



Physician Transition of Care: Benefits of I-PASS and an Electronic Handoff System in a Community Pediatric Residency Program

Jasmine Walia, MD; Zainab Qayumi, MD; Nayaab Khawar, BA; Beata Dygulska, MD; Ilya Bialik, MD; Carolyn Salafia, MS, MD; Pramod Narula, MD

From the New York Methodist Hospital, Brooklyn, NY
The authors declare that they have no conflict of interest.

Address correspondence to Jasmine Walia, MD, New York Methodist Hospital, 506-6th St, Brooklyn NY 11215 (e-mail: jkw02005@gmail.com).

Received for publication June 30, 2015; accepted April 10, 2016.

ABSTRACT

BACKGROUND: Miscommunication is a leading cause of adverse events in hospitals. Optimizing the handoff process improves communication and patient safety. We sought to assess how the components of I-PASS (a mnemonic for illness severity, patient summary, action list, situational awareness with contingency planning, and synthesis by the receiver), a standardized handoff bundle, improved the quality of handoffs in a pediatric residency program based in a community hospital.

METHODS: Pediatric residents in a university-affiliated community teaching hospital were observed on the pediatric inpatient floor and in the newborn nursery. One hundred resident handoffs per setting were analyzed in 3 phases, with a total of 600 handoffs assessed. Phase 1 comprised preintervention handoffs before I-PASS; phase 2, initiating I-PASS mnemonic and educational session; and phase 3, implementing a handoff tool, electronic physician handoff (EPH), into the electronic medical record. One attending physician at each setting assessed the handoff process using an 11-item survey. A resident satisfaction survey assessed the resident's experience after phase 3.

RESULTS: Comparing phase 1 with phase 2, there was improved situational awareness with contingency planning (nursery: 12% to 83%, $P = .001$; floor: 21% to 84%, $P = .001$). Incidence of tangential conversation decreased in both settings (nursery: 100% to 23%, $P = .001$; floor: 84% to 11%, $P = .001$). Comparing phase 2 with phase 3, there was improvement in identification of illness severity (nursery: 62% to 99%, $P = .001$; floor: 41% to 64%, $P = .001$) and fewer omissions of important information (nursery: 14% to 0%, $P = .001$; floor: 33% to 17%, $P = .007$). A total of 93% of residents found the new EPH system to be beneficial.

CONCLUSIONS: Specific components of a standardized handoff system, including a mnemonic, an educational intervention, and an EPH, improved the clarity and organization of key information in handoff.

KEYWORDS: educational research; electronic handoff system, intervention; handoff; I-PASS; quality improvement; quality of care; resident education; residents; teaching hospital

ACADEMIC PEDIATRICS 2016;16:519–523

WHAT'S NEW

The study evaluated the importance of specific components of the I-PASS handoff bundle in a university-affiliated community hospital in order to improve resident handoff. A resident satisfaction survey highlighted the comfort level in using the new handoff system.

PHYSICIAN HANDOFF, THE process of transferring patient-specific clinical information between health care providers, is a critical moment in which communication failures may reduce quality of patient care.^{1,2} Communication errors during patient handoffs constitute a majority of adverse events in medical care.^{3,4} With

the increasing complexities of medical treatment and care in hospitals, the importance of effective measures of communication between providers has never been more important. Furthermore, the Accreditation Council for Graduate Medical Education's new policy on duty hours has led to increased handoffs between residents, increased omissions of important patient information, and reduced continuity of patient care.^{1,5–7} With these new regulations, standardized physician-to-physician handoffs are recommended for the provision of medical care.^{8–10}

Recent studies have shown communication deficiencies among physicians and discrepancies in the quality of handoffs between different institutions.^{5,8,9} Recommended strategies to enhance handoffs and decrease medical

errors include educational lectures, communication training, mnemonics to standardize handoffs, reduction of interruptions during handoffs, and computerized tools.^{11–20} Some benefits of utilizing an electronic medical record (EMR) as a standardized handoff tool include decreasing transcription errors, increasing in-house and remote accessibility, reducing data collection time, and improving legibility.^{7,21,22}

The objective of this study was to assess the quality of handoffs by implementing specific components of the I-PASS handoff bundle, a standardized method derived from a multicenter study initiated at Boston Children's Hospital.^{11,23,24} Prior I-PASS studies have evaluated handoffs in academic centers, but this study was based in a community hospital pediatric residency. This study aimed to implement specific I-PASS components, the mnemonic and educational intervention, faculty training and observation, and an electronic physician handoff (EPH) on the pediatric inpatient floor and in the newborn nursery, and to assess the quality of resident handoffs. The secondary aim was to determine the effectiveness of each individual component on the overall handoff.

METHODS

SETTING AND PARTICIPANTS

The study took place in a university-affiliated community hospital at New York Methodist Hospital, which consists of 16 pediatric inpatient beds and includes 5500 births per annum. The pediatric academic residency program includes 28 residents. The project was implemented in 2 settings, on the pediatric floor and in the newborn nursery. These 2 settings were chosen to compare the diverse environment and acuity of patient care. The participants were a 2-resident team including 1 postgraduate year 1 (PGY-1) resident and 1 PGY-2 or PGY-3 resident for every 12-hour shift. The components of the I-PASS bundle utilized in this study were created by the I-PASS study group from Boston Children's Hospital.¹¹ We chose from the I-PASS bundle the mnemonic and educational intervention, faculty training and observation, and the EPH.¹¹ The study was from January 2013 to December 2013, with all participants working at the institute for a minimum of 6 months. Phase 1 began in January 2013, phase 2 in April 2013, and phase 3 in September 2013. New interns joined in the middle of phase 2 and were educated according to the same protocol. During all phases, handoffs were observed by one faculty member in each setting.^{11,25}

The study was approved by the institutional review board at New York Methodist Hospital.

EDUCATION AND INTERVENTION

In phase 1 (pre-I-PASS), PGY-1 residents led verbal handoffs, supervised by their senior resident and an attending physician. The verbal handoff included patient name, working diagnosis, hospital day number, current health status, current medications, and a to-do list to be completed during the shift. Residents made notes on a printed patient census, generated from the hospital's

EMR (PowerChart, Cerner Corp, Kansas City, MO). During phase 2 (postmnemonic/education), all residents participated in a 90-minute educational session. The intervention focused on training residents to organize handoffs by using the mnemonic "I-PASS" (illness severity, patient summary, action list, situational awareness with contingency planning, synthesis by the receiver).^{11,23,24} The residents were educated on the importance of handoff, ideal content of handoffs, proper use of the mnemonic, and consequences of poor handoffs. After the educational session, an interactive workshop had residents role-playing cases using the new verbal handoff. Each example highlighted the components and strategies of effective handoffs.

In phase 3 (post-EPH), the EPH was incorporated into the EMR, with a template of the I-PASS mnemonic. A 90-minute interactive session taught residents how to efficiently use the EPH. Every resident, before handoff, completed the EPH in the EMR, printed a copy of the EPH, and referred to the EPH during the handoff process.

Residents completed an anonymous questionnaire after phase 3, rating the new system, indicating their comfort level of the handoff, and listing any concerns with the system.

FACULTY DEVELOPMENT AND OBSERVATION

Two attending physicians were trained to assess the handoffs in an educational session given by the I-PASS study group from Boston's Children Hospital, based on faculty development as designed in the I-PASS bundle.²⁵ An 11-item survey to assess handoffs was modified from a 17-item survey created by the I-PASS group. The 11 items included the elements of the mnemonic and evaluation of the handoff giver. Unlike the original survey, which used a scale to rate the quality of each category, each attending physician documented a yes or no to indicate if the element was present. The original survey rated the pace of the handoff (too fast, fast, optimal, slow, too slow), while the attending physician in this study labeled each handoff as optimal or not (without including the actual pace). To assess the resident's sign-out in each phase, 100 handoffs were evaluated on the pediatric floor and in the newborn nursery by the same attending physicians. The attending physician completed the survey without feedback to the residents during the handoff.

STATISTICAL ANALYSIS

Statistical analysis was performed by IBM SPSS Statistics 20 software (IBM SPSS, Chicago, Ill). The study analyzed categorical variables using contingency tables and chi-square analysis.

RESULTS

One hundred patient-specific handoffs were evaluated in the 3 consecutive phases from both the pediatric floor and the newborn nursery, with a total of 600 handoffs assessed.

Download English Version:

<https://daneshyari.com/en/article/4138859>

Download Persian Version:

<https://daneshyari.com/article/4138859>

[Daneshyari.com](https://daneshyari.com)