

guidelines instruct training programmes to 'provide formal educational activities' for patient safety and to ensure residents 'know how to report patient safety events' (ACGME V1.A.1a).¹ Despite these expectations, there is no formal consensus on how to deliver training to residents in root cause analysis that is experiential. We developed a collaborative method of teaching root cause analysis to internal medicine residents using active cases obtained from the safety incident reporting system. Objectives included: (i) to achieve the team-based construction of a fishbone diagram based on a local adverse event; (ii) to facilitate resident engagement in collaborative problem solving based on a local adverse event, and (iii) to demonstrate how to use the hospital adverse event reporting system.

What was tried? Utilising one faculty moderator per workshop, 3-hour educational sessions were held on four occasions to reach every internal medicine resident across all categories in the context of a 3 + 1 scheduling system. Prior to the workshop, the moderator researched a real case from the hospital reporting system and developed a timeline; residents were asked to complete relevant pre-work Institute for Healthcare Improvement (IHI) modules. The workshop started with an IHI activity designated 'How do you measure the banana?', which highlights the difficulty of choosing and defining quality improvement measures. A discussion regarding the concepts of process mapping and shared definitions followed. Next, the moderator taught key topics, including Agency for Healthcare Research and Quality (AHRQ) definitions for adverse events, and fishbone development. Learners were provided with instruction on how to use the hospital adverse event reporting system. The moderator introduced the case by presenting the timeline. The residents were then tasked with applying the AHRQ definitions for adverse events to the case. The residents chose a salient adverse event to explore. They constructed a fishbone diagram to identify the human, environment, education/training, communication, system and policy/procedure factors that contributed to the event. The moderator guided the residents in a discussion regarding the 'contributing factors' and 'causal factors' that allowed the adverse event to occur.

What lessons were learned? We completed pre- and post-data surveys on a Likert scale regarding residents' ability and comfort in utilising root cause analysis and patient safety event reporting. Paired *t*-testing demonstrated significant gains ($p < 0.01$) in resident comfort and ability in utilising the hospital event reporting system, as well as in navigating a

root cause analysis. Residents further rated the experience as highly valuable and relevant to their training ($p < 0.05$).

After the workshop, we distributed a new feedback e-mail to residents who utilised the hospital reporting system and tracked their involvement before and after the workshop. An initial review of the data reveals increased resident engagement in the hospital reporting system following the workshop.

Our greatest challenge concerns choosing cases that both expose system vulnerabilities and are relevant to internal medicine residents.

REFERENCE

- 1 Accreditation Council for Graduate Medical Education. *ACGME Common Program Requirements*. Chicago, IL: ACGME 2017. https://www.acgme.org/Portals/0/PFAAssets/ProgramRequirements/CPRs_2017-07-01.pdf. [Accessed March 2019.]

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Requiring wellness: implementation of a comprehensive wellness curriculum

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What problems were addressed? Medical students are at greater risk than the general population of mental health difficulties, burnout and suicidal ideation. Medical schools have an obligation to implement strategies to mitigate the risks of these outcomes and to maintain student well-being. Appropriate, timely, sufficient and mandatory wellness content should be provided as part of the core medical school experience.

What was tried? The Keck School of Medicine (KSOM) hired a Director of Medical Student Wellness in 2016 to develop programmes, policies and curricula to support the well-being of medical students.

A needs assessment was conducted in 2016¹ through literature review, student survey and listserv conversation with wellness officers across the country to identify: (i) risks of mental health difficulties specifically relevant to medical students,

and (ii) specific knowledge and skills that may reduce those risks. The wellness themes that emerged from that effort and were incorporated into the curriculum included mindfulness, resiliency, mind–body skills, time management, self-awareness and self-care. In addition, we derived five key features to build into KSOM wellness sessions: (i) focus on the lives of medical students; (ii) link physician well-being and quality and patient safety outcomes; (iii) incorporate student self-reflection; (iv) promote appropriate self-disclosure and role modelling by instructors, and (v) no testing or grading of wellness sessions. A total of 34 hours of mandatory wellness content were developed and progressively integrated into the curriculum for Years 1–3 from 2016 to 2019. The average rating of wellness sessions delivered in 2016–2018 was 4.14 (5 = highest quality). Although many students responded positively to the curriculum (e.g. ‘Thank you for taking the time to do this training, to meet with students, and to encourage a healthy attitude toward seeking help for mental health as needed.’), qualitative analysis of student comments revealed some concerns: (i) required attendance at wellness sessions can itself cause stress; (ii) self-directed wellness efforts may be perceived as better than those mandated, and (iii) the school is responsible for addressing stress within the learning environment.

Lower-rated wellness sessions were made optional. Mandatory sessions are now timed to be least disruptive to student schedules (start no earlier than 09.00 hours and end no later than 16.00 hours; not scheduled on days when students are not otherwise required to be on campus). In addition, a Wellness Taskforce of administrators, faculty members and students was formed in 2018 to identify and reduce environmental and systemic stressors.

What lessons were learned? A substantial number of hours of mandatory and optional wellness content can be effectively and longitudinally integrated into a curriculum. Mandatory wellness sessions were generally well received by KSOM students, but stress can be increased by the amount and timing of mandatory sessions, and when they are suboptimally placed in the curriculum.

Establishing a framework for the organisation and delivery of each wellness session (i.e. the five key features) was useful for developing sessions of consistent quality. There is opportunity and need to establish an overarching conceptual approach to implementing wellness curricula in medical schools, defining core wellness competencies, establishing measurable curricular outcome objectives, and

developing tools to better assess wellness learning, skill acquisition and the overall impact of these curricula on students.

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An advisory peer review board: promoting PubMed-indexed, student-authored publications

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What problems were addressed? Medical students increasingly participate in curricular and extracurricular research activities pertaining to medical education. Many students produce high-quality and methodologically sound data which often go unpublished, partly as a result of a lack of guidance on manuscript publishing. Other students who aspire to publication disseminate their research findings in the less professional medical student journals (MSJs) or, more worryingly, in ‘predatory’ journals. Overall, not many students are able to disseminate their research work in professional PubMed-indexed journals.¹ One substantial barrier to student publishing in mainstream journals is the rigorous and professional peer review process employed by such periodicals. This barrier is further compounded by a relative lack of faculty members committed to mentor students, critically appraise their research work and facilitate manuscript publishing.

What was tried? The present author (currently a medical graduate) self-developed confidence in scholarly activities and founded an initiative designated an ‘advisory peer review board’. The primary aim was to disseminate students’ research work in mainstream journals. In a constructive and user-friendly simulation, the initiative combined the duties of a journal’s editorial board and a research mentor. Students were invited to submit medical education-related preliminary or completed research drafts. The specific duties of the present author included: (i) handling the student’s research work as an administrative/assistant/associate editor and ensuring that it met basic technical requirements regarding general layout and English