Use of an Error-Reporting System in a Michigan-Based Health System: A Pre and Post Analysis of Resident Usage Data

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Objective

The aim of this project was to quantify usage, utilizing a survey, among residents of a pre-existing error-reporting system, Radicalogic (known as RL) at a Michigan-Based Health System. Then, based on these results, to work with residents to increase their knowledge and usage of the RL system.

Background

The use of error-reporting systems in healthcare has been a topic of great interest recently, highlighted by the publication of the Institute of Medicine’s (IOM) report, To Err is Human: Building a Safer Health System. In it, the importance of findings from the Harvard Medical Practice Study (HMPSt) are discussed, particularly the importance of recognizing and addressing medical errors. Historically, resident participation in error reporting has been low, and it has been shown that among hospitals with structured reporting systems, physicians (including residents), submit less than 3% of error reports.

Educational Design/Methods

A survey was administered to determine usage as well specific gaps in reasoning for neglecting use of the RL relevant to residents within the Henry Ford Wyandotte (HFWS) system. This initial survey was administered during the period from November 1, 2017 to November 30, 2017. The outcomes from this survey were then used to inform refinements in the design of the proposed curriculum, which was modified to reflect the specific content areas determined to be most in need of improvement in regards to the RL error-reporting system. Curriculum was only partially (1 session out of 4) administered due to extenuating circumstances, and a lessons learned analysis was employed.

Data Collection/Analysis

Pre and post survey results were to be compared to assess whether administration of the curriculum may have had an effect on resident knowledge in QI/PS. Additionally, residents’ satisfaction with the intervention were to be examined via post survey quantitative and qualitative data collection. Mean score data pertaining to knowledge of the RL system was to be examined using Repeated Measures ANOVA using SPSS Version 25 Analytic Software. Data was to be further examined for trends among PGY Year and Gender.

Outcomes / Results

Because the curriculum was not administered, the planned project of impacting resident use of the online error reporting system was not completed, and a lessons learned approach was adopted, analyzing the limitations of the original proposed project.

Due in part to the fact that the developed curriculum was not administered, there was little data to collect and analyze. Also limiting was the number of responses to the initial survey sent to the medical residents, with N = 15 responses from a possible N = 62 residents (a response rate of 24.2%). Of these responses, N = 8 were from Emergency Medicine, N = 5 were from OB, N = 1 was from Surgery, and N = 1 was from Podiatry. The responses were a mix of all PGY levels. Lack of time (N = 4) and fear of reprimand (N = 2) were the most common reasons given for not using the online error reporting system.

Discussion

The literature search for this project revealed that residents rarely participate in hospital error reporting systems. There have been several studies attempting to impact resident involvement in online error reporting. Most have concluded that while resident participation increases during the educational sessions, there is little long term impact on resident behavior, and residents often return to their previous behavior once the project ends.

The most common reason given for lack of reporting is that residents fear staff reprimand or reprimal for reporting an error. This will need to be addressed, and a shift in hospital culture from assigning blame to addressing the error as an educational opportunity would need to occur.

Having one person responsible for the entire project turned out to be a mistake. Unfamiliarity with the clinical staff hindered efforts to present the curriculum to the residents. Didactic time is important to resident education, and it was difficult to be added to the session agendas for each resident specialty. Additionally, there was no one with whom the project workload could be shared. As sole librarian, and sole project member, it became extremely difficult to balance completing the task with performing daily job responsibilities, and the project suffered. It would also have helped the project to have obtained support from the clinical educators prior to beginning the project. Getting support in advance of project launch would have made it much easier to have the curriculum placed on the didactic session agendas.

Conclusions and Implications

If the project were to be attempted at a later date, the concerns regarding project structure would need to be addressed for the project to succeed. It is not certain that a successful project would have had any long term affect on resident behavior regarding the online error reporting system, given the results of the literature search. However, the accurate reporting of medical errors remains vitally important. As such, future research exploring ways to increase the knowledge and usage of error-reporting systems within health systems are needed.

References and/or Acknowledgements