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EDUCATIONAL CASE REPORT

Speak Up! A Resident-Led Initiative to Increase Safety Event Reporting in Psychiatry

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More than two decades after the publication of the Institute of Medicine's landmark report *To Err is Human*, medical errors remain a leading cause of death in the USA [1, 2]. Safety event reporting provides a critical building block for improving patient safety, and the majority of US hospitals have a centralized safety event reporting system [1, 3]. However, prior studies suggest that while residents and faculty at teaching hospitals understand the value of reporting safety events, reporting rates remain low, potentially compromising patient safety and educational goals [3, 4].

From their vantage point as frontline providers, residents have important first-hand observations of adverse events and near misses. The Accreditation Council for Graduate Medical Education program requirements state that residents and fellows should understand their responsibility to report patient safety events and near misses, know how to do so at their institutions, and receive a summary of their institution's patient safety reports [5]. Despite this, education in patient safety may be relegated to an afterthought in psychiatry training, in the context of the vast volume of psychiatry-specific skills and knowledge to be taught.

Within our general psychiatry residency at Cambridge Health Alliance (CHA), we observed that the rate of reporting patient safety events in our institution's safety event reporting system was lower in psychiatry relative to other specialties, with psychiatry residents filing fewer reports per person than their peers in other training programs at our institution. In this paper, we describe a quality improvement initiative aimed at increasing safety event reporting rates of psychiatry residents to equal or exceed reporting rates in other training programs in our institution by the following academic year. A secondary aim included developing at least one recommendation for systems-level change to facilitate an increase in reporting. Over the course of one academic year, the interventions we describe were associated with a sizable, lasting change in reporting of safety events by psychiatry residents, in addition to subjective descriptions of increased engagement with safety event reporting. This quality improvement project was reviewed by the CHA Institutional Review Board, which determined that it did not constitute human subjects research.

Assessment of Barriers to Safety Event Reporting: Resident Survey

To identify barriers to submitting safety reports, psychiatry residents ($n = 32$) completed a 12-item online survey in December 2018 assessing their understanding of our hospital's centralized, electronic reporting system and what happens to filed reports. Participants were asked how they learned about safety event reporting, if they had ever filed a report at our institution, and how clear it is when a safety event report should be filed in psychiatry. Multiple-choice questions assessed the number of reports that residents filed and the number of reports that residents contemplated filing but did not file in the previous 12 months. Residents also identified their motivations to file safety reports and barriers preventing them from doing so.

Further Exploration of Barriers to Safety Event Reporting: Focus Groups

Themes from the survey data were used to formulate follow-up questions for focus groups, which occurred in January and February 2019. Before each focus group, a summary of the survey results was shared with participants to provide

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context for the discussion. In each focus group, participants were asked to discuss four prompts informed by the survey results, including identification of factors contributing to lack of time or forgetting to file a safety report, uncertainty about types of events meeting threshold for reporting in psychiatry, residents' understanding of how reports are reviewed, suggestions for interventions to reduce barriers to filing, and thoughts about why residents might find the reporting portal difficult to use.

Focus groups were conducted during protected time for didactics or all-resident meetings. Post-graduate year (PGY) 1 residents participated in their own group because of scheduling constraints, and PGY2–PGY4 residents were divided equally between two other groups. Focus groups were facilitated by fellow residents, without faculty present, to promote open sharing. Funding for a meal provided during focus groups was supported by the CHA Clinical Learning Environment Innovation Grants Program, an institution-wide program to support trainee-led quality improvement projects.

Pre-intervention Survey Responses

A total of 26 out of 32 (81%) eligible psychiatry residents participated in the online survey. Seventy-three percent of participants ($n = 19$) reported they had contemplated filing one or more safety reports in the previous 12 months but had not actually filed. Fifteen percent ($n = 4$) reported they had contemplated but not filed as many as 3–5 potential reports, while 27 percent ($n = 7$) reported they had considered filing five or more potential reports that they ultimately did not file. Primary barriers to filing included lack of time (77%, $n = 20$), feeling that filing would not result in change (58%, $n = 15$), concerns regarding lack of anonymity (50%, $n = 13$), forgetting to file (46%, $n = 12$), and finding the reporting portal difficult to use (31%, $n = 8$). Additionally, a majority reported they did not have any knowledge (19%, $n = 5$) or were somewhat unknowledgeable (38%, $n = 10$) regarding what happens to safety event reports after they are filed.

Pre-intervention Focus Group Responses

Twenty residents (63%) participated in the follow-up focus groups, from which several themes emerged. First, residents described the reporting software as difficult to use, noting the form was long and confusing, with many required fields (e.g., medical record number) not applicable to every report. Second, residents wanted to understand what happened to reports they filed. They described feeling unmotivated to file because they rarely received formal responses to their reports, and they wanted to know how issues identified in

the reports were addressed. Additionally, residents described 24-h call shifts as a common setting in which they considered filing safety event reports, but frequently lacked time to file or forgot to file secondary to fatigue. Finally, residents universally felt there was a cultural difference regarding safety event reporting between departments at our institution. For example, they felt internal medicine teams more frequently discussed what constituted a safety event and encouraged residents to file reports relative to psychiatry. Many residents felt there were fewer objective measures to help define a near miss or adverse event in psychiatry.

## Initiatives to Improve Resident Filing Rates

Survey and focus group findings were shared with the residents, program directors, and the Department of Risk Management in May 2019. Two recommendations were made based on resident feedback: (1) the online reporting portal should be streamlined and focused on a narrative report, and (2) the outcomes of reports should be shared with those who filed, while still protecting patient and staff privacy.

Upon further discussion with the Risk Management Department, the project team learned the reporting software could not be modified. Risk Management Department staff, who review all safety event reports, also noted they would not be able to provide individualized responses to each filing party given the volume of reports received. Given the limited opportunity for modification to the reporting software, the psychiatry residency addressed the recommendation for increased feedback about the results of filed reports by creating a quality improvement leadership role in the PGY4 year. This PGY4 leader would serve as a liaison between psychiatry residents and the Risk Management Department by meeting with Risk Management on a quarterly basis to review reports filed by residents; they would then share de-identified outcomes of these safety event reports at all-resident meetings.

Outcomes

Changes in resident reporting rates were tracked by the Risk Management Department, which was able to view the number of reports filed by psychiatry residents in the online reporting system and calculate reporting rates based on resident numbers in each training program. During the 2018–2019 academic year, when this quality improvement initiative was conducted, the average number of reports filed per psychiatry residents increased 62%, from an average of 0.75 reports per resident the prior year to an average of 1.22 reports per resident (Fig. 1). Of the reports filed during the 2018–2019 academic year, 74% were filed between

Fig. 1 Safety event reporting rates by academic year
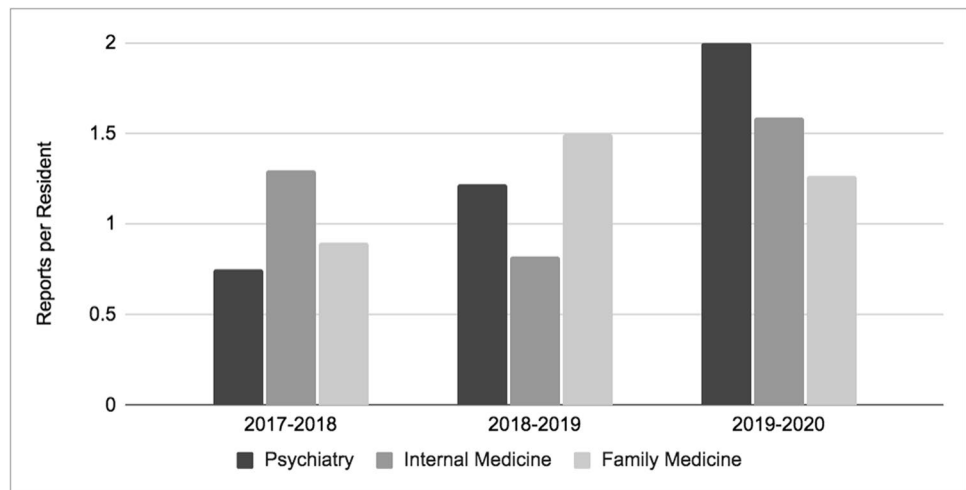
December and June, the period during which the survey and focus groups were conducted and the PGY4 quality improvement leadership role created.

In the subsequent (2019–2020) academic year, filing increased even more, with an average of 2.0 reports per psychiatry resident, compared to 1.59 reports per internal medicine resident and 1.27 reports per family medicine resident. Pearson chi-square test with post hoc analyses and Bonferroni corrections for multiple statistical tests showed that the reporting rate difference between the psychiatry 2017–2018 and 2018–2019 cohorts was statistically significant ($p = 0.022$), as was the difference between psychiatry and the internal medicine reporting ($p = 0.042$). Other relationships, e.g., reporting rate differences from 2018–2019 to 2019–2020 ($p = 0.086$), were observed as trends but did not reach statistical significance. Informally, many residents also reported they appreciated receiving outcomes reports from the PGY4 leader, even if feedback was general or brief to protect privacy. As one resident noted, "It's nice to know [my] report actually mattered."

Reflections on Process and Outcome

This quality improvement initiative suggests that many observations about patient safety reporting from other fields are relevant to psychiatry residency training. Namely, the information gathered regarding baseline reporting rates is consistent with prior research suggesting that residents frequently underreport safety events [6]. Similarly, recommendations to improve reporting rates from other medical specialties have included educating staff about which incidents should be reported, simplifying the reporting process, identifying patient safety experts among residents and faculty to role model and teach peers, making systems changes, providing financial incentives for filing, and giving feedback

on the outcomes of their reports to reporting staff [7–9]. While we were not able to implement all these approaches, we did note an apparent benefit associated with increasing clarity around events that should be reported, identifying a resident leader in patient safety, and improving feedback to filers on outcomes of their reports.

The increase in safety event reporting in the final two quarters of the 2018–2019 academic year occurred over the same period in which survey and focus groups were conducted. This timing suggests that participation in the survey and focus groups likely had a positive impact on reporting rates, even prior to the creation of the PGY4 leadership role communicating the outcomes of resident-filed safety event reports back to the residents. While the process of surveying residents was intended to inform subsequent interventions, the survey and discussions also likely improved awareness and understanding of safety event reporting, thereby facilitating increases in reporting even prior to planned interventions.

Reporting rates continued to increase among psychiatry residents after the completion of surveys. Increased utilization of the safety event reporting system appeared to be sustained by the PGY4 quality improvement leadership role, which facilitated closed-loop communication and reporter satisfaction. Regular feedback about filed reports from the PGY4 patient safety leader also directly targeted three of the barriers to filing identified in the survey and focus groups. Specifically, it addressed concerns about lack of anonymity and the perception that filing would not result in change, while also providing routine education on what defines safety events in the field of psychiatry. Clear information about institutional responses and improvements resulting from reports were provided, and concerns regarding anonymity in reports related to professionalism were addressed by educating residents about how privacy of the reporter is preserved.

The increase in the number of reports filed per resident over the course of this project was a substantial improvement in safety event reporting. This increase highlights the potential for the positive impact resident-led patient safety initiatives may have in psychiatry training programs. Having residents lead this project likely generated trust among participants and encouraged candor in surveys and focus groups. While on the surface it may appear that a higher number of safety event reports is not a positive sign if it implies that more safety events are occurring, there was no indication based on resident feedback or institutional data that more safety events occurred. Rather, the increase in filed reports likely indicates that a greater proportion of baseline near misses or adverse events were captured, which was a goal of this initiative.

Several limitations of this project should be noted. First, only 63% of residents ($n = 20$) participated in the focus groups due to variability of clinical and vacation schedules, which may have resulted in selection bias. There is also a noted lack of a control group, and while improvements were observed as trends, not all changes reached statistical significance. Additionally, this initiative was conducted at a smaller hospital in which the Risk Management Department was accessible and open to collaboration. While similar initiatives may be of benefit at other training programs, the ability to arrange collaboration between residents and a risk management team may vary with institution size. Finally, while data from 2 years demonstrated a sharp increase in safety event reporting by residents, we do not have access to a comparable data set for subsequent years as the need to prioritize response to the Covid-19 pandemic limited data collection.

Safety event reporting provides invaluable data needed to improve healthcare systems. By participating in event reporting, residents learn about how the healthcare system operates and their own role in promoting safe care. This initiative demonstrates that providing feedback to residents about the outcome of their safety event reports may help improve motivation to file reports, and resident leadership roles in patient safety can help increase residents' trust and participation in the patient safety initiatives of their institutions.

Declarations

Disclosures On behalf of all authors, the corresponding author states that there is no conflict of interest.

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