Safer Together: A Novel Interprofessional Near-Miss Root Cause Analysis Curriculum
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Background
Institutions vary in how they instruct and involve learners in evaluating medical errors. Best practices in conducting Root Cause Analyses (RCA) include interprofessional (IP) involvement - an ingredient missing from most traditional venues for error review by learners. Error evaluation and Interprofessional Collaborative Practice (IPCP) are focus areas within the ACGME Clinical Learning Environment Review (CLER) process, and are emphasized in Internal Medicine Milestones including SPB1, SPB2, PBL1, PROF1, and ICS2.
We hypothesize that a curriculum aiming to teach RCA methodology through hands on investigation of near miss events will also improve teamwork competencies if IP learners are included.

Innovation
We redesigned an existing Internal Medicine curriculum, the Near Miss RCA (NMRA), to incorporate IP learners. All course material was moved to a free mobile-based app (SLACK) designed for team collaboration, but utilized here as a learning platform to aid in course organization, asynchronous groupwork, and faculty supervision.
In order to create a common foundation, we flipped the classroom, delivering a prework module consisting of readings and a practice Fishbone exercise for a non-medical error.

To recruit learners from outside Internal Medicine, we formed partnerships with local IP stakeholders. We incorporated the Jefferson Teamwork Observation Guide (JTOG) to provide 360 degree formative feedback on teamwork competencies. The JTOG is a tool designed to evaluate health care teams or individual members from the vantage point of an outside observer, patient, care giver or team member.

Methods
Five learner teams will complete the NMRA course this year. The course runs over two months with the timeline below. A modified version of the Attitudes Towards Healthcare Teams tool was used to assess learners pre and post-course, as well as several qualitative questions.¹

Prework:
Self-paced online focus on error evaluation best practices and tools
Course:
IP team monitored by faculty; Learning platform augments team meetings
Formative Feedback:
Team members evaluate each other; faculty mentor evaluates learners & teams; individual review feedback

Pre-course Assessment
Course
Formative Feedback
Post-course Assessment

Results
22 learners will have gone through the course from seven professions by the end of this academic year. To date, 12 learners have completed the curriculum. The course has been well received, with 90% of learners satisfied to very satisfied with the experience.

Representative post-course feedback includes:
¹“ I enjoyed the interprofessional engagement beyond the day to day workflow. I think it is critical to developing a culture of understanding and efficiency that is needed for a successful healthcare organization.”
²“I was nice to work with the residents, but as a student from another discipline, I sometimes felt lost in terms of understanding the medical terminology abbreviations that were thrown around. I think it would have been nice if we went around and talked about our roles in more detail before we all started together (and if the team was more well distributed across all disciplines with PT, pharmacy, nursing, etc.”
³“Throughout this project, I learned so much from the other people in the group...I think a very important part of the process is speaking with the people involved with the error and thinking of each step along the way that may have contributed.”

Following the course prework, 79% of students were able to identify the four aspects of a high-quality RCA, and 53% could put the steps of an RCA in order. Upon completion of the course, 90% agreed or strongly agreed that discussing near miss events will bring about positive change and 73% stated that when they see a near miss event in practice they will often or always report it.

Results Cont.
Learners were asked to identify words associated with IP Teams Before and after the course (see wordcloud below). Even before starting the program, students highly rated all items of the Attitudes Towards Healthcare Teams instrument. Combined with the small sample size to-date, this made it difficult to ascertain whether any statistical significant change occurred as measured by the tool. More analysis will be conducted upon the completion of the program by all 2016-2017 cohorts.

Conclusions
The NMRA has been successfully converted from a course involving only medical residents to a fully IP and interdisciplinarian experience. This intervention reinforces RCA best practices and the roles of health care providers in all professions to report errors, participate in RCAs, and adopt a systems approach to medical errors. The addition of IP team members has been well received and appears to enrich learning. Structured formative feedback on teamwork allows for self reflection. Development of prework modules and use of an interactive learning platform may help scale this innovation by creating “simulated” near miss cases that could be used in additional IP educational venues.

Sample JTOG report

References: