HANDOVERS: CRUCIAL SKILLS IN HIGH-STAKES HANDOFFS

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No Disclosures
Breakdown of this talk

Define Handovers or Handoffs

Look at Handoffs in the context of patient care and medical costs

Best practice for different types of handovers
  - Highlight a few studies

Recap take home points

Questions
Objectives of this Talk

➢ Reveal why transitions in care are crucial
➢ Understand the importance of handovers
➢ Apply best practice to your inpatient handoffs
➢ Apply best practice for your discharge processes
Defining Patient Handovers

1. **Transitions of Care**
   - Change in patient location, or provider, or both
   - ED, ICU, discharge, shift change, service change

2. **Handovers or Handoff**
   - The exchange of *information and transfer of responsibility* that occurs during a transition of care

A History of Handoffs

1996
JC instituted the sentinel event reporting policy

2006
National Patient Safety Goal (NPSG) implemented

2010
NPSG became a requirement for accreditation

2011
ACGME mandates residency competency in handover communications

# of Events with Root Cause

- Human Factors
- Leadership
- Communication
- Assessment
- Physical Environment
- Information Management
- Care Planning

2011 (N=1243)
2012 (N=901)
2013 (N=887)
2014 (N = 764)
2Q 2015 (N=474)
1,744 deaths and $1.7 billion in malpractice costs over 5 years.
What the Patient Experiences

15 transitions in 5 days

3 different physicians in 1st 24 hrs

Vidyarthi et al. JHM. 2006
Philibert I. QualSaf Health Care. 2009

https://theosophical.wordpress.com
Changes in Medical Errors after Implementation of a Handoff Program


### Table 2. Incidence of Medical Errors, Preventable Adverse Events, and Medical-Error Subtypes before and after Implementation of the I-PASS Handoff Bundle.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Before Implementation (N=5516)</th>
<th>After Implementation (N=5224)</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall medical errors</td>
<td></td>
<td></td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Preventable adverse events</td>
<td></td>
<td></td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Near misses and nonharmful events</td>
<td></td>
<td></td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Medical-error subtype</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Errors related to diagnosis</td>
<td>1.0 (2.0)</td>
<td>0.8 (1.5)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Errors related to therapy other than medication or procedure</td>
<td>112 (2.0)</td>
<td>77 (1.5)</td>
<td>0.04</td>
</tr>
<tr>
<td>Errors related to history and physical examination</td>
<td>43 (0.8)</td>
<td>0</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Other and multifactorial errors</td>
<td>239 (4.3)</td>
<td>106 (2.0)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Medication-related errors</td>
<td>660 (12.0)</td>
<td>580 (11.1)</td>
<td>0.28</td>
</tr>
<tr>
<td>Procedure-related errors</td>
<td>83 (1.5)</td>
<td>85 (1.6)</td>
<td>0.49</td>
</tr>
<tr>
<td>Falls</td>
<td>13 (0.2)</td>
<td>8 (0.2)</td>
<td>0.37</td>
</tr>
<tr>
<td>Nosocomial infections</td>
<td>15 (0.3)</td>
<td>14 (0.3)</td>
<td>0.79</td>
</tr>
</tbody>
</table>

**23% reduction in medical-error rate**

**30% reduction in rate of preventable adverse events**
Changes in Medical Errors after Implementation of a Handoff Program

Handoffs We Will Review

Types of Handoffs

• End of Shift
• Service Change
• Discharge
Handoffs We Will Review

Types of Handoffs

• End of Shift
• Service Change
• Discharge
Dr. M is an inpatient internist with a patient census of 15 patients today. She is updating her sign out for the night-time physician: her patients are stable but there is a patient w/ a presumed LGIB with a follow up CBC to check.

What information should be included in the sign out and how should it be relayed?
Components of a Strong Verbal Handover

1. **Structured Communication**
   - Both users know what to expect

2. **Dialogue** not **Monologue**

3. **Close the Loop**

Chu et al., JHM 2010; 5: 344-348.
Effectiveness of written hospitalist sign-outs in answering overnight inquiries.

- 124 inquiries for 96 patients
- Sign out referenced for 89 inquiries (74%)
- Sufficient to respond to 27 (30%)
- Primary team did not predict 102 (86%) of inquiries
Critical information should be relayed electronically and verbally

Face to face or at least some verbal exchange should take place

Standardized tools should be employed
What information should be included in the sign out and how should it be relayed?

- Ms. C is considered a sickest patient...
- She was admitted with a LGIB, she is actively bleeding but hemodynamically stable...
- She is being transfused the 2nd unit of PRBCs
- A follow-up H/H has been ordered for 9 pm
- If her hb<7, please transfuse an additional unit and repeat the CBC
- If she becomes HD unstable, call the ICU for transfer—both the ICU and GI services are aware.
- Questions?
Handoffs We Will Review

Types of Handoffs

• End of Shift
• Service Change
• Discharge
Dr. M has finished her service days and is now signing out to the oncoming physician. There are 14 patients listed, all of them are stable. She updates her sign out for her colleague and leaves for the day.

What information should be included in the sign out and how should it be relayed?
Service Change Handovers: SHM Guidelines

- Decide on a plan
- Educate people on that plan
- Prioritize anticipatory guidance during verbal communication
- Technology or template should be available for accessing patient data, should be in a centralized location
- To-do list is highlighted for the oncoming hospitalist

Society of Hospital Medicine
Hospitalist Handoffs: A Systematic Review and Task Force Recommendations
Warm Handoffs

- NYU, 99 PGY 2/3 residents trained on warm handoffs, 60 responded
  - 85% perceived warm handoffs to be safer than written/verbal
  - 87% improved knowledge and comfort on day 1
  - 75% spent an extra hour or more
  - 88% worthwhile – 90% perform warm handoffs some of the time compared to 5% pre-intervention

Assessing the implementation of a bedside service handoff on an academic hospitalist service

Charlie M. Wray a, b, Vineet M. Arora b, Donald Hedeker c, David O. Meltzer a, d, e

67% of the scheduled BHOs were performed

52% of participants would not or were unsure they would continue

What about the patients?
Service Change Handovers

- Formal introduction
- Sit down with the patient
- Clarify team member roles
- Communicate with subspecialists
A Case

Dr. M has finished her service days and is now signing out to the oncoming physician. There are 14 patients listed, all of them are stable. She updates her sign out for her colleague and leaves for the day.

What information should be included in the sign out and how should it be relayed?

Everything that is included in shift change handoff in addition to the patients’ concerns.
Handoffs We Will Review

Types of Handoffs

• End of Shift
• Service Change
• Discharge
Mr. S is a 79 yo M w/ hx of mildly elevated PSA and HTN who was admitted to the hospital for fatigue and decreased appetite. He was diagnosed w/ a UTI, & his PSA was >100. Urology recommended outpatient follow up for possible prostate biopsy after his UTI treatment was complete. He was discharged w/ outpatient PCP and Urology appointments. He returned to the ER a week later asking about his prostate cancer workup.

What information should have been given to the patient and how should it have been relayed? Could his ER visit have been prevented?
Internal Medicine Residents’ Perceived Responsibility for Patients at Hospital Discharge: A National Survey

How many days are inpatient providers responsible for their patients after they are discharged?

The Impact of Readmissions

1/5 Medicare pts readmitted w/in 30 days

2.6 million seniors

Over $26 billion per year
Readmissions Reduction Program (HRRP)

Background

Section 3025 of the Affordable Care Act added section 1886(q) to the Readmissions Reduction Program, which requires CMS to reduce patient readmissions, effective for discharges beginning on October 1, 2012.

Figure 2
National Medicare Readmission Rates Started to Fall in 2012

![Graph showing national average readmission rates for different diagnoses from July 2005 to June 2014.]

Notes: National readmission rates include unplanned hospitalizations for any cause within 30 days of discharge from an initial hospitalization for either heart failure, heart attack, or pneumonia. Readmission rates are risk-adjusted for certain patient characteristics, such as age and other medical conditions.
Source: Kaiser Family Foundation analysis of CMS Hospital Compare data files.
Discharge Handovers

- Medication Reconciliation
- Patient/Family Education
- Interdisciplinary team
- Follow Up

http://www.creativeblueprintmarketing.com/marketing-packages/
Medication Reconciliation

19% of patients experience adverse events post discharge.
30% are preventable.
66% related to adverse drug events.


A Toolkit to Disseminate Best Practices in Inpatient Medication Reconciliation: Multi-Center Medication Reconciliation Quality Improvement Study (MARQUIS)

Ideal Medication Reconciliation Process

MARQUIS Standard Bundle:
1. **Risk stratification**: standard approach for placing patients in high or low risk pathway
2. **Interview**: standard approach at admission to take Best Possible Medication History (BPMH)
3. **Reconciliation**: standard approach at discharge to highlight changed, discontinued, or new medications
4. **Education**: standard approach at discharge to educate patient on changed, discontinued, or new medications
5. **Forwarding**: standard approach at discharge to forward discharge medication list to next provider

MARQUIS Intensive Bundle:
- **Output**: Risk status documented
- **Output**: Best Possible Medication List
- **Output**: Accurate discharge medication list depicting changes
- **Output**: Patient educated
- **Output**: Discharge medication list forwarded to next provider
Patient/Family Education

- Reinhard and colleagues revealed
  - 40% of caregivers perform medical/nursing tasks
  - 78% of caregivers manage meds
  - 58% of caregivers serve as care coordinators

- Care Transitions Intervention (CTI)
  - 4-week program that reduces readmissions, offers costs savings
  - Coach visits in the hospital
  - One home visit
  - At least 3 phone calls

What should be communicated?

- Discharge diagnosis
- Red Flags/warning signs
- Medication changes
- Follow Up appointments
- Identify needed home support
Follow Up

- Availability of discharge summary at 1st visit low (12-34%), which affects quality of care in 25% of cases
- CHF f/u should occur w/in 7 days
- All other patients within 14 days unless they have complicated comorbidities

Ibironke et al., JAMA Intern Med, 2013;173 (8): 624-629
Kripalani et al., JAMA, 2007, 297(8): 831-841
Changes in Health Care Costs and Mortality Associated With Transitional Care Management Services After a Discharge Among Medicare Beneficiaries

Table 1. Medicare Beneficiaries With Discharges Eligible for TCM Services, 2013-2015

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>TCM (n = 975,169)a</th>
<th>No TCM (n = 17,781,538)</th>
<th>E/M Office Visit (n = 9,279,899)b</th>
<th>No E/M Office Visit (n = 8,501,639)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, mean (SD)</td>
<td>76.3 (11.1)</td>
<td>76.3 (11.1)</td>
<td>72.3 (13.9)</td>
<td>72.0 (14.6)</td>
</tr>
<tr>
<td>Male, No. (%)</td>
<td>41,338 (42.7)</td>
<td>3,365,056 (44.0)</td>
<td>1,160,441 (44.8)</td>
<td>2,556,511 (42.1)</td>
</tr>
</tbody>
</table>

Table 4. Mortality 31 to 60 Days After TCM- Eligible Discharge

<table>
<thead>
<tr>
<th>Type of Visit</th>
<th>Mortality (95% CI), %</th>
<th>TCM vs No TCM, Adjusteda</th>
<th>TCM vs No TCM With or Without E/M Office Visit, Adjusteda</th>
</tr>
</thead>
<tbody>
<tr>
<td>TCM</td>
<td>1.1 (1.1-1.1)</td>
<td>1.0 (1.0-1.1)</td>
<td>1.0 (1.0-1.0)</td>
</tr>
<tr>
<td>No TCM</td>
<td>1.6 (1.6-1.6)b</td>
<td>1.6 (1.6-1.6)b</td>
<td>NA</td>
</tr>
<tr>
<td>E/M office visit</td>
<td>1.4 (1.4-1.5)b</td>
<td>NA</td>
<td>1.5 (1.4-1.5)b</td>
</tr>
<tr>
<td>No E/M office visit</td>
<td>1.7 (1.7-1.7)b</td>
<td>NA</td>
<td>1.7 (1.7-1.7)b</td>
</tr>
</tbody>
</table>

Abbreviations: E/M, evaluation and management; NA, not applicable; TCM, transitional care management.

a Adjusted for age, sex, risk score, Medicare/Medicaid dual status, home health care, type of discharge, and year of discharge. The 95% CIs are derived from SEs adjusted to account for clustering at the hospital service area based on the home zip code of the beneficiary.

b Statistically significant compared with TCM (P < .001).

Higher Hierarchical Condition Category scores reflect greater morbidity.
Recap!

- Handoffs are important and affect patient care
- Choose a standard sign out method w/ both verbal and written components
- Update clinical status, to do lists and anticipatory guidance daily
- During Service change think about the patient’s experience
- Remember the discharge bundle
Resources

- Joint Commission Website
- Agency for Healthcare Research and Quality (ahrq.gov)
- Project Red
- Caretransitions.org
- CMS.org
- Project Boost