shared goal
  - Specifically, the sharing/updating of a mental model in regard to a patient’s status
- There is little to no work surrounding handoffs that focuses on the important aspects of teamwork
- Therefore, this talk addresses this gap and attempts to propose a theoretical model for teamwork during care transitions
TEAMWORK

Skills
Goal
Vision
Communication
Research
Creativity
Collaboration
Leadership
Become a High Performing Team

- Use closed loop communication
- Develop shared mental models
- Provide backup behavior
- Be assertive
- Seek feedback
- Demonstrate collective orientation
- Be flexible and adaptable
- Self correct
IMOI Teamwork Model for Handovers
IMOI Teamwork Model for Handovers
Tools

• The cognitive aids and technologies used to support cognitive work surrounding handoffs
  • Checklists/protocols
  • Mnemonic devices
  • EMRs
### Handoff Protocol Examples

#### Background
- **Situation:** I am (name), a nurse on ward X. I am calling about (child X).
- **Demographics:** Age, sex, weight, allergies.
- **Patient Summary:** History, chief complaints, diagnosis.
- **Current Issues:** Code status, events, condition.
- **Labs and Tests:** Cultures, labs, tests, results.
- **Medication:** Medication, blood products, new medication.
- **Pulm/CV/Neuro:** Pulse, blood pressure, respiratory and mental status.
- **FEN/GI:** Fluids, diet, input/output, nutrition.
- **Access:** Foley, chest tube, IV, Drain.
- **Social:** Education needs, requests, family support, primary language.
- **As needed:** Surgery details, procedures, consults, evaluation, treatments, clarifying information.
- **Plan:** Plan of care and discharge plan.

#### Flex 11

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<th>35 Mnemonic Devices</th>
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<td>I PASS the BATON</td>
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<td>Just Go Nuts</td>
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More work needs to be done!

- We need to understand other variables that surround the handoff and how they relate to effectiveness of the care transition
  - Team familiarity
  - Hierarchies and power distance
  - Organizational constraints
IMOI Teamwork Model for Handovers
IMOI Teamwork Model for Handovers

[Diagram of the IMOI Teamwork Model for Handovers]

- Inputs: Environment, Organization, Person, Tasks, Tools
- Team Mediators: Communication, Leadership, Coordination, Decision Making
- Outputs: Patient Provider Organization
Other Input Variables
Organization

- Variables that are likely guided by organizational policy and change
  - Handoff audits
  - Handoff education and training
  - Adequate time provided for handoffs
Environment

- Variables that emerge from the busy hospital environment including side conversations, noisy machinery, and alarms
  - Interruptions and distractions should be minimized
  - Consideration should be given to the location
Person

- Variables that are intrinsic to the individuals involved in the handover
  - Interruptions and distractions should be minimized
  - Importance of being present for handover
Tasks

• Variables associated with the complexity, structure, and challenge of various activities conducted throughout one’s work
  • Handoff documentation
  • Read back and verbal synthesis
  • Creation of a “to do” list
Team Process Variables

• The actions and behaviors teams use to achieve their shared goal(s)
Coordination

• Organization of the elements of a team to achieve an effective outcome
  • Presence of all team members
  • Read back critical numerical values and acknowledge all critical items
  • Interactive communication
  • Handoff isn’t over until receiver is ready
Communication

• Act of sharing information either verbally or non-verbally to update mental models and share system states
  • Handoffs should be clear, concise, and interactive.
  • Use of closed-loop-communication should be present
  • Allow one person to speak at a time
  • Leave time for questioning
Decision Making

• Act of using cues to choose a course of action
  • Ensure a shared mental model is achieved
  • Utilization of team cognition for complex decisions
  • Understanding of patient complexity and severity
Leadership

- Act of providing resources and coaching to ensure a team can reach its goals
  - Establish a tone for blame-free communication
  - Act as a role model to demonstrate mutual respect, role clarity, collaboration, and equality of others’ information
  - Understand the importance of shared leadership
Outcome Variables

- Patient
- Provider
- Organization
Areas of Research

• Context/patient specific protocols
• Comparison of protocols to one another
• Creation of protocols “in house” vs use of pre-manufactured protocol