abstract

OBJECTIVE: Physician-to-physician handoffs have been identified as a high-risk area of patient care. Few data exist to support any specific handoff process as being superior. We developed a handoff process entitled physician bedside handoff (PBH), which is unique for allowing all stakeholders, including the parents of patients, to be involved in the handoff at the bedside. Our goal was to compare stakeholder perceptions of PBH with traditional physician handoff and to learn which factors stakeholders believe are important for improving handoffs in general.

METHODS: A convenience sample of 34 stakeholders (including attending physicians, residents, nurses, patient care attendants, patient parents, and medical students) participated in 1 of 3 group level assessments (GLAs), a participatory method in which valid data are generated regarding an issue of importance through an interactive and collaborative process.

RESULTS: In comparing PBH and traditional handoffs, participants uniformly perceived that both processes have value and that neither is superior in all cases; individual circumstances and parental preference should dictate which is used. Participation of all stakeholders was identified as being essential in improving handoffs in general. Other themes included that handoffs should occur in both verbal and written formats, and that providers and learners, specifically medical students and residents, should be comfortable with both types of handoffs.

CONCLUSIONS: Participants identified that including all stakeholders is essential to improve handoffs, that PBH is not superior to traditional handoffs, and that both processes have value. Further research should be conducted to determine if including all stakeholders in the handoff process results in improved quality of care and safety.

INTRODUCTION

Physician-to-physician handoffs have been identified as a high-risk area of patient care that can result in serious safety events, near misses (medical errors that do not cause harm), suboptimal patient care, and poor coordination of care.1 Many potential reasons for these risks have been identified, including lack of a standardized procedure or process, incomplete information transfer, overestimation of the effectiveness of the communication, and reliance on one-way communication.1-4 Physician handoff on the intern and resident level has been identified as being particularly inadequate, potentially due to a lack of appropriate education regarding
handoffs. Despite these issues, the available literature suggests few data exist to support any specific handoff procedure or practice.

Historically, physician handoff has been conducted directly from physician to physician, without the involvement of any other members of the treatment team or patient families. In addition, handoffs generally occur away from the patient, such as in a conference room, office, or call room. Therefore, the traditional physician handoff process is not consistent with the principles of family-centered care, which reportedly improve communication among physicians, nurses, and families.

We have developed a unique physician handoff process entitled physician bedside handoff (PBH) for use in the inpatient unit at the Cincinnati Children’s Hospital Medical Center Liberty Campus that anecdotally has been well received by physicians, nurses, ancillary staff, and patient families. Specifically, for each patient, the incoming and outgoing hospitalists perform a handoff directly from physician to physician, without the involvement of the patient and correct and/or update orders as needed. In practice, each handoff takes ~2 to 3 minutes. If there are nonurgent issues or questions that will take significantly more time, the incoming hospitalist tells the parents that he or she will return after all other handoffs are completed, preferably within a specific timeframe.

**DESCRIPTION OF THE PBH PROCESS**

First, the outgoing physician introduces the incoming hospitalist to the parents. Second, the outgoing hospitalist describes the purpose of the handoff: (1) to briefly discuss and clarify the patient’s diagnosis and care plan, (2) to answer any questions from the parents and/or staff concerning the patient’s care, and (3) to make sure that all stakeholders are up to date and in agreement with the care plan. Third, the outgoing hospitalist describes the patient’s case, emphasizing the diagnosis (or diagnostic plan) and the current treatment plan, including the predicted discharge date and time. Participation of all stakeholders is explicitly encouraged. Lastly, the incoming hospitalist has the opportunity to briefly examine the patient and correct and/or update orders as needed. In practice, each handoff takes ~2 to 3 minutes. If there are nonurgent issues or questions that will take significantly more time, the incoming hospitalist tells the parents that he or she will return after all other handoffs are completed, preferably within a specific timeframe.

**DESIGN/METHODS**

**Participants**

This qualitative study was conducted at the Liberty Campus of Cincinnati Children’s Hospital Medical Center (Cincinnati, OH), an urban, tertiary care children’s hospital. The institutional review board determined this study to be exempt from review. A convenience sample of 34 stakeholders (4 attending physicians, 3 residents, 16 nurses, 3 patient care attendants, 6 parents, and 2 medical students) participated in 1 of 3 study groups. The parents were all members of our Family Advisory Council. Approximately two-thirds of the stakeholders had previous experience with both PBH and traditional handoffs, and none had experience with PBH only. Parent participants received a gift card to thank them for their time.

**Measures and Procedures**

In each group, we used group level assessments (GLAs), a participatory method in which valid data are generated regarding an issue of importance through an interactive and collaborative process. The GLA method was chosen instead of traditional focus groups because the GLA process allows for groups of stakeholders with different backgrounds and training (eg, physicians, nurses, parents) to be actively involved in generating and synthesizing data. For a more detailed description of the GLA process, please refer to the article by Reddy on this topic.

Data were collected in the following fashion. First, the participants met with the research team in a large room. Participants were asked to make written responses to 45 questions on flip charts that were placed in the room. Example prompts included “In an ideal
world, handoffs would include….” “Characteristics of an excellent handoff include….” and “After viewing the video on physician bedside handoff (or traditional handoff), rate the following on a scale of 1 to 5: possibility of error, quality of care, patient safety, etc.” Participants were instructed to look at what others had written. Second, the participants divided into 4 small groups and were given 5 to 7 flip charts each, and were instructed to discuss the responses on the charts to identify common themes. Third, the large group reunited, and each small group reported their findings. The primary facilitator recorded the major themes on a flip chart for the larger group to review. Finally, the large group discussed and came to consensus on overall themes and chose the most important priorities regarding the handoff process.

**Data Analysis**

Individual-level qualitative data were collected by each participant in response to the different prompts during each GLA. Because the GLA is a participatory process, the participants themselves distilled and summarized themes from the flip charts and prioritized needs during the actual GLA. After the 3 GLA groups were finished, the researcher team compiled study results across groups to detect similarities and overlap of priorities.

**RESULTS**

In comparing PBH and traditional handoff processes, participants uniformly perceived that both have value and that neither is superior in all cases; individual circumstances and parental preference should dictate which process is used. It is important to note that because there is no consensus in the definition of “superior handoff” in the literature, the researchers instructed the stakeholders to compare subjectively traditional handoffs with PBH. The involvement of all stakeholders was identified as an essential element of improving handoffs in general; location was not as important. Five other themes emerged from the data: (1) “core” handoff information should be identified so that it can be standardized, (2) handoffs should occur in both verbal and written formats, so that core information can be better retained by all stakeholders, (3) families should have the authority to decide where and how the handoff occurs, (4) time and patient privacy should be considered when deciding the mode of handoff, and (5) providers and learners should learn how to do both types of handoffs.

**DISCUSSION**

Participants identified that the inclusion of all stakeholders is an essential factor in improving handoffs, regardless of where the handoff takes place. In addition, participants believed that multidisciplinary involvement is important even when all stakeholders cannot be present for the actual handoff. Other findings included that both PBH and traditional handoffs are perceived to have value, and neither is superior in all circumstances.

Concerning the inclusion of all stakeholders in the handoff process, our results revealed that communication of handoff information between stakeholders is perceived to be essential. Although inclusion of all stakeholders is the unique feature of PBH, this can also be accomplished in an asynchronous fashion when traditional handoffs are used. Consistent with this, our study participants identified that PBH is not superior to traditional handoffs in all cases and that both processes have value.

In deciding which handoff process should be used in a given situation, study participants identified time constraints, patient privacy, family and patient preferences, and the nature of the information transferred as important factors. Study participants also consistently identified that families should have the power to decide how and where the handoff occurs. This conclusion is consistent with our finding that stakeholders believe that providers and learners should learn how to perform handoffs using both the PBH and traditional handoff processes. These findings suggest that families and nonphysician clinicians want the opportunity to be involved in physician-to-physician handoffs, which is a new concept that has not been reported from a qualitative study, to our knowledge, in the literature. Our findings suggest that this opportunity for multidisciplinary handoffs involving families and patients and the actual information transferred are the most important factors in determining the perception of handoff quality.

Interestingly, our study participants did not directly answer the question of whether PBH is perceived to improve communication between stakeholders. The fact that the stakeholders did not answer this question suggests that although PBH might help create an environment in which all stakeholders are present, PBH itself does not necessarily result in improved communication.

Two other themes identified in our study concerning handoffs in general
have been reported previously, but our qualitative study provides additional information for consideration. First, core handoff information should be identified so that it can be standardized. Previous studies have found that improved standardization of handoff information can result in increased accuracy of information transfer. However, our study participants discussed the difficulty in identifying what core information should be included in a handoff, a concept that is supported by a recent literature review on hospital handoffs. Furthermore, another review reported that significant overlap exists between nurse-to-nurse and physician-to-physician handoffs. We suggest that a standardized handoff tool incorporating nursing and physician elements might improve handoffs and interdisciplinary communication.

A second theme highlighted here is that handoffs should occur in both verbal and written formats, so that core information can be better retained by all stakeholders. This finding is consistent with previous studies, which found that residents identify both verbal and written handoffs as inadequate individually and that expert opinion supports the use of verbal and written methods together.

The strengths of this study include the participation of a wide range of stakeholders, including patient families, and the observation of examples of both PBH and traditional physician handoff examples using videos. These processes allowed us to consider the perceptions of nonphysician stakeholders. GLA methods allowed for the collection of data at both the individual and group levels, as well as allowing the study participants to process the data and create the results, which avoids the potential bias of the investigator. However, a potential weakness of the study was the inclusion of physicians in the discussion groups, particularly attending physicians, which might have caused a bias in the results.

The main implication of this study is the potential use of PBH in other clinical settings. The Liberty Campus of Cincinnati Children’s Hospital Medical Center is a small, attending-run unit, and efficiencies exist that allow for the use of PBH in the vast majority of cases. Widespread implementation of PBH in a larger and busier unit might be more challenging. However, PBH could be considered in any unit for specific cases identified as high complexity, high acuity, or when previous communication has been less than optimal. A second implication of this study is that core handoff information continues to be poorly defined by clinicians.

CONCLUSIONS

Participants identified that including all stakeholders is essential to improve handoffs, that PBH is not superior to traditional handoffs, and that both processes have value. Further research should be conducted to determine if including all stakeholders in the handoff process results in improved communication, quality of care, and safety, and to test models of bedside handoff that include patients and families. Additional research in identification of what core handoff information is essential for safe handoffs would also be valuable.

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REFERENCES


