



CLINICAL HANDOFFS: EMERGING STRATEGIES ACROSS SYSTEMS



D. Bails MD, K. Hurdle MS, M. LoCurcio MD, M. Brabeck MD, E. Hackett MD, J. Adams MD, E. Grossman MD, E. Goldberg MD
 *Medicine Service, Bellevue Hospital Center, NYC, NY, USA bailsd01@nyumc.org

Introduction

It has been estimated that 98,000 deaths occur annually in the US that are directly attributable to medical errors. Concerns that physician fatigue contributed to errors has led to significant work hour restrictions over the past decade. As a result, care has been increasingly fragmented and the number of handoffs has risen dramatically. Recent studies have shown:

- Communication errors are twice as clinical errors in contributing to deaths
- Weekend mortality is higher than weekday mortality

Challenges

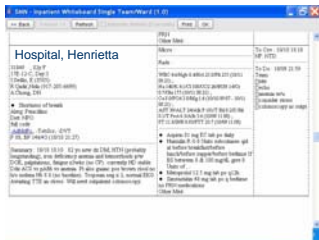
- No current standards exist to define handoff processes
- The communication that occurs at clinical transition points is inconsistent and poorly defined
- Very few methods exist to display clinical information to ALL clinicians (nurses, social workers, etc.)
- Electronic Medical Records and systems differ between institutions

Shared Goals

- Utilizing mandatory computerized templates to maximize effective communication and minimize opportunity for errors of omission
- Defining Minimum Standards of Communication
- Creating Signout/ Handoff tools that pull clinical information directly from the EMR
- Creating useful resources for physicians
- Investigating how information can be better exchanged between institutions
- Improving the language of signouts and skills required to effectively communicate

Electronic Innovations

The MISYS Signout: Improving Day-to-Night Handoffs



Problem/ Challenge

As clinical handoffs have become increasingly important, there was no available method for clinical information to be accessible to all clinicians at each transition point in care.

Solution: The MISYS Signout

- Displays demographic and clinical information pulled directly from the EMR
- Allows the computer to "work for the MD" by auto-populating information
- Provides accurate medication lists
- Provides a unified location for objective data and signout activities
- Has vastly improved the exchange of clinical information
- May prove to decreased medication errors at Bellevue

ICU to Floor Transfer Note Template A Handoff Tool Across Three Institutions

Template of Mandatory Items

SUBJECTIVE DATA	
Verbally signed out with team?	
Date/Time	
Admitting Diagnosis	
Code Status	
Family Contact	
Pertinent labs	
Pain Issues	
Microbiology Results	
Procedures/ Study results	
Active Consults	
Medication List	
Antibiotic History	
OBJECTIVE DATA	
Vital Signs	
Physical Exam	
Lines/ Tubes	
PROBLEM LIST	
ID	Heme (Including Anticoagulation)
CV	FEN
Pulmonary	GI Prophylaxis
GI	DVT prophylaxis
Renal	Neurology
Endocrine	Dermatology

Problem/ Challenge

Sicker patients
 Different information systems
 Unpredictable transfer times
 Floors: No protocolized care like ICU

Standard template

- Assures communication of all important elements
- Promotes the handoff to occur
- Can be incorporated into each institution's EMR

Research Projects

Capstone Project: Evaluating Handoffs From Gouverneur to Bellevue

Submitted by Jennifer Adams, MD

Task and Methods

- Evaluate the transfer process of patients presenting to GH urgent care center who are sent to BH ER for evaluation
- Interviews of urgent care, emergency room and hospital staff and physicians
- Map of the process (see flowchart ->)
- Case studies- on ambulance transfers from GH to BH

Outcome

- 12 Cases followed, 11 admitted
- 2/11 received follow up appointments (for primary care) at BH instead of GH.
- There was NO documented contact between BH and the PCP or referral source in any case

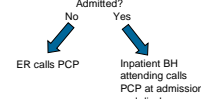


Recommendations

- Assign a PCP to every pt seen in urgent care
- Referral cards
- Modify Transfer forms
- Assign a point person for referral F/up at BHC
- Create Directory of GH providers for BHC
- Alpha numeric text pagers
- Social Activities between sites

Action Plan

- GH: give ALL patients a PCP
- GH urgent care informs PCP of case
- Adapt transfer form



The Scripted Narrative Sign-out

LEVELS OF INFORMATION

LEVELS OF INFORMATION	CLINICAL EXAMPLE
Level 1: perception of the facts in the environment	Example: Mr. X is a 44-year-old man with HCV who presented with nausea and vomiting. Gastric lavage showed bright red blood that did not clear after 1000 cc. His blood pressure on admission was 90/50, HR 120, and HH 5.2/7. Now with HH 10/30 after 2 units PRBCs, and esophageal banding. BP 110/80 to 82.
Level 2: comprehension of the situation, encompassing integration of the information and a determination of relevance to the person's goals and objectives.	Example: Mr. X is a 44-year-old man with HCV who presented with an upper-GI bleed from esophageal varices, now stable after banding.
Level 3: the ability to forecast future events based on the information in level 1 and level 2.	Example: Mr. X is a 44-year-old man with HCV who presented with an upper-GI bleed from esophageal varices, now stable after banding. Patient is at high risk for re-bleeding in the next 72 hours, and therefore will be monitored in a step-down unit with frequent CBCs.

- The Problem: there is no standard form for written clinical summaries of patients on sign-outs given by the primary clinical team to covering interns.

The Project: Submitted by Elizabeth Hackett, MD and Michael LoCurcio MD

- We will perform a randomized controlled trial of a scripted narrative format for these clinical summaries.
- This format is based on the Situational Awareness model from aviation in which three levels of information are identified. We hypothesize that providing level 2 and 3 information rather than level 1 information will improve intern's confidence and decision-making ability while covering patients not on their primary team.
- Simple to teach and will be easy to apply rapidly and widely within the program, if it is shown to be superior to current written sign-outs.

Future Directions

Setting Standards: Outpatient to Inpatient Communication

Impediments
 Difficulty in identifying PCP
 Lack of Up-to date intranet directory
 Lack of efficient mode of communication (text pagers/ secure email)

Standards Of Performance

- All patients provided with a copy of their discharge summary
- PCP informed of admission and discharge in real-time
- Ultimately an ATTENDING responsibility to assure communication
- PCP must attempt to contact Medical Consult on admission
- PCP responds to contact overtures and accommodates discharge follow-up

Action Plan

- Inclusion of PCP on MISYS facesheet
- Regularly updated intranet-based Directory

NYCLIX: Improving Handoff Communication Between Hospitals

Challenge

- Currently, there is no means of organized information exchange between hospitals
- As EMRs continue to gain sophistication and detail regarding patient information, very little has been done to link the information between institutions
- As patients present to any ER or inpatient facility in NYC, no data is available to clinicians

Solution

- New York Clinical Information Exchange
- Dr. Eric Goldberg is a current collaborator in this investigation
- A multicenter initiative to improve inter-hospital communication, currently in development to link ER clinical data (inpatient areas may follow)
- Can vastly improve the flow of information, utilization of tests and overall patient care



Opportunities for DGIM And Faculty

- 1) Help to bring clinicians together around shared challenges
- 2) Initiate faculty development programs to improve signout and communication skills
- 3) Support defined and rigid standards for handoff communication
- 4) Supporting information systems and modes of communication that are built within normal workflow
- 5) Apply GIM evaluation expertise in measuring the outcome of handoff interventions