

# **ABSTRACT**

## **Background**

Effective teamwork and communication are essential for providing high-quality medical care in the emergency department (ED). Our review of patient safety reports revealed recurring themes related to challenges in interprofessional teamwork, physician-nursing communication, awareness of the operational impact on the interdisciplinary team, and physician familiarity with nursing staff. This quality improvement study aimed to assess an ED-based physician-nursing team-huddle program as an intervention to enhance self-reported interdisciplinary teamwork, improve awareness of interprofessional operational risks, and increase team familiarity.

## **Methods**

This project was conducted in a single-site academic ED. We added physician involvement into the daily morning nursing huddle in July 2022. Senior resident physicians were surveyed in our early-intervention state between July 2022 and November 2022 and, again, nine months following implementation, from May 2023 to July 2023. Our primary outcome was a change in self-reported sense of interdisciplinary teamwork in the ED and, secondarily, awareness of operational issues on the interprofessional team and overall familiarity with the nursing staff. We used descriptive analysis to evaluate outcomes.

## **Results**

There were 16 respondents in our pre-intervention state and 17 in our post-intervention state, representing a 73% and 77% response rate. Our intervention was associated with a 26.5% improvement in the sense of strong interdisciplinary teamwork, a 33.8% improvement in

24 awareness of daily issues, a 21.6% improvement in operational process impacts, and a 15.4%  
25 improvement in nursing team familiarity.

26

## 27 **Conclusion**

28 Our team-huddle program improved self-reported interdisciplinary teamwork, operational  
29 awareness, and staff familiarity.

30

## 31 **KEYWORDS**

32 Communication, emergency department, team huddle, collaboration, interdisciplinary teamwork

## **Interdisciplinary Team Huddle Initiative: An Innovative Approach to Improving Effectiveness of Teamwork and Communication in the Emergency Department**

### **BACKGROUND**

Teamwork is key to safe patient care provision in the emergency department (ED). With many quick decisions that must be made to care for critically ill patients, well-established team dynamics and communication are essential in this environment. Suboptimal communication and teamwork correlate with sentinel patient safety events and an error-prone environment, resulting in missed or delayed diagnoses, improper treatment, morbidity, and increased healthcare costs.

Our current understanding of teamwork and communication best practice standards based on the evidence supports team huddle frameworks in the clinical space. The literature and current evidence support daily healthcare huddles in improving patient safety through standardizing communication, creating a feeling of shared responsibility, and improving teamwork.<sup>1-3</sup> A recent systematic review on the impact of multidisciplinary team huddles on engagement, teamwork, and satisfaction showed that daily huddles are critical in improving communication between team members, promoting overall job satisfaction, and enhancing team function and collaboration.<sup>1</sup>

In our institution, we observed several patient safety reports related to care team communication difficulties, of which a majority arose from challenges around physician-nursing collaboration, interprofessional communication, team relationships and dynamics, and operational awareness. These events led our quality improvement team to brainstorm ways to improve communication

among physicians and nurses. We had a pre-existing morning nursing huddle focused on sharing active concerns about operations affecting the ED and designating staff roles. This was an opportunity for our quality improvement (QI) team to develop and implement a revised huddle program to include senior resident physician presence to address difficulties with interprofessional teamwork, physician-nursing communication, awareness of the operational impact on the interdisciplinary team, and physician familiarity with nursing staff. We aimed to improve senior resident's self-reported perceptions in those key areas.

## **METHODS**

### Study Design and Setting

Our quality improvement team designed and implemented this program to improve interprofessional collaboration, communication, and operational effectiveness. This project was conducted at an academic medical center ED in Portland, Oregon, from July 2022 to July 2023. Study periods were defined as follows: early intervention, from July 2022 through November 2022, and post-intervention, from May 2023 to July 2023. Our intervention was implemented in July 2023. The ED cares for approximately 49,000 patient visits per annum. The study site includes 68 full-time faculty, 20 adjunct faculty members, and 22 senior residents across second and third-year levels. The ED employs approximately 130 bedside registered nurses.

### QI Strategy

We developed our interdisciplinary team huddle program through a process supported by literature, our previous experiences, and collaboration with physician and nurse leadership. The Interdisciplinary Team Huddle Initiative (ITHI) included the following elements:

- The addition of on-duty physician attendance at the daily morning nursing-led team huddle.
- An educational development program aimed to support a resident-led “medical minute,” a teaching opportunity embedded within team huddles.
- Continuation of operational announcements at huddles and active role call and nursing assignments.
- A process and cultural change campaign, including posters and departmental communique, to support program adoption and sustainability.

## Measures

Our primary outcome was a change in self-reported sense of interdisciplinary teamwork in the ED and, secondarily, awareness of operational issues on the interprofessional team and overall familiarity with the nursing staff. A psychometric survey was administered early in our QI intervention and nine months following the rollout process to measure perceptions of the intervention on physician-nursing teamwork, communication, staff familiarity, and daily operational awareness. The survey was sent to senior resident physicians using a unidimensional 5-point Likert scale to evaluate the level of agreement in each domain: interdisciplinary teamwork, operational awareness of impacts on the interprofessional team, and familiarity with our ED nursing colleagues. We also elicited open-ended commentary through free textbox entries. The local Institutional Review Board approved this protocol and waived the requirement for informed consent.

## Data Analysis

We used descriptive analysis to evaluate outcomes by comparing early and post-intervention time periods. Only senior-level resident physicians were included in our analysis. We considered strongly agree and somewhat agree as a positive count, and somewhat disagree and strongly disagree as an adverse count.

## **RESULTS**

Over the course of this initiative, we obtained qualitative and quantitative data from senior resident physician participants to assess the interventional effectiveness of our intervention. We surveyed participants in both early intervention (16 respondents, 73% response rate) and nine months following implementation of ITHI (17 respondents, 77% response rate). We utilized surveys to assess physician-nursing teamwork, communication, staff familiarity, and daily operational awareness. Our intervention was associated with a 26.5% improvement in the sense of strong interdisciplinary teamwork, a 33.8% improvement in awareness of daily issues, a 21.6% improvement in operational process impacts, and a 15.4% improvement in nursing team familiarity. Participation at team huddles showed that more than 70% of respondents attended 50% while on shift, and 22% of respondents attended 0% of huddles.

## **DISCUSSION**

Team huddles effectively foster communication exchange, problem-solving, enhancing teamwork, and promoting job satisfaction.<sup>1-4</sup> These flow into key positive impacts on patient safety. From this study, our team learned that improving interdisciplinary teamwork in the emergency department will take time and a multifaceted approach. The feedback we received indicated that while attending the daily huddle was an excellent initial step, there were barriers to

fostering teamwork based on this intervention alone. One obstacle we face is that many travel nurses are new to our system, so developing professional relationships and team continuity has been challenging. Other feedback indicated that demands on the time and attention of the clinical team made it difficult or impossible for them to attend the daily huddle. More than 70% of respondents reported they attended only 50% of the huddles while on shift and 22% of respondents attended 0%. Some remedies to these issues will be for the charge nurse to regularly call our physician lead into the huddle and ensure extra time for introducing new team members. As our nursing staffing stabilizes in the ED and with efforts to improve physician engagement and improvement, we will continue to obtain ongoing data to assess effectiveness.

## **Conclusion**

Implementing an interdisciplinary team huddle strategy improved the sense of interdisciplinary teamwork and daily operational impacts in the Emergency Department. Staff familiarity had less than expected improvement, which is likely attributed to significant nursing turnover during the study period. We did experience challenges related to non-attendance. Additional work is needed to strengthen attendance and staff engagement with team huddles.

## REFERENCES

1. Lin SP, Chang CW, Wu CY, et al. The Effectiveness of Multidisciplinary Team Huddles in Healthcare Hospital-Based Setting. *J Multidiscip Healthc.* 2022;15:2241-2247. Published 2022 Oct 6. doi:10.2147/JMDH.S384554
2. Royse L, Nolan N, Hoffman K. Using a Sociogram to Characterize Communication During an Interprofessional Team Huddle. *J Multidiscip Healthc.* 2020;13:1583-1593. Published 2020 Nov 17. doi:10.2147/JMDH.S273746
3. Murphy V. Daily huddle best practice: An Evidence-Based guide. *Worldviews Evid Based Nurs.* 2023;20(5):513-518. doi:10.1111/wvn.12668
4. Martin HA, Ciurzynski SM. Situation, Background, Assessment, and Recommendation-Guided Huddles Improve Communication and Teamwork in the Emergency Department. *J Emerg Nurs.* 2015;41(6):484-488. doi:10.1016/j.jen.2015.05.017