Original Article

Error reporting in the emergency department: do we do what we say we do?

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BACKGROUND: The Joint Commission accreditation manual contains standards in improving organization performance related to report and review of patient care issues causing unexpected harm. In spite of regulations mandating reporting, it remains inconsistent, varying by provider type and hospital. Our purpose was to determine current attitudes, knowledge, and practice of error reporting among emergency department (ED) providers.

METHODS: We administered a survey assessing ED staff practice regarding error reporting. Questions involved reporting of errors in which the practitioner was directly involved, errors the practitioner observed, and general awareness of reporting mandates. We also questioned individuals regarding fear of repercussions for reporting.

RESULTS: Fifty-two surveys were returned. For most errors, providers were more likely to tell their supervisor about the issue than to tell the patient. Seventeen percent of respondents did not think that referring errors for review was their job. Only 31% of respondents were aware of standardized institution-wide pathways to report errors. Any respondent who was aware of the institution-wide pathway also felt responsibility for error reporting. Thirty-three percent of the respondents were concerned about negative repercussions from reporting errors. In querying the hospital reporting system, 263 cases were referred for quality issues over the previous year, 51% of them were referred by nurses, 27% by medical technicians (MTs), 2% by mid-level providers (MLPs), 1% by physicians, and 19% by other personnel.

CONCLUSION: Although most of the ED staff are responsible for patient safety, most are not aware of systems available to assist in reporting, and even many do not utilize those systems.

KEY WORDS: Error reporting; Quality assurance; Medical error

World J Emerg Med 2012;3(4):261–264

DOI: 10.5847/wjem.j.issn.1920-8642.2012.04.004

INTRODUCTION

In 1999, the Institute of Medicine published a landmark paper bringing widespread attention to the problem of medical errors in US hospitals. This article estimated that 44 000 to 98 000 patients die annually as a result of medical errors.^[1] As a result of the attention this paper received, patient safety became a higher priority for health care, professional, and governmental agencies. The Joint Commission accreditation manual contains standards in improving organization performance related

to reporting and reviewing patient care issues that cause serious or unexpected harm. Many state laws require hospitals report any errors that harm patients to the State Health Department, and most medical centers have internal policies regarding reporting all errors, including "near misses" that do not harm patients.

Since "To Err is Human", there is anecdotal evidence suggesting that physicians believe some progress has been made regarding patient safety, but no hard data.^[2] For those that believe improvement has occurred, two

commonly cited reasons include increased sensitivity to the issue of safety and increased safety regulations.^[2] In spite of increased sensitivity to the issues of safety, there are data to suggest that medical providers do not believe medical errors are as large a problem as the Institute of Medicine report suggests, with only 5% in one study viewing medical errors as the most important problem facing health care.^[3] In addition, although more than 1/3 of physicians and 40% of the public surveyed reported having experienced an error in their own medical care, only 1/3 of those reported that the health professional disclosed it to them.^[3] The reluctance to report errors to patients, agencies, and organizations may be related to fear of litigation or other negative repercussions.^[4]

In spite of regulations mandating reporting, it remains inconsistent, varying by provider type and hospital.^[4-6] Studies have shown that, in other settings, nurses provide at least half of quality referrals, with physicians consistently providing about 2%.^[5,6] It is unknown whether these proportions are similar in the ED. Although reporting an incident is only a first step in reviewing causes and changing systems to prevent recurrence, it is a necessary step, and one that is inconsistently done.

METHODS

This study was performed in a tertiary care ED with an annual census of 65 000 patients. The ED is a primary site for a residency training program in emergency medicine. The hospital utilizes an on-line error reporting system ("Patient Safety Net") for monitoring and reviewing errors.

We administered anonymous surveys to attending and resident physicians, MLPs, nurses, and MTs. The survey was designed by a multidisciplinary team of physicians, representatives from risk management, and nurses to ensure that it was both clear and addressed all relevant quality issues. It was administered in June of 2007, as the month of June has very few new hires, thereby reducing bias related to inexperience. The survey involved case scenarios where an error was made, with yes/no questions about whether the provider would report the incident, inform the patient, or document the error in the chart. Scenarios had escalating outcomes, from "error made with no harm" to "error made with serious harm". The cases involved medication errors (wrong dose, wrong drug, or giving a medicine to which the patient reported an allergy) and procedural errors (wrong procedure or correct procedure with harm caused). Distinction was made between cases in which the respondent was involved in the patient's care versus those in which the respondent

was simply aware of a quality issue that occurred but in which he or she was not personally involved. There were also questions about general knowledge regarding the web-based error reporting system, sense of responsibility for reporting errors, and concern of repercussions for reporting errors. In addition, we queried our electronic error reporting system for all quality referrals made for the ED in the previous 12 months to determine which providers had reported. All data were analyzed using descriptive statistics, the Chi-Square test and Fisher's exact test. The Institutional Review Board reviewed our study protocol and found it to be exempt.

RESULTS

Fifty-two surveys were returned (8 attending physicians, 7 resident physicians, 5 MLPs, 13 nurses, 14 MTs, and 5 unidentified). For medication errors (wrong medication or wrong dose) with no adverse events, respondents were more likely to tell their supervisors (45/52, 87%) than document the error on the chart (32/50, 64%), and they were least likely to tell the patient (25/50, 50%, $P=0.0004$). Medication errors with minor adverse events were described as events requiring symptomatic or supportive treatment only (ie incorrect dose of narcotics requiring transient oxygen therapy or prolonged observation). For those medication errors with minor adverse events, respondents were again more likely to tell their supervisors (49/52, 94%) than document the event in the chart (41/50, 82%) or tell the patients (34/50, 68%, $P=0.003$). Serious harm from a medication error was described as a change in treatment course as a result of the error (ie intubation needed after oversedation). With serious harm caused by a medication error, 98% (51/52) reported they would report the incident to their supervisors, 84% (42/50) reported they would document the incident on the chart, and 76% (37/49) reported they would tell the patient or family ($P=0.004$). With escalating harm, there was a trend toward increasing likelihood of reporting the error to the supervisor ($P=0.06$). Respondents were significantly more likely to report adverse events on the chart or tell the patient about the incident with increasing harm ($P=0.03$ and $P=0.02$, respectively, Figure 1).

In the setting of patients receiving medications to which they had reported an allergy but having no symptoms, there was no difference between the number of respondents reporting they would tell their supervisors (41/52, 79%), report the incident on the chart (42/49, 86%), or tell the patient (39/48, 81%, $P=0.66$). Likewise, if a patient received a medicine to which he was allergic

Figure 1. Medication errors: reporting practices.

Figure 2. Procedures errors: reporting practices.

and symptomatic, providers reported no difference in the likelihood they would report it to their supervisors (49/52, 94%), document it on the chart (45/50, 90%), or tell the patient (42/49, 86%, $P=0.36$). There was no difference in respondents reporting of the event to the patient or documenting the event on the chart whether the patient had symptoms or not ($P=0.75$ and $P=0.73$, respectively).

Procedural errors were described as minor or major. Minor procedural errors were those that involved the wrong procedure (ie IV placed on the wrong patient) and required either self-limited discomfort or supportive treatment only. For procedural errors resulting in minor harm, 40/52 (77%) reported they would report the event to their supervisors, 42/50 (84%) reported they would document the event on the chart, and 34/49 (69%) reported they would inform the patient ($P=0.23$). Major procedural errors were those resulting in change in treatment or disposition plan for the patient (ie intraabdominal chest tube placement). For respondents questioned on the event of a procedural error with major sequelae, 51/52 (98%) would tell their supervisors, 42/50 (84%) would document it on the chart, and 39/50 (78%) would tell the patient ($P=0.009$). With increasing harm for a procedural error, respondents were more likely to tell their supervisors about the incident ($P=0.003$). There were no differences between those who would document the event or tell the patient with increasing harm ($P=0.79$ and $P=0.45$, respectively, Figure 2).

All respondents stated they would tell their supervisors if they were personally involved in a quality issue, but only 30/46 (69%) stated they would tell the patient ($P<0.0001$). 37/50 (75%) said they would report a quality issue to their supervisors even if it did not involve them personally, and 4/45 (21%) would tell the family in that situation ($P<0.0001$, Figure 3).

Figure 3. All quality issues: reporting practices.

Totally 43/52 (83%) reported they believed that referring medical errors for review was their job, however only 16/52 (31%) were aware of standardized institution-wide pathways to report errors. Any respondent who was aware of the institution-wide pathway also felt responsibility for error reporting. 21/52 (40%) cited concerned about negative repercussions as a deterrent to reporting errors.

In querying the hospital reporting system, 263 cases were referred for quality issues from the emergency department over the previous year. Of these, 51% were referred by nurses, 27% by MTs, 2% by MLPs, and 1% by physicians.

DISCUSSION

The IOM report on medical errors and subsequent Joint Commission mandates have made medical errors an area of focus over the last decade; the results of the survey

allow for multiple interpretations of staff's attitude towards patient safety. On one hand, the staff will take responsibility for errors even if they are not involved. Alternatively, they will not necessarily utilize formal reporting methods in place. Kaldjian et al^[8] found similar results, but they concluded that physicians are likely to report a hypothetical error and their behavior is different in actual practice. Our results revealed physician reporting of errors to be on par with previously published rates of 1%–2%,^[6,7] disparated from survey results regarding likelihood of disclosure to patients and/or supervisors, which are much higher. This discrepancy creates a challenge in understanding how to improve error reporting and disclosure. Errors can only be tracked if recognized and reported. The fact that physicians have been found unlikely to report an error but self report themselves to be more likely to disclose one to a patient or family, which may be related to physicians' impression of the error reporting system. Another possibility is that disclosure and reporting do not diverge; rather, physicians are unmotivated to admit error outside of a hypothetical situation. Non-maleficence would guide us to do all in our power to prevent errors, but fear of repercussions may prohibit the practice of disclosure and reporting. Also, staff may not make the connection between error reporting and prevention of future error, which may explain why providers are less likely to report an error with minor or no harm.

Without a consistent process for internal review, a dilemma arises in ensuring continuous quality improvement (CQI). Optimally, an anonymous web-based error reporting system should allow all staff to report errors without fear of consequence; nevertheless, this does not seem to be the case. Khare et al^[9] found three factors preventing error reporting: fear, futility and hassle. It may be possible to create an environment in which error reporting is non-punitive, and the specter of litigation persists. Department administrators and risk managers are privy to mechanisms for quality improvement based on investigation of errors, but most staff are not aware of efforts on process improvement and are therefore not incentivized to refer errors. Without a positive feedback mechanism, referral may seem futile. The time required to complete a report is yet one more barrier to reporting. Beyond these three obstacles, we found ignorance to the system to be an additional hurdle as 69% of respondents were unaware of the institutional web-based error reporting system. Further education is necessary for both clinical and ancillary staff regarding proper methods for error reporting.

This study is limited by the small number of respondents. It may be that people who are more interested

in quality assurance were more likely to return surveys, but since surveys were anonymous, we have no way to determine predictors as to why some providers were unwilling to return their surveys. Additionally, the difficulty reconciling staff's reported likelihood of disclosure and referral with actual institutional referral statistics suggests bias due to the factors outlined above. Finally, we did not design our study to detect differences in response from providers of different types, nor did we distinguish among providers with different administrative responsibilities.

In conclusion, although most ED staff feel patient safety is their responsibility, most of them are not aware of systems available to assist in reporting, and many do not utilize those systems even when they are aware of them. ED staff are more likely to report errors to their own supervisors than they are to inform patients of errors made.

Funding: This was an unfunded study.

Ethical approval: This study was approved by the Institutional Review Board (IRB).

Conflicts of interest: The authors declare that there is no conflict of interest.

Contributors: Jeanmonod R wrote the initial draft. All authors contributed to the design, interpretation of the study and to further drafts.

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Received April 20, 2012

Accepted after revision September 16, 2012