QUALITY IMPROVEMENT OF YOUR RESIDENCY PROGRAM: AN EXPERIENTIAL WORKSHOP

BROUGHT TO YOU BY:
UW PEDIATRIC RESIDENCY PROGRAM DIRECTORS AND CHIEF RESIDENTS

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Disclosures

- We have no conflicts of interest and nothing to disclose
Workshop Objectives

- Didactic Learning: Introduce you to a method to make improvements to your residency program using QI principles based on Toyota Production System (LEAN).

- Experiential Learning: Participate in a “Modified Design Workshop” to standardize resident handoffs at Hospital X.

- Take-home: (1) Format for improving your program (meeting ACGME requirements); (2) example(s) of standard handoff processes.
Seattle Children’s Hospital first began using a quality improvement (QI) methodology based on a modified Toyota Production System (aka LEAN) in 2002.

Now called “Continuous Performance Improvement (CPI)”
Continuous Performance Improvement

- A methodology that improves quality, cost, safety and engagement through elimination of waste
- Philosophy puts customer first by assessing value of a process from their viewpoint.
- Use the smallest resource to create greatest value by continuously eliminating waste
- Instill a spirit of inquiry by asking “why” 5 times
- Create reliable methods leading to standard work
Variation in Processes

Which management problem would you rather have?

Performance

Target

Continuous Performance Improvement
Tools to make improvements

- Dependent on complexity of problem
  - A3, 5-day multidisciplinary Rapid Process Improvement Workshop (RPIW), design event

- **Modified Design Workshop:**
  - 1 or 2 half-day workshops spaced apart by a couple of weeks
  - Utilizes CPI principles, CPI facilitator
  - Requires significant planning, pre-work
  - Redesigned our ward (3 teams to 6 teams, change to shift schedule), standardized handoffs, LEP families on rounds
Step 1:

Identify the problem
Step 2:

Identify a SMART improvement goal
Step 3:

Prepare the background information
Step 4:

Set a workshop date, identify a facilitator, and send out invites
Step 5:

Identify your resources and any rules and regulations that need to be considered
Step 6: Develop a few “straw” plans
Step 7:

Meet with Facilitator and Plan Agenda
Step 8:

Start talking up the change
Day of the Meeting...
IMPROVING RESIDENT HAND OFFS: A WORK IN PROGRESS

Emily Hartford, Molly Martyn, Celeste Quitiquit
Introduction

Thank you for coming!
Spirit of improvement
Ground rules
Goals for today....
Project Goals

Ensure patient safety surrounding physician handoff by improving communication, standardizing the process, and teaching sign-out to new residents.

Improve sign-out efficiency, resident satisfaction, and resident confidence in caring for patients.
We will have a standard sequence for the flow of patient information during resident handoffs on the inpatient wards at change of shift.

(OUT of scope) All other types of handoffs, electronic tools
Framing the problem

- Duty hours and patient handoffs
- Why it’s important: patient safety and education
- Evidence on patient handoffs
- Examples of patient handoffs
Current status: nationally

- ACGME duty hours (2003, 2011)
  - Emphasis on safety
  - Increasing handoffs
- All in agreement: RRC/ACGME/JCAHO/IOM
  - Standard handoffs
  - Formal educational curriculum for residents
- Many institutions working on standardization
Why it’s important: patient safety

- Sentinel events
  - IOM 1999 To Err is Human 72% communication related
  - JCAHO report 2006-10: 2/3 due to communication errors
- Cross-cover shifts and errors
  - Cross cover an independent risk factor for adverse events
  - Patients with adverse events 44% more likely to be cross-covered at the time

Incidence: 24 sign-out problems per 319 patient-care days

- 15 episodes of inefficient or duplicative care
- 5 adverse clinical outcomes
- 4 near-misses
- Missed in sign-out: current clinical status, recent/scheduled events, anticipatory guidance, plan

Why it’s important: education

- Resident ability to accurately predict issues
  - Adverse events predicted <50% (surgeons)
  - Pediatric interns
    - overestimated effectiveness of hand-off
    - conveyed “most important” info 40% of the time
- HUGE variability in sign out
- Efficiency
- Patient ownership

After-hours complications: evaluation of the predictive accuracy of resident sign-out.

Interns overestimate the effectiveness of their hand-off communication.
Interpersonal Communication

1. Remember first/last best
2. Overestimate our ability to communicate
3. Information saturation


In industries with potentially high risk handoffs (NASA, nuclear power plants, railroad dispatch, EMS, etc...), these things were prioritized for safety:

Current opinion: SCH residents

→66 of 98 pediatric residents completed a survey

- 42% of residents considered sign-out an efficient process
- Fewer than 50% of the residents reported receiving any formal education regarding sign-out despite mandatory training at orientation
- 88% believed that a standard process for patient handoff would improve patient care
Important details were left out of verbal sign-out

Information conveyed in sign-out is too detailed

Frequency of concerns about patient safety due to incomplete or inaccurate sign-out

Frequency of written and verbal inaccuracies in sign-out
Patient handoff examples
IPASS (THE BATON): AHRQ

I: Introduce yourself
P: Patient ID
A: Assessment
  CC, vitals, symptoms, diagnosis
S: Situation
  current status, code status, recent changes, treatment
S: Safety concerns
  Allergies, social, critical values
B: Background
  PMH, meds, FH
A: Actions
  taken or required
T: Timing
  level of urgency
O: Ownership
  team members
N: Next
  anticipated actions/changes, plan
SIGN-OUT: Yale

- Developed at Yale
- Implemented with formal curriculum, observed practice and feedback, wide dissemination of tool

Table 2. SIGNOUT Format for Oral Communication

<table>
<thead>
<tr>
<th>Mnemonic</th>
<th>Sample sign-out</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>Sick or DNR? (highlight sick or unstable patients, identify DNR/DNI patients)</td>
</tr>
<tr>
<td>I</td>
<td>Identifying data (name, age, gender, diagnosis)</td>
</tr>
<tr>
<td>G</td>
<td>General hospital course</td>
</tr>
<tr>
<td>N</td>
<td>New events of day</td>
</tr>
<tr>
<td>O</td>
<td>Overall health status/clinical condition</td>
</tr>
<tr>
<td>U</td>
<td>Upcoming possibilities with plan, rationale</td>
</tr>
<tr>
<td>T</td>
<td>Tasks to complete overnight with plan, rationale</td>
</tr>
<tr>
<td>?</td>
<td>Any questions?</td>
</tr>
</tbody>
</table>

SAIF-IR: Denver

(outgoing provider)

- **Summary**: 1-3 sentence summarizing patient’s hospital stay. NOT repeated HPI
- **Active issues**: written template lists all issues including chronic conditions, house staff only verbalize active medical issues
- **If-then contingency plans**: clues to oncoming provider about potential issues arising and what the off-going provider would suggest on basis of his or her clinical knowledge of the patient
- **Follow-up activities**: test, procedures, therapies which need to be reevaluated by oncoming provider

(incoming provider)

- **Interactive questions**: clarify or correct info
- **Repeat back important information to ensure understanding**
What about your patient hand off process?

→ Process map

→ Strengths and Opportunities
To create a shared vision for safe, efficient, standard, and well supported patient handoffs.
Break-out groups
I AM SAFER

ID: Summary statement
- Name
- Age
- Gender
- One-liner
- Acuity (sick/not sick)

Active Diagnoses:
- Current active issues with history OR update
- New an relevant labs/vitals/consults
- Current plan for each diagnosis

Medical Problems:
- List medical problems
- Code status
- Allergies
- Access

Social:
- Language of preference
- Custody/consent

Action Items:
- To-do in the next shift

IF/Then
- If/then statements
- Attending or service to call

Elicit Questions

Repeat Back:
- Brief summary of patient handoff
- Assure action items well understood/distributed
Our Implementation Timeline

- **Desire to improve sign-out + New electronic tool available**
- **Aug 30** First meeting with residents
- **Sep 8** QI event with residents and faculty to develop IAMSAFER
- **Sep 28** Education begins: noon conf
- **Oct** First team begins using IAMSAFER
- **Now** All teams using IAMSAFER
- **Ongoing:** PDSA and improving IAMSAFER
Implementation support

- Ongoing education (EVERY block, ALL residents)
- Observation and feedback
- Gathering feedback
- Job Aides
  - Badge cards
  - Posters
  - Scripts
Outcomes to evaluate

- Patient safety data
- Time per patient
- Adherence to new tools
- Resident satisfaction
- Resident perceptions of
  - Patient safety
  - Errors/omissions in sign-out
  - Ability to provide quality patient care
Design for Evaluation

Time-interrupted Series: Gather data on all teams

Team 1: IAMSAFER

Team 2 control

Team 2: IAMSAFER

Team 3 control

Team 3: IAMSAFER
Next steps....

- Analyze data
- Continuing improvements to IAMSAFER
- Further resident education
- Expand use of tools to all services
- Feedback?
- Questions?