Background

- Handoffs between providers have increased following the 2011 Accreditation Council for Graduate Medical Education (ACGME) work hour restrictions
- As a result, errors in communication, medication allergies, and important updates to the problem list, and result in adverse outcomes to patients.
- Literature supports a role for comprehensive handoff training programs in the reduction of medical errors.
- At Thomas Jefferson University Hospital (TJUH), the 2016 Safety Culture Survey revealed we were below the national benchmark for safety of handoffs (Figure 1).
- The interdisciplinary Housestaff Quality and Safety Leadership Council (HQSLC) sought to evaluate and modify the TJUH handoff process.

Methods

An interdepartmental workgroup was created to develop comprehensive handoff training programs in the reduction of medical errors.

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Results

With leadership of a Surgery Quality Fellow, abbreviated IPASS materials specific to TJUH were created. These materials were successfully piloted in the surgery department and informed further development of handoff curriculum by GME leaders which was used to train all incoming interns to TJUH in 2017. HQSLC members also assisted with training for senior housestaff in many specialties (Figure 4).

Evaluation of the proportion of rapid response team (RRT) activation rates versus total demonstrates an initial decrease as more residents are trained in IPASS; a spike in July did occur with new trainees; further data collection to follow (figure 5).

A pilot of new ICU to floor transfer workflow did not significantly increase total time to transfer to the floor or time to transfer bedside evaluations (figures 2 and 3). A modest increase in the number of charted bedside evaluations by sending team as well as the accepting resident changing the physician staff information was found in chart review after the pilot.

Conclusions

- Handoffs are an essential component of high quality care of hospitalized patients, and are an area that continue to require continued vigilance in quality improvement.
- The HQSLC set out to demonstrate that changes to the process and content of handoffs between members of different departments could improve handoff quality at TJUH. HQSLC residents and faculty champions from various departments collaborated to create standardized training materials which were ultimately used to train all incoming interns as well as senior residents from several departments.
- Although our pilot for a new transfer workflow resulted in only a modest behavior change in transfer practice, it stimulated significant dialogue around handoff process and culture which has helped make safe handoffs an institutional priority.
- Our pilot study occurred just prior to a transition to a new EMR, allowing our results to inform the creation of a new electronic documentation workflow for patient flow from the ICU to the floor affecting quality care at our institution.

Lessons Learned/Future Directions

- The HQSLC, along with faculty support, successfully engaged residents to build a platform for change and tackle an institutional complex problem.
- This process was not without many challenges:
  - Extensive heterogeneity of handoffs styles across various training programs created barriers to standardization of handoff process
  - Pace of change and faculty involvement varies between units and department
  - Support from hospital and program leadership is essential; change is quickly extinguished without consistent reinforcement from faculty and senior housestaff
- Through this project, HQSLC members gained valuable leadership skills, as well as an increased appreciation for stakeholder interplay and the physician role in our institution.

In 2017, the HQSLC continues its work to ensure lasting success in handoff safety at TJUH -
- In our EMR, the written handoff tool now mimics IPASS to complement and reinforce use of standardized handoff content transfer (Figure 8, right).
- To evaluate the quality of handoffs, including use of IPASS, formal interdisciplinary handoff observation and feedback training to start in January 2018 mediated by HQSLC resident members.
- Further research efforts will evaluate if IPASS handoffs from day to night shift could have a measurable effect on the number of rapid response team (RRT) activations at nighttime versus during the daytime, and if resident categorization of illness severity accurately predicts likelihood of RRT or level of care escalation.

References:


IPASS Way of Life: How a Housestaff Quality Council Supported Complex Institutional Change

Kristin Lohr, MD & Grant Turner, MD, Andrew Brown, MD, Allison Greco, MD, Megan Margiotta, MD, and Rebecca Jaffe, MD

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Figure 1: Bar chart demonstrating housestaff attitudes towards handoffs and patient safety culture at TJUH versus national benchmark for 2016.

Figure 2 (left): Flowchart demonstrating steps taken to implement IPASS at our institution.

Figure 3 (below): Process map for the ideal ICU to floor handoff process, with red highlights indicating steps taken to the current workflow.

Figure 4: Pain chart demonstrating cumulative housestaff that have been trained in IPASS at our institution since the implementation of IPASS.

Figure 5: Demonstration of proportion of evening RRT activations to total activations as a surrogate for handoff effectiveness.

Figure 6: Time from assignment of floor bed to transfer of patient out of the ICU was not significantly increased by our intervention.

Figure 7: Comparison of completion of bedside evaluation prior to transfer from the ICU team to the floor team and staff information was being changed by receiving team pre and post intervention.

Figure 8: Screenshot demonstrating example of integration of IPASS handoff tool into EMR. © 2017 Epic Systems Corporation. Used with permission.