

# Patient Safety Initiative Using Peer Observations and Feedback Inspire Collegial Workplace Culture

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## Abstract

*Following Joint Commission recommendations for standardizing patient handoffs, direct peer observations and feedback were utilized in order to improve patient safety related to transitions of care in the Division of Pediatric Hospital Medicine at Kapi'olani Medical Center for Women & Children.*

*All hospitalist attendings were trained in an evidence-based handoff bundle inclusive of team communication and feedback strategies. For the initial project, each hospitalist performed 12 peer observations and feedback sessions using validated tools for verbal and written handoffs over 6 months. For a subsequent "refresher" project, each hospitalist performed 6 handoff observations. Attendings were surveyed several times before, during, and after completion of the multiple iterations of the project. A qualitative interview was conducted 6 years after the initial handoff project.*

*In total, 204 observations were completed by 17 hospitalists during the initial project. The perceived overall quality of the patient handoff improved significantly across shifts ( $P < .001$  for the quality of each of two critical daily handoffs) as did pediatric hospitalists' confidence in providing peer feedback ( $P < .001$ ). Downstream effects of this activity led to additional benefits towards the cohesive growth of the division. Themes from post-project qualitative interviews regarding the peer observation and feedback portion of the study included that it was "helpful," "collaborative," and inspired "camaraderie" that led to increased comfort and participation during future opportunities for observation and feedback.*

*Performing direct peer observations with feedback strengthened the workplace culture, promoted growth through collaboration, and allowed acceptance and success of future projects involving peer observations and feedback.*

## Keywords

*Handoffs, Peer Observations, Workplace Culture*

## Introduction

Transitions of care, which are increasingly common for the hospitalized pediatric patient, are a common juncture for medical errors, especially those related to lapses of communication between health care providers. Recognizing the safety opportunity, the Joint Commission prioritized implementation of a standardized approach to handoff communications in their 2006 National Patient Safety Goals.<sup>1</sup> A systematic review of hospitalist handoffs published shortly afterwards noted a paucity of literature on this important subject.<sup>2</sup>

In an effort to improve inpatient handoffs, in 2013 the Division of Pediatric Hospital Medicine at Kapi'olani Medical Center for Women & Children (KMCWC) began the first phase of a quality improvement project to standardize the handoff process that occurred at several points of shift to shift physician transi-

tions of care during the daily 24-7 inpatient staffing schedule. The increasing complexity and diversity of the pediatric patient population and a growing patient census sparked an urgency to move the division towards a structured and consistent team-based approach to transitions of care. This project was designed to maximize outstanding communication within the division by standardizing verbal and written handoffs. An important motivator for the direct observations was the newly assigned Part IV Maintenance of Certification requirement by the American Board of Pediatrics. Additionally, as KMCWC is a teaching institution, there was a strong desire to model good handoff practices for the medical students and residents, who were also learning to utilize the same structured form of handoff communication. The division chose to use the evidence-based I-PASS (Illness Severity, Patient Summary, Action List, Situational Awareness and Contingency Planning, and Synthesis by Receiver) handoff model as an organizing framework for this project.<sup>3</sup> Effective implementation of the I-PASS handoff bundle demonstrated a 30% reduction in medical errors and adverse events across 9 children's hospitals.<sup>4</sup>

This project introduced peer mentoring through direct observations and structured peer feedback amongst the hospitalist attendings. Peer observation and feedback have since been described as a means for ongoing workplace coaching and self-improvement in hospital medicine through observing team performance on rounds,<sup>5,6</sup> teaching activities,<sup>7</sup> and handoffs.<sup>8</sup> McDaniel et al published a summary of nationally reported peer observation and feedback activities in hospitalist divisions collected through a national, anonymous survey performed in November 2017 at 12 institutions across the United States.<sup>9</sup> The project described in our article qualifies as one of the earliest hospitalist peer observation and feedback handoff projects found in the literature.

## Methods

This project (HPHRI Study 2012-100) was reviewed and exempted from formal IRB review by the Hawai'i Pacific Health Research Institute as it was acknowledged to be a quality improvement project that sought to improve patient care as part of hospital operations.

Pediatric hospitalist attendings participated in an intensive training session during an off-site division retreat that introduced team communication strategies, the I-PASS handoff bundle,

electronic medical record imbedded tools, and a 1-hour interactive simulation to practice performing peer observations with peer feedback.<sup>10</sup> A handoff tool in the I-PASS structure was created within the electronic medical record to support the verbal handoff; this could be printed or viewed within the electronic health record on the computer. Handoffs occurred between hospitalist attendings during 2 major shift changes: day shift to swing shift at approximately 3-4 pm and swing shift to night shift at approximately 7-8 pm. An additional modified handoff occurred in the morning between the night shift hospitalists to the various day shift hospitalist attendings.

Baseline handoff behaviors were observed by the study investigators and were measured against the ideal I-PASS structure prior to training. Following the training session, each division member performed 12 peer handoff observations of the verbal handoff and provided direct feedback using the I-PASS handoff observation tool. Two sets of peer-to-peer observations and feedback were performed, the first set during the implementation study in 2013 and a second set during a refresher training four years later in 2017. Twelve observations and feedback were performed by each hospitalist attending during implementation and 6 observations and feedback were performed by each hospitalist during the refresher. As an important side note, while further direct observations of handoffs using the observation tool were not conducted, the KMCWC Pediatric Hospitalist Medicine division continues to utilize the I-PASS handoff bundle for shift to shift handoffs.

Hospitalist attendings completed an electronic needs-assessment survey querying group members' opinions of the quality of the current handoff process and individual experience with providing feedback at baseline prior to implementation, then at 8 months, 12 months, and 4 years after initial implementation. The questions were developed based on the I-PASS handoff bundle<sup>3</sup> and included demographics, self-assessment of handoff competency, perceptions on quality of the handoffs received, and confidence in providing feedback, amongst other topics. Statistical analysis was performed using SAS statistical software version 9.4 (SAS Institute, Inc., Cary, NC). The Kruskal Wallis test was used to compare the Likert-scale questions among time periods. Fisher's exact test was used for categorical questions.

Qualitative interviews with questions developed with input from the peer observation and feedback literature<sup>9</sup> were conducted 6 years after initial implementation to elicit focused reflections regarding the experience of performing peer observations and giving peer feedback (see Table 1 for interview questions). The interviews were audio recorded with verbal consent from participants and later transcribed verbatim into a Microsoft Word document. Data was then manually coded using codes that initially arose from the data itself, becoming evident upon multiple reviews by the principal author. Codes were then organized into categories based on grouping of data. Items gleaned from relevant literature were compared against these initial codes, and when appropriate, codes from the literature were assimilated and organized under existing categories. The categories were further assessed and the organized codes more globally considered through a generalized inductive approach until greater themes and subthemes emerged through recognizing overall patterns.

## Results

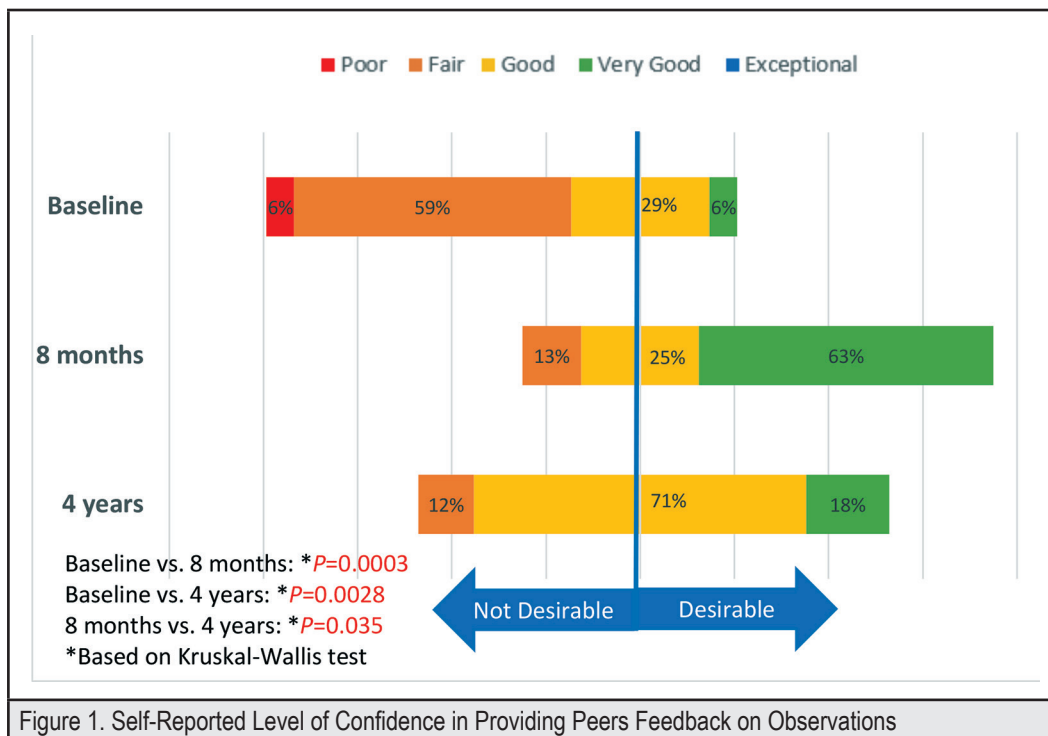
Seventeen hospitalists participated in the initial study and 18 hospitalists (including 6 new members and 12 of the hospitalists who had participated in the initial study) participated in the refresher project. In both phases of the study, the majority of participants were female who had been practicing hospitalist medicine for a mean of between 6-9 years across both projects (Table 2).

Overall perceived quality of other division members' handoffs was rated significantly better at 8 months compared to baseline ( $P < .001$  swing shift,  $P < .001$  night shift; Table 3). There was also a significant difference between 8 months and 4 years with increased "good" and less "very good" responses ( $P = .005$  for swing shift,  $P = .036$  for night shift). Self-rated confidence increased significantly from an initial 35% of division members feeling "confident" or "very confident" in giving peer feedback to 88% of division members when asked again 8 months post-project implementation ( $P < .0001$ ). This confidence in giving peer feedback was sustained 4 years post-implementation ( $P = .0028$ ; Figure 1). Hospitalist attendings found more value in peer observations and feedback for skill assessment and self-

Thinking back to the observations and feedback for the KMS Peds Hospitalists I-PASS project, what words come to mind?
Did our hospitalist I-PASS project change your relationship with your colleagues? How?
Do you remember any benefits associated with the process of observations and feedback of the hospitalist I-PASS project?
Do you remember any problems associated with the observations and feedback of the hospitalist I-PASS project?
How did the observations and feedback for the I-PASS project affect your comfort with subsequent division activities which also involved direct peer observations, feedback and open discussion?

	Baseline 2013	Refresher 2017
Number of participants	17	18
Year graduated from residency	1991-2012	1991-2016
Years as a hospitalist (mean)	6.2	8.8
Female : Male	13:4	15:3
Total observations across participants	204	108

Table 3. Overall Perceived Quality of Handoffs Across Shifts						
	Baseline n (%)	8 months n (%)	4 years n (%)	P-value <sup>a</sup>		
				Baseline vs. 8 months	Baseline vs. 4 years	8 months vs. 4 years
<b>Overall perceived quality of handoff from day to swing shift</b>						
Poor	0 (0%)	0 (0%)	0 (0%)	<.0001	.086	.0005
Fair	4 (24%)	1 (6%)	0 (0%)			
Good	13 (76%)	2 (12%)	15 (83%)			
Very Good	0 (0%)	14 (82%)	3 (17%)			
Exceptional	0 (0%)	0 (0%)	0 (0%)			
<b>Overall perceived quality of handoff from swing to night shift</b>						
Poor	3 (18%)	0 (0%)	0 (0%)	.0006	.052	.036
Fair	2 (12%)	1 (6%)	2 (11%)			
Good	12 (71%)	7 (41%)	13 (72%)			
Very Good	0 (0%)	9 (53%)	3 (17%)			
Exceptional	0 (0%)	0 (0%)	0 (0%)			



improvement at 8 months compared with baseline ( $P=.045$ ) and this was sustained 4 years post implementation ( $P=.045$ ). At baseline, 88% of surveyed division members felt peer observations and feedback were important for improving patient safety, which increased to 100% when re-surveyed at 4 years.

Fourteen hospitalists from the initial study (all initial participants excluding the 3 study leaders who are authors of this paper) and 5 additional hospitalists from the refresher study (one hospitalist

was on extended leave and not interviewed) were interviewed using open-ended questions during which several common qualitative themes emerged (Table 4). When asked, “Thinking back to the observations and feedback for the Kapi‘olani Medical Specialists Pediatric Hospitalists I-PASS project, what words come to mind?”, responses included “helpful,” “camaraderie” and “collaborative.” When asked, “Did our hospitalist I-PASS project change your relationship with your colleagues?”, twelve members noted there was no change in their already good rela-

Table 4. Themes in Participant Responses During Four Year Follow-Up Interview of the I-PASS Project (N=19)	
Themes	Coded and Verbatim Responses <sup>a</sup> (parentheses indicate frequency of verbatim responses)
Mixed feelings towards project initiation	Appreciative Scared Nervous Awkward Positive Impatient
Project valued overall	"Helpful" (5) "Valuable" (2) "Useful" (2) Created less stress with future peer observation projects
Workplace culture was positively changed	"Professionalized and normalized giving feedback" (1) Learned from colleagues modelling other styles Systematic approach Consistent behavior Ability to be honest Easier with time and practice
Relationships remained good or were improved	"None" (12) <sup>b</sup> Increased "Camaraderie" (2) Improved with expectations Collaborative Increased Respect
Common barrier of time	"Time" (8) "Interruptions" (2) Difficulty giving constructive peer feedback Competing priorities Project length

<sup>a</sup> Overlapping items incorporated from McDaniel<sup>9</sup> during coding process: identify areas for improvement, feedback less intimidating when received from peers than supervisors, creation of mutually supportive relationships, learning other styles and approaches, opportunity to practice giving feedback, barriers of time management and uncomfortable receipt of peer feedback.

<sup>b</sup> All those who noted "none" when asked if this project changed relationships with colleagues indicated the relationships within our division were already good and that this project did not have a negative impact.

tionships. Others indicated that this project helped to improve relationships through consistent communication expectations and helped them to develop a greater respect for their peers' approach to patient care. Almost all (18 of 19) division members interviewed noted that the peer observations and feedback didn't negatively affect their interactions with each other; one hospitalist described the normalized process as "one of the few times I have formally done that with my peers in a way that wouldn't hurt relationships." When asked "Do you remember any benefits associated with the process of observations and feedback of the hospitalist I-PASS project?", nearly all division members reflected on how viewing others' handoff performance and listening to how feedback was given was beneficial towards improving their own practice. There was a learning curve for some when providing feedback to peers, especially when the feedback was constructive, but all commented that performing the feedback improved their comfort and ability in this skill with continued practice. Normalizing the process of observing each other and providing peer feedback helped with future

division activities, such as a project involving observing each other on family-centered rounds and giving feedback.<sup>11</sup> When asked "Do you remember any problems associated with the observations and feedback of the hospitalist I-PASS handoff project?", the biggest limiting factor volunteered by 10 of 19 participants was the extra time and coordination that it took to observe handoffs and give or receive peer feedback during a busy clinical day. When asked, "How did the observations and feedback for the I-PASS project affect your comfort with subsequent division activities which also involved direct peer observations, feedback and open discussion?" participants reported it helped them to establish greater comfort and safety with self-allowance of necessary vulnerability when a giver and receiver of peer feedback. Participants noted that practicing strategies of peer feedback was helpful to apply towards future similar projects involving peer observation and feedback during Family Centered Rounds, and that this project laid the groundwork for future collaboration among division members.

## Discussion

Working together toward the common goal of improving patient safety through the standardization of pediatric hospitalist handoffs proved successful in improving the reported overall quality of patient care information being transmitted in both verbal and written form. Garnering buy-in from all 17 division members was achieved by surveying division members to glean beliefs and attitudes regarding current handoff processes and tools and by performing observations of baseline handoffs. The structure of the initial training retreat proved to be important in emphasizing the importance of the project and for giving division members the strategies and skills for giving peer feedback and reemphasized the importance of all elements learned from national I-PASS handoff bundle implementation.<sup>4</sup> Division response to peer observations and feedback confirmed findings recently reported in a novel national survey of pediatric hospitalists on the subject, with benefits of the creation of mutually supportive relationships, learning from others' styles, and improvement through practicing feedback.<sup>9</sup> All the division members had practice giving feedback to trainees in the past, but most had never given feedback to a peer. Most verbalized they were not used to allowing the vulnerability required to give and receive feedback with other co-workers in the division, which included members with variable experience and in all phases of their hospital medicine careers. The standardized observation tool helped to normalize the process of giving each other feedback, and, with ongoing practice, division members remarked that there was an overall decrease in anxiety, awkward conversations, and indirect wording of constructive suggestions on how to improve practice. Over time, the division accepted this as part of the normal workflow and strove for consistent use of the tool.

Comfort with giving and receiving peer feedback improved with practice as expected, and was sustained for years following this initial project. Division members who were initially skeptical of the peer observations and feedback grew to appreciate their value as a tool for faculty development. Becoming comfortable with and finding value in the process of peer observations and feedback has changed the workplace culture of the division. Shared expectations of colleagues coaching each other to excellence has improved division morale, and although difficult to quantify, this indirectly improved perceptions of patient care. Through structured patient handoffs and the open dialogue of providing peer feedback, this project encouraged sharing of clinical judgment/pearls and clinical reasoning amongst colleagues on both individual and group levels and has therefore allowed the division to grow in new ways.

The process of normalizing peer observation and feedback enhanced the group's camaraderie and proved to be a springboard for the success of additional projects involving peer workplace observations with feedback within the division, following shared division confidence in this culture shift. Subsequent

collaborative projects included observing and coaching each others' teaching behaviors during family-centered rounds and in using structured communication on family-centered rounds. Initiating this observation/feedback process allowed for sustained vulnerability amongst colleagues with an emphasis on the value of group growth and self-reflection. Questions and suggestions for most effective patient care during individual handoffs are now invited amongst division members, whereas previously, these interactions seemed more awkward and perhaps perceived as judgments of individual knowledge and skills due to lack of common practice.

Additional division benefits following this project included the implementation of case-based journal club and formal case review conferences that examine specific patient care circumstances against best practices on a systems level. The authors have surmised that the sustained change in workplace culture has allowed for meaningful frank discussion at these conferences, with division members valuing the opportunities for growth via group reflection instead of fearing a punitive review of suboptimal performance.

Achieving American Board of Pediatrics Part IV Maintenance of Certification (MOC) together as a division was also an important "carrot" which inspired all to strengthen practice to meet this important goal and paved the way for the division to receive MOC through additional group projects.

This study has several limitations. Some of the division members had been preceptors to others during their training, which made some initial feedback sessions especially uncomfortable for the junior members of the division. Observation bias was certainly a factor in performance, but with 204 observations occurring throughout the initial study and 108 observations in the refresher study, the division culture of improving accuracy and standard performance of the handoff was constantly reinforced to the point that it became habit, with only some degradation of precise use of the tool in the years that followed.

The perceived quality of hospitalist handoffs improved from baseline to 8 months and remained improved in a statistically significant manner from baseline to 4 years. However, fewer hospitalists rated the handoff quality at both the swing shift and the night shift to be "very good" vs. "good" at 4 years. One reason for this may be the long time period between the two projects with loss of adherence to the I-PASS structure due to lack of retraining of core content. Another factor includes division staffing turnover (12 of the original members participated in the follow up study 4 years later, but the addition of 6 new division members could have also affected the data). The qualitative interview responses indicated that the lack of continued workplace observations with feedback invited variation into the handoff communication structure as more time lapsed between projects.

The limiting factors of difficulty scheduling observations of handoff and giving timely feedback during busy clinical days were also challenging at times and consistent with a common barrier of time affecting peer observations and feedback as reported by McDaniel.<sup>9</sup> This was not unbearable, however, and with practice as the project progressed, the division learned ways to minimize disruptions and maximize time management while still providing peers with helpful, timely feedback.

Rallying behind a patient safety goal to improve handoff communication through attending-level peer observations and feedback sustainably improved trust and camaraderie as well as overall workplace culture of a busy pediatric hospital medicine division. Although adherence to the I-PASS structure remained high, the decrease over time underscores the need for ongoing training or refreshing foundational knowledge, workplace observations, and feedback for sustained handoff excellence.

### **Conflict of Interest Statement**

Aside from that mentioned in the disclosures, the authors have no conflicts of interest.

### **Disclosure Statement**

Dr. Patel holds equity/stock options in and has consulted for the I-PASS Patient Safety Institute. The I-PASS Patient Safety Institute is a company that seeks to train institutions in best handoff practices and aid in their implementation. Dr. Patel was not compensated by the I-PASS Patient Safety Institute (which was not in existence for the majority of the timeframe of this project) for any of this work. The other authors have no financial disclosures.

### **Acknowledgements**

We thank Hawai'i Pediatric Association Research and Education Foundation for helping our project succeed.

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