Handoffs Improvement Workshop

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Disclosures

- **Funding – Handoff Projects**
  - Agency for Healthcare Research & Quality
    - 1 R03HS018278-01
    - 1P20 HS017119 A Model for Effective Inpatient Ambulatory Care Transitions
  - Pritzker School of Medicine Academy of Distinguished Medical Educators
  - Dept of Medicine Medical Education & Clinical Excellence Award

- **Other funding**
  - National Institutes on Aging
  - ACGME
  - ABIM Foundation
  - ACP Foundation

- **Consulting / Honoraria**
  - Illinois Hospital Association
  - Michigan Health and Hospital Association
  - Maryland Patient Safety Center
  - MacNeal Hospital
  - Washington Hospital Center
  - Society of Hospital Medicine
  - Advocate Christ Medical Center
  - University of Illinois in Chicago
  - Mt Sinai Hospital
  - Ohio State University
  - Medical College of Wisconsin VA HSR&D
Introductions

- Who am I?
- Who are you?
- What are you already doing?
- What are your expectations for today’s session?
- What are your goals for your residents with respect to handoffs?
Goals…

- Appreciate the scope of care transitions (handoffs) and their associated problems

- Explore transitions as a process within your residency

- Learn strategies for teaching and assessing transitions in your program
In-hospital Handoffs

- **ACGME Duty Hour Limits 2003**
  - 11-20% increase in handoffs
    *(Vidyarthi, 2006)*
  - Member of the primary team in-house for less than half of the hospitalization
    *(Horwitz, 2006)*

- **Safety concerns with handoffs**
  - Error-prone, variable
  - Vulnerable “gap” in patient care
  - Concern of shift-work mentality

- **Lack of infrastructure & education**
Calls to Improve Handoffs

The Joint Commission, 2006

National Patient Safety Goal: a standardized approach to hand-off communication...provide staff an opportunity to ask & respond to questions about a patient's care

World Health Organization, 2006

Prevention of handover errors part of “high fives” patient safety solutions

Institute of Medicine 2008

Teaching programs "should train residents in how to hand over their patients using effective communications"
In Search of the Cure All

- Many in search of the one size fits all solution
  - SBAR?
  - Checklist?
  - Technology solution?
  - Other?

- Challenge given the different needs of programs and types of patients

Let this cure all your uncertainties!
What types of handoffs come to mind when you think about handoffs?
Taxonomy of Hospital Handoffs

Extra-hospital handoffs
- Admission
  - EMS-ED or ED to floor
- Discharge
  - Home or SNF, rehab
- Inter-hospital transfer

Intra-hospital handoffs
- Shift change
  - Is the sender returning? (night float with cross-cover)
- Service change
- Service transfer
  - Escalation or de-escalation of care (in and out of ICU)
  - Different specialty (med-surgery, OR to PACU)
Risk Stratifying Care Transitions

1. Is the patient physically moving?
2. Is the patient critical or unstable?
3. Is the hand-off temporary or permanent?
4. Is this the first time the receiver is hearing about a patient?

If yes to any question, inherent increase in safety risk

Admission (EMS-ED or ED-floor/ICU)
A floor patient going for urgent surgery OR to PACU
Core Components of Handoffs

- Verbal Communication
  - In person or over phone

- Written communication
  - “Transition Record”
    - Discharge summary
    - Admission or Transfer note
    - Signout

- Transfer of Professional Responsibility
Handoffs need Tightly Linked Structure and Process
Hand-off Theatre
Your Job

- To observe
- Please record any barriers that interfere with successful patient hand-off practices in patient care
  - Communication
  - Environment
  - Cultural
<table>
<thead>
<tr>
<th>Barriers</th>
<th>Observations/Thoughts</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cultural</strong> (e.g., not prioritizing hand-offs, following proper procedures, unprofessional behavior, etc.)</td>
<td></td>
</tr>
<tr>
<td><strong>Communication</strong> (e.g., vague terms, incomplete information, lack of verification, etc.)</td>
<td></td>
</tr>
<tr>
<td><strong>Environmental</strong> (e.g., distractions and obstacles interfering with completing proper hand-off procedure)</td>
<td></td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Facilitators</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>What went well in this scenario?</td>
<td></td>
</tr>
</tbody>
</table>
Debriefing

- What types of barriers to an effective hand-off did you observe?
  - Environment
  - Cultural
  - Communication
  - Any others?
<table>
<thead>
<tr>
<th>Pre-handoff</th>
<th>Arrival</th>
<th>Dialogue</th>
<th>Post-handoff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sender organizes &amp; updates handoff information</td>
<td>Stop patient care tasks to conduct handoff</td>
<td>Specific verbal exchange between sender and receiver (could be in person or over phone)</td>
<td>Receiver integrates new information and assumes care of patient(s)</td>
</tr>
</tbody>
</table>

**Sender could**
- Provide disorganized info
- Use vague or unclear language
- Fail to provide clinical impression (what is wrong), anticipatory guidance (if/then), plan (to do), & rationale (why)

**Receiver could**
- Not listen (distractions)
- Misunderstand
- Not clarify (ask questions)

**Lack of time, poor time management, fatigue, or work prevent updating**
- Lack of clinical judgment to construct proper handoff
- Vague language

**No set location or time**
- Not able to contact sender or receiver
- Competing obligations (work or personal)
- Handoff not a priority over tasks

**Forget key tasks or information**
- Not document actions taken
- Act on plan without taking new arriving information into account
- Not invest in the care of patient (lack of professional responsibility)
Swiss Cheese Model

Goal Conflicts and Double Binds

Triggers
- Incomplete Procedures
- Mixed Messages
- Production Pressures
- Responsibility Shifting
- Inadequate Training
- Attention Distractions
- Deferred Maintenance
- Clumsy Technology
- Goal Conflicts and Double Binds

The World

Institution

Organization

Profession

Team

DEFENSES

Individual

Technical

Accident

Modified from Reason, 1991 © 1991, James Reason
Another point of view

- Best understood as a *dialogue*
  - an interaction that fosters common ground, empathy, and equity to transfer necessary information

- Sender must paint a picture
  - receiver must see it, understand it, act on it, and, ultimately, communicate it to someone else

Another point of view

- Both parties should anticipate potential differences in expectations
  - can influence what is said (content) & how messages are communicated (style)

- Like ‘fixing an engine that’s running’
  - the medical environment is changing
  - by the time of the handoff, the information may very well be old

Improving handoffs: 

*Understanding handoffs as a process*

“The first step is to draw a flow diagram. Then everyone understands what his job is. If people do not see the process, they cannot improve it.”

*W.E. Deming, 1993*
Process Mapping – Brief Overview

- A process map or flowchart is a picture of the sequence of steps in a process

- Useful for
  - Planning a project
  - Describing a process
  - Documenting a standard way for doing a job
  - Building consensus about the process (correct misunderstandings about the process)
Process Mapping

- Ovals are beginnings and endings
- Boxes are steps or activities
- Diamonds are questions
- Arrows show sequence and chronology
Process Mapping

Can be “high-level” to get an overview of the process or more “drilled down”
Process Mapping

- Can also be very detailed and “drilled down” to show the details and roles
- Detailed process maps are especially helpful to standardize and improve processes
- For use as an improvement tool, it is important to map the current process, not the desired process
Analyzing Process Maps

- What is the goal of the process?
- Does the process work as it should?
- Are there obvious redundancies or complexities?
- How different is the current process from the ideal process?
Advanced Process Mapping: Identifying Barriers

- Primary MD creates written signout
- Primary MD contacts on call MD
- On-call MD Meets with Primary MD
- Primary MD reviews patients with on call MD

**POTENTIAL FAILURES**

**ENVIRONMENT**
- computer/printer malfunction
- interruptions/ongoing workload of on call MD
- no designated meeting place; interruptions; workload
- interruptions; workload;

**COMMUNICATION**
- omission of information
- text page "signout is on the wall"
- omissions; failure to verbally communicate/ emphasize important issues

**CULTURE**
- updating signout not a top priority
- Signout not a priority "I've gotta go"
- text page to on call MD "my signout is on the wall!"
- "Nothing to do"
Process Mapping Demonstration

- You will need
  - Sticky notes
  - A pen
  - Wall space, flip chart or a white board

- First start with beginning and end
- “And then what happens?”
Small Group Exercise

- Working in small groups, create a process map of a hand-off process
- Identify the type of hand-off
- Set clear boundaries (where does the process begin and end)
- Identify key steps and decision points
Building a Standard Handoff Protocol 2006

- **Principles**
  - Protocol will be discipline specific
  - Standardization is key for both process and content

- “Handoff Clinic” for 9 specialties

- **PROCESS**
  - Create a process map

- **CONTENT**
  - Create a standard check-list

- **IMPLEMENTATION**
  - Resident buy-in

- **MONITORING**
  - Identify and resolve barriers

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National Patient Safety Goals

A Model for Building a Standardized Hand-off Protocol

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Department Editor:
Marina M. Patrinos, R.N., M.S., Peter A. Angood, M.D., Paula Grinwald, M.S., Gina Blajter, R.N., M.S., Samy Jr, M.D., M.P.H., Scott E. Sheridan, M.A., M.B.A., Kenen A. Shagonis, M.D. Authors are the authors of National Patient Safety Goals for Patient Safety Guide and Masako Kitamura (kitamura@redcross.org) and Marketing at Media (masako.patrinos@redcross.org).

In July 2003, the Accreditation Council for Graduate Medical Education (ACGME) set limits for resident duty hours. Although the main driving force was to reduce sleep deprivation and improve patient safety, one unintended consequence was the increase in the number of handoffs during patient care. The discontinuity of care that thereby results has the potential to undermine the beneficial effects of work hour limitations. The safety of the hand-off process has been called into question by a number of different sources and studies which suggest that handoff errors are often characterized by communication failures and environmental barriers.

The handoff is also the subject of a Joint Commission on Accreditation of Healthcare Organizations National Patient Safety Goal, which went into effect January 1, 2006. Written as a new requirement of Goal 2, Improve the Effectiveness of Communication Among Caregivers, this addition requires hospitals to implement a standardized approach to hand-off communications and provide an opportunity for staff to ask and respond to questions about a patient’s care. Although the standard applies to all handoffs that occur between all personnel within all healthcare settings, the focus of this article is on the handoffs between resident trainers at academic teaching hospitals. Because medical trainees receive little or no formal training or education in communication during handoffs, there is an inherent opportunity to influence the practice of
1. Understand and attempt to reduce the variation in the process

- All disciplines “required” a verbal hand-off BUT sometimes did not occur due to competing demands (OR, clinic, etc.)
  - Educate staff on this important priority
  - Establish contingency plans in light of competing demands

2. Handoff = Transfer of information + professional responsibility

- At times, these transfers were separated in time and space....
Universal pager is transferred to on-call Intern (8 am – 9 am)

Team conducts rounds (Attending, PGY4, PGY2)

Are there tasks to be completed?

No

PGY4 runs the list with Post-call Intern

Post-call Intern updates signout on the computer

Post-call Intern pages on-call Intern

Yes

PGY4 assigns tasks

Post-call Intern runs the list with on-call Intern in the Conference Room (noon-1 pm)

Post-call intern forwards pager to on-call intern

On-call intern continues care and follow-up on any tasks

Are the tasks completed?

Yes

Intern reports status of task to PGY4 and on-call intern

No

Input given to PGY4 that tasks not completed

Unfinished tasks go to on call intern

Transfer of professional responsibility

Verbal hand-off

Neurology Hand-Off
The post call intern updates sign-out on the computer (noon – 1p.m.)

Post call intern brings copy of sign-out for on call intern

Team meets to review list after noon conference (team includes other interns, senior residents)

Post call intern reports on each patient

Are there tasks to be completed? (e.g., f/u labs, imaging, discharge)

No

Sign-out given to on-call intern

Post-call intern forwards pager to on-call intern

On-call intern continues care and follow-up on any tasks

Yes

Sr resident assigns tasks to other interns

Are the tasks completed?

No

Sr Resident offers input on completing task

Unfinished tasks go to on call intern

Yes

Intern reports status of task to senior resident and on-call intern

“closed-loop” communication
Anesthesia Resident to PACU Nurse Hand-Off

Patient in OR

- Is patient ok to go to PACU?
  - yes: Patient goes to ICU
  - no: Patient in OR

Patient goes to ICU

- Is patient ok to go to PACU?
  - yes: Patient goes to ICU
  - no: Patient in OR

Patient in OR

- Resident tells circulating nurse about special needs (ventilator, a-line, invasive monitors, etc.)
- Resident mentally summarizes case to prepare for documentation
- Resident moves patient to PACU
- Resident arrives in PACU and shouts out to unit clerk “Where am I going/what number bed?”
- Secretary or someone else answers with bed or slot number
- Resident takes patient to designated slot

Are nurses waiting at slot?

- yes: Nursing hooks up monitors with priority on oxygen and pulse ox, then EKG and blood pressure, etc.
- no: Yes

- Is there a greater than 30 second delay in hook up?
  - yes: Resident mobilizes nursing
  - no: Resident mobilizes nursing

Resident mobilizes nursing

- Are nurses waiting at slot?
  - yes: Nursing hooks up monitors with priority on oxygen and pulse ox, then EKG and blood pressure, etc.
  - no: Residents accept patient

Resident puts monitor on patient and hooks up oxygen, questions why no nurses

Nursing hooks up monitors with priority on oxygen and pulse ox, then EKG and blood pressure, etc.

Is patient high risk? (difficult airway, labile vitals, anes problem)

- yes: PACU resident called and given special report
- no: Resident mobilizes nursing

Resident mobilizes nursing team to put on monitors

Resident completes documentation of case (fills out PACU vitals, writes note, documents handoff given)

Is patient high risk? (difficult airway, labile vitals, anes problem)

- yes: PACU resident called and given special report
- no: Resident mobilizes nursing

Resident identifies nurses that are taking care of patient

Resident gives report (content checklist)

Nurses accept patient

Resident completes and signs PACU orders
Physician Focus Groups
Process Map Contacting PCPs

- A process map (using post-it notes) was generated to represent the current view of communication during ambulatory-inpatient care transitions with a focus on steps that were problematic.
  - Probes for barriers and facilitators
  - Important to map the “current process”
    - *No matter how embarrassing…*
PCP finds out via active surfing of roster, or coaches patient to call PCP if they go to hospital, or home health fax

“Maybe smoke signals”
Current Communication Process between Inpatient Physician and Primary Care Physician for Hospitalized Patients and Identified Barriers

- Patient admitted to the hospital
- Identify the PCP or other MDs who primarily care for the patient
- Search for contact information for the PCP
- Contact the PCP
- Follow-up with patient after transition

Barriers:
- Correctly identifying PCP
- Forgetting to contact PCP / Time to contact PCP
- Contacting the PCP Not a Priority
- Not aware of what happened, information not available

Engage frontline staff in redesign of process...
Unfortunately, animals sometimes lack the necessary skills to communicate with each other.
Improving Handoffs:
Handoffs as a Form of Communication

“who says what to whom in what channel with what effect”

Harold Dwight Lasswell
Psychology of Miscommunication

- Speakers systematically overestimate how well their messages are understood by listeners

- *Egocentric heuristic*—Senders assume that receiver has all the same knowledge that they do
  - Worsens better you know someone

- *Study of pediatric handoffs*
  - Optimal environment
  - Dedicated room & time
  - Supervised by senior resident & attending physicians

Testing these Theories

- Interviewed incoming and outgoing pediatric interns 1 h after handoff over 6 months
  - Asked senders to guess what receivers would say was the most important information for each patient (had access to signouts)

- The most important piece of information was NOT communicated 60% of the time
  - despite the sender believing it had been

- Did not agree on the rationales provided for 60% of items
  - At times contradictory (pt going home vs. pt needed to stay)

Retention Hierarchy of Information

- If/then items (69%)
- To Do items (65%)
- Knowledge Items (35%)

$p=0.003$

Hand-off as a Form of Communication

“When you move from right to left, you lose richness, such as physical proximity and the conscious and subconscious clues. You also lose the ability to communicate through techniques other than words such as gestures and facial expressions. The ability to change vocal inflection and timing to emphasize what you mean is also lost...Finally, the ability to answer questions in real time, are important because questions provide insight into how well the information is being understood by the listener.”

–Alistair Cockburn
Safe and Effective Hand-offs: Other Industries

- Direct observations of hand-offs at NASA, 2 Canadian nuclear power plants, a railroad dispatch center, and an ambulance dispatch center

STRATEGIES

- Standardize - use same order or template
- Update information
- Limit interruptions
- Face to face verbal update
  - with interactive questioning
- Structure
  - Read-back to ensure accuracy

Applications of Standard Language

- **“Read-back”**
  - Reduces errors in lab reporting

<table>
<thead>
<tr>
<th>Description of Error</th>
<th>No. (%) of Occurrences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incorrect name of patient</td>
<td>10 (34)</td>
</tr>
<tr>
<td>Incorrect test result</td>
<td>9 (31)</td>
</tr>
<tr>
<td>Incorrect specimen/test repeated</td>
<td>6 (21)</td>
</tr>
<tr>
<td>Recipient refused to repeat message</td>
<td>4 (14)</td>
</tr>
<tr>
<td>All</td>
<td>29 (100)</td>
</tr>
</tbody>
</table>


29 errors detected during requested read-back of 822 lab results at Northwestern Memorial Hospital. All errors detected and corrected.
A Word of Caution on Technology

- Computerized sign-out
- IT solutions alone cannot substitute for a “successful communication act”
  - Human vigilance still required

In an emergency room, the replacement of a phone call for critical lab values with an electronic results-reporting system with no verbal communication resulted in 45% (1443/3228) of urgent lab results to go unchecked.

CoPaGA Syndrome

CoPaGA = Copy Paste Gone Amok

Repeated highlighting, copying and pasting text from past EHR notes into current notes, the physician-victim attains several goals;

1. avoiding time-consuming work of talking to patient
2. building a documentation trail that portrays faux work
3. crowd-out of useful information by gluts of useless data
4. zombie-like propagation of inaccuracies that persist

74% of Mercy residents saw cut/paste problems in signout
TMI?

- Overreliance on signouts for other work
  - Become unnecessarily long “shadow chart”
  - Often becomes a personal tracker of information
    - “cognitive artifact” like a grocery list

- Loses its primary function for the receiver
  - Information overload
Now..Let’s put our communication skills to the test

The Paper Tear Exercise
A Brief Example of the Difficulties in Communicating

- The Purpose of This Exercise
  - To make the distinction between hearing (the biological process of assimilating sound waves) and listening (adding our interpretations of what is being said)
  - To demonstrate the importance of effective communication skills and listening skills to thinking and acting systematically

- adapted from the Systems Thinking Playbook, Meadows and Sweeney, 1995
Instructions for the exercise

- Everyone take 1 sheet of colored paper
- There is no talking
- Close your eyes and do exactly what I tell you to do
- Our goal is to produce identical patterns with the pieces of paper
What happened?

- How would you describe your listening skills?
- For those who were communicators, how effective were your skills?
- Were there any differences in the 3 attempts?
Unfortunately, animals sometimes lack the necessary skills to communicate with each other.
Is the checklist the holy grail?
SHOUT… it Out!

S – Sick or Not Sick
   (include DNR, diagnosis)

H – History and Hospital Course

O – Objective Data
   (exam, vitals, results)

U – Upcoming Plan, Dispo

T – To Do
   (include rationale)

Acronym modeled after Arora, V., et. al.
Caution for ‘checklists’

- Check the box mentality
  - Complete the form but don’t improve care
    - Checkbox for “I contacted the PCP”
- Forms don’t fill out themselves
  - Training and frontline buy-in
- One size fits all doesn’t always work
  - Customization often needed (i.e. SBAR)
- Sustaining behavior change difficult
  - Audits to ensure continued use
  - Engage frontline staff to customize
Case of SBAR

- Originated in Navy to communicate critical situations
- Adapted for nurse to physician communication
- Became most commonly described handoff mnemonic
Misuse of SBAR

- Using “SBAR” as a verb
  - “I’m SBARing”

- Failing to customize and specify the precise elements in each category
  - Likely that situation for a L&D unit differs from a geriatrics unit

- Assumption that using SBAR checklist will result in comprehensive information transfer
Figure 6. The MICU Situation, Background, Assessment, and Recommendation (SBAR) focused on respiratory issues and intravenous (IV) access for their patients, who are likely to be intubated and on vasopressors. ETT, endotracheal tube; AICD, automatic implantable cardioverter defibrillator; VAD, ventricular assist device; BM, bowel movement; Tx, treatment. Used with permission.
Strategies for Verbal Communication

- Face to face communication is BEST
- Prioritize time on those most sick
- Interactive and ask questions for clarification
  - Aim for a shared mental model
  - Overcome egocentric heuristic (think about the other person)

Focus on upcoming issues
- “If/Then”
  - Anticipatory guidance
  - What may happen overnight and what to do about it

- “To-do”
  - Tasks that need to be done
Craft the One Liner

- This is *NOT* the first line of the H&P...
  - but start with the one liner summarizing the patient from the ‘assessment and plan’

- Make sure the one liner includes a PRIMARY DIAGNOSIS (when one has been made)
  - _One liners from H&P usually don’t have a diagnosis_
    - Early in hospital course so still keeping a ‘wide’ differential…

- Goal is not to keep your anyone in suspense
To - Do Items with Rationale

- NOT just what to do
- What are you looking for
- What to be done with the results
- Be specific as possible

Check CBC

Check Hgb at 11pm and if <7.0, transfuse 2U PRBC
## Behaviors of Listeners

<table>
<thead>
<tr>
<th>Category</th>
<th>Definition</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Displays of understanding</td>
<td>Things that make me THINK you’re listening</td>
<td>Nodding, eye contact, body language, positioning</td>
</tr>
<tr>
<td>Processing information</td>
<td>Things that let me KNOW you’re listening</td>
<td>Read-back, Note Taking, Asking Questions</td>
</tr>
<tr>
<td>Interruptions &amp; Distractions</td>
<td>Things that prevent you from listening to me</td>
<td>Interrupting sender, checking phone, side conversations, eating, gathering belongings</td>
</tr>
</tbody>
</table>
Number of Interruptions versus Patient Census

$r=0.64 \ p<0.01$
What Can Receivers Do?

- Actively listen
  - stay focused, limit interruptions, taking notes can enhance memory
- Ask questions
  - to ensure you understand directions
  - the handoff is your learning opportunity
- Use a system
  - to keep track of to do items that require your action
- Read-back
  - directions to ensure you are on the same page
What can the program do?

- **Schedule design**
  - Overlap to avoid arrivals/departures as interruptions

- **Minimize handoff interruptions**
  - Pagers
    - “Pager-free zone”
    - “Pager taker”
  - Sterile cockpit rule
For copies of our papers or tools:

patienthandoffs@gmail.com

For our videos:
“MergeLab” on YouTube
http://www.youtube.com/mergelab

Questions or Ideas?
Vineet Arora varora@uchicago.edu
This is all great, but how do I teach this stuff ??
Curriculum Development Process

Kern’s 6-Steps

- Problem Identification & General Needs Assessment
- Needs Assessment of Targeted Learners
- Goals & Objectives
- Educational Strategies
- Implementation
- Evaluation & Feedback
Percent of Penn Residents Who Believe that Things “Fall Between The Cracks” When Transferring Or Signing-out Patients

May 2011, All UPHS residents, n = 931

46% of residents agreed or at least did not disagree with this statement
Many Penn Residents Feel the Need for Handoff Training and Supervision

% of Residents and NPs who think new hires should be supervised by seniors

HUP, Fall 2011, n = 131
Step 2: Needs Assessment of Targeted Learners

- Specific methods:
  - Informal discussion
  - Interviews/focus groups
  - Surveys
  - Direct observation
  - Audits of performance
Step 3: Goals & Objectives

- What specifically do you want the residents to do differently related to Transitions?
  - Know Different Things? (Knowledge)
  - Act Differently? (Skills)
  - Feel Differently? (Attitudes)
Step 3: Goals & Objectives

Goal: Improve OR to ICU Handoff

Taxonomy of Learning Objectives

Cognitive: Define, List Analyze

Psychomotor: Demonstrates Be Able To

Affective: Believe Internalize

List the required elements for a safe OR to ICU handoff

Demonstrates concise and effective verbal and/or electronic sign-out skills

Believes that handing off post-operative patients can create the opportunity for error and adjusts behavior
Step 4: Educational Strategies

- Consider multiple strategies
  - Maintain learner interest & enhance retention

- Foster active learning
  - Don’t just teach *at* them, relate to prior experiences, facilitate reflection & feedback

- Does strategy match objective?
  - Cognitive, affective, psychomotor?
Step 5: Implementation

- Identify existing vs desired resources ($)
  - Department, hospital, admin time?
  - Faculty time for teaching & assessment

- Anticipation of barriers
  - Politics, culture

- How and when to best reach your audience?

- Scholarship?
  - Steps are usually simultaneous, not sequential
Step 6: Evaluation & Feedback

- Users?
- Uses?
  - Formative vs Summative
- Resources?
- Outcomes of interest?

Then… choose Educational Strategy and Methods
Evaluation of Reactions aka “Did they like it?”

- Written materials were useful: 65%
- Would recommend training to others: 81%
- Satisfied with the handoff training: 87%

Kirkpatrick Model
Training Program Evaluation

Levels of Evaluation

- Evaluation of results (transfer or impact on society)
- Evaluation of behavior (transfer of learning to workplace)
- Evaluation of learning (knowledge or skills acquired)
- Evaluation of reaction (satisfaction or happiness)

Learner Assessment
Miller’s Pyramid

Model of Competence

- Knows
- Knows how
- Shows how
- Does

Behaviour - skills/attitudes
Cognition - Knowledge

Professional Authenticity

Miller GE: The assessment of clinical skills/performance
Academic Medicine (Supplement) 1990, 65: S63-S7
Kirkpatrick Model
Training Program Evaluation

Penn’s Resident Handoff Assessment Tool (HAT)

- Based on safe handoff practices, ACGME core competencies, and a previously published tool (Farnan, et al JGIM)
- Tool was studied and validated at Penn
- 7 items
- Created for shift-to-shift handoffs but many concepts are transferrable
- We recognize that you may want to customize
Bringing it all Together
Take a Chinese Menu Approach!
Your Task

<table>
<thead>
<tr>
<th>Learning Objective</th>
<th>Assessment</th>
<th>Kirkpatrick Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Think in terms of the following: “By the end of this curriculum, I would like all learners to....”</td>
<td>I will know that they met my learning objectives using the following measurements...</td>
<td>Reaction</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Knowledge</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Behavior</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Benefits to patients</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Organizational Change</td>
</tr>
</tbody>
</table>
Tips for Getting Started in Teaching Transitions

- Align your teaching efforts with others who care about this topic:
  - Your Department and/or Division Leadership
  - Medical Education Leaders
  - Other Faculty in your group
  - Nurses, pharmacists, social workers

- Think about inter-professional curricula

- Move beyond knowledge to skills/behaviors
OK, But How Do I Change Culture?

Curriculum + Process

Change the Way we Do Things Around Here…

Behavior

Attitudes

CULTURE