The Handoff Baton –
Teams, Communication and the plan-do-check-act (PDCA) Model

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Learning Objectives

1. Describe the PDCA cycle and its implication to patient safety and handoff communication.
2. Describe the relationship between teamwork and safety.
3. Describe the relationship between situation monitoring, shared mental models, and team effectiveness.

I have no disclosures.
A bad system will beat a good person every time.
- W. Edwards Deming

The Hand-Off:

The Swiss Cheese Model of Accident Causation

High Reliability Organizations
- Nuclear Power
- NASA and Mission Control
- Aviation: Crew Resource Management
  - Air traffic control
  - Carrier flight deck
- Dispatch Services
- Formula One Pit Crews
Calls to Improve Handoff

1. The Joint Commission
2. World Health Organization
3. Institute of Medicine
4. Accreditation Council of Graduate Medical Education

Exchange vs. Hand-Off

An exchange of information doesn’t require that the other person understand what is being transmitted but simply conveys information.

A hand-off implies transfer of information as well as professional responsibility.

Hand-Off Defined by The Joint Commission

"Contemporaneous, interactive process of passing patient specific information from one caregiver to another for the purpose of ensuring the continuity and safety of patient care"

Recognized as a critical, clinical activity - occurring at all levels of the hospital from individual to organizational level.
Sentinel Events

Unanticipated event that results in death or serious physical or psychological injury to a patient and is not related to the natural course of the patient’s illness.

Root Causes of Sentinel Events

- Communication
- Assessment
- Physical Environment
- Information Management
- Operative Care
- Care Planning
- Continuum of Care
- Medication Use
- Special Interventions
- Anesthesia Care

World Health Organization, 2006

prevention of hand-off errors part of "high fives" patient solutions

Institute of Medicine, 2008 re: Residency duty hours

Teaching programs "should train residents in how to hand over their patients using effective communication"
New ACGME Regulations: Duty Hours

Effective as of July 2011
Informed by a landmark Institute of Medicine report released in 2008
Limits shifts for first-year residents to 16 hours or less
Further increases the frequency of Hand-Offs
Also creates a patchwork of coverage systems, including day and night float services when residents care for patients for whom they lack primary knowledge.

New ACGME Regulations: Hand-Offs

Programs and sponsoring institutions must:
Design clinical assignments to minimize the number of transitions in patient care
Ensure and monitor effective, structured Hand-Off processes that facilitate both continuity of care and patient safety
Ensure that residents are competent in communicating with team members in the Hand-Off process
Ensure availability of schedules that inform all health care team members of attending physicians and residents currently responsible for each patient’s care

How Handoffs Relate to ACGME Core Competencies

- Patient Care
- Medical Knowledge
- Practice-Based Learning & Improvement
- Interpersonal & Communication Skills
- Professionalism
- Systems-Based Practice
Hand-Off Challenges

Human Factor Issues
- Stress, fatigue, interruptions, memory load, multitasking

Communication Issues
- Differences in training, relationships, professional hierarchies

Workflow Issues
- Support, organizational culture
Let’s take a test…

Surgeon Information Transfer and Communication
Factors Affecting Quality and Efficiency of Inpatient Care

- Blurred boundaries of responsibility
- Decreased surgeon familiarity with patients
- Diversion of surgeon attention
- Distorted or inhibited communication

Annals of Surgery • Volume 245, Number 2, February 2007

Integration of a Formalized Handoff System Into the Surgical Curriculum
Resident Perspectives and Early Results

Hypothesis: Integration of a standardized resident handoff system into the surgical curriculum would minimize missed or misunderstood information, improving overall patient care.

Purpose: Evaluate resident perceptions of handoffs, identify areas of communication deficiency, and evaluate early outcomes after informal implementation of a standardized communication model into the surgical curriculum.
Information sharing - a sequelae of educational, psychological and organizational factors.

5 Stages of Tribal Leadership

Stage I: Despairing Hostility - "Like, no, actually, I am actually not interested.
Stage II: Apathetic Victim - "Wow, really? That's great.
Stage III: Lone Warrior - "Yeah, well, you guys are nuts.
Stage IV: Tribal Pride - "No, seriously, we are the ones.
Stage V: Innocent Wonderment - "Hey, guys, we just won.

Shared Mental Model!
Shared Mental Model

Communication

Assertive Communication

- Organized
- Competent
- Disavow perfection while looking for clarification/common understanding
- Owned by the entire team
- It must be valued by the receiver to be successful
What do we know about communication?

Sender:

Receiver:

The Hand-Off Players
Example
Post-Call to On-Call Intern

Post-Call Intern
1. "Follow-up on surgery’s recommendations."
2. "Post-op, restart patient on feeds and if that improves, stop IV fluids."
3. "Patient will stay on IV antibiotics today and will go by mouth tomorrow."

On-Call Intern Understood:
1. "Coming back from surgery, so restart feeds."
2. "I might get a page from [affiliated hospital] and defer to primary physician."

Purpose:
Describe critical incidents occurring as a result of resident uncertainty that plague resident decision making and strategies adopted by residents to deal with their own uncertainty.

Using Beresford conceptual framework of clinical uncertainty.
### Differential Diagnosis of Uncertainty

<table>
<thead>
<tr>
<th>Domain</th>
<th>Definition</th>
<th>Example</th>
<th>Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical uncertainty</td>
<td>Absence of or inadequate scientific data; limitations of fund of knowledge; knowledge of indications</td>
<td>Performing of a lumbar puncture</td>
<td>Seek supervision</td>
</tr>
<tr>
<td>Conceptual uncertainty</td>
<td>Difficulty applying abstract criteria to concrete situations</td>
<td>Transition of Care (PICU transfer); discharge; Readiness</td>
<td>Seek supervision</td>
</tr>
<tr>
<td>Personal uncertainty</td>
<td>Lack of personal relationship with patient</td>
<td>Goals of care</td>
<td>Learn during Hand-Off</td>
</tr>
</tbody>
</table>

### Categories of Uncertainty

<table>
<thead>
<tr>
<th>Beresford Model domain (n)</th>
<th>Major category generated (n)</th>
<th>Sub-theme (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conceptual uncertainty (11)</td>
<td>Transitions of care (8)</td>
<td>Escalation of care (5)</td>
</tr>
<tr>
<td></td>
<td>Diagnosis decision making (4)</td>
<td>Management conflict (1)</td>
</tr>
<tr>
<td>Technical uncertainty (6)</td>
<td>Procedural skill (5)</td>
<td>Knowledge of indications (1)</td>
</tr>
<tr>
<td>Personal uncertainty (2)</td>
<td>Goals of care (2)</td>
<td></td>
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### Clinical Decision Making

[Diagram of Clinical Decision Making]
Team Communication Strategies

<table>
<thead>
<tr>
<th>Action</th>
<th>Description</th>
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<tbody>
<tr>
<td>Teach effective communication strategies</td>
<td>Teaching structured methods of communication, such as &quot;STOP&quot; interactions,</td>
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<tr>
<td>Train teams together</td>
<td>Teams that work together should train together. Training that involves all</td>
</tr>
<tr>
<td>Train teams to identify problems</td>
<td>Members of the team improves outcomes. Using technology in a safe way to</td>
</tr>
<tr>
<td>Train teams to develop new communication</td>
<td>Reduce misunderstandings.</td>
</tr>
<tr>
<td>Patient involvement</td>
<td>Provides the team of healthcare professionals from a variety of disciplines</td>
</tr>
<tr>
<td>Create electronic forms</td>
<td>to a common voice, with common goals, and a common pool of knowledge.</td>
</tr>
<tr>
<td>Support teamwork with protocols and</td>
<td>Sharing information sharing among the entire team, such as checklists,</td>
</tr>
<tr>
<td>procedures</td>
<td>hand-offs, guidelines, and policies.</td>
</tr>
<tr>
<td>Provide an organizational culture</td>
<td>Senior champions and department heads must recognize the importance of</td>
</tr>
<tr>
<td>supporting healthcare teams</td>
<td>interprofessional collaboration for safety.</td>
</tr>
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</table>

"Closed-loop" Hand-Off Communication

A Model for Building a Standardized Hand-off Protocol


Post-Call Hand-Off Close Loop
A word on checklists...

- Not a cure all
- Does not replace critical thinking
- Paradigmatic and narrative modes of thought

How do we transfer care in our department?

- Do we take it seriously?
- Do we have formal training on how to perform hand-offs?
- Is verbal communication required for hand-offs?
- Do we have written communication? Is it standardized and structured?
- Are long term plans/family questions discussed?
- Psychological concerns?
- Do we sign out patients with care?
- Do we role model?

Hand-Off

A major point of vulnerability

OR

An opportunity for error detection and recovery
Take Home Points

- Transfer of content AND professional responsibility
- Standardized and structured format
- Communication strategies
  - Face to face communication with opportunity to ask questions (Check for understanding)
  - Use precise language & explain rationale
  - Use of read-back to increase memory
- Critical Verbal content
  - Anticipatory guidance (IF/then)
    - What may happen and what to do about it
  - Tasks that need to be done ("To-do") - with specific rationale/instruction
- A comprehensive updated written sign-out

Let's try again.....

“It is not enough to do your best; you must know what to do, and then do your best.”

W. Edwards Deming
References


