Medical Errors—What and When: What Do Patients Want to Know?

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Abstract

Objectives: 1) To determine how and when emergency department (ED) patients and their families wish to learn of health care errors. 2) To assess the error threshold this population believes should trigger reporting to government agencies, state medical boards, and hospital patient safety committees. 3) To evaluate the role patients and families believe medical educators should play in this process. Methods: A 12-item survey was administered to a convenience sample of ED patients and families during evaluation in a tertiary care academic ED. Results were tabulated and data were reported as percentages. Statistical significance was analyzed using the chi-square test. Results: 258 surveys were returned (80%). A majority of respondents wished to be informed immediately of any medical error (76%) and to have full disclosure of the error’s extent (88%). An overwhelming majority of respondents endorse reporting of errors to government agencies (92%), state medical boards (97%), and hospital committees (99%). Most respondents believe medical educators should focus on teaching students to be honest and compassionate (38%) or on how to tell patients about mistakes (25%). The frequency of hospital admission or physician visits per year had no impact on any response pattern (ns with \( \chi^2 \) test). Conclusions: Regardless of health care utilization, a majority of respondents want full disclosure of medical error and wish to be informed of error immediately upon its detection. Respondents support reporting of errors to government agencies, the state medical board, and hospital committees focused on patient safety. Teaching physicians error disclosure techniques, honesty, and compassion were endorsed as a priority for educators who teach error management. Key words: medical errors; patient preferences; reporting; disclosure. ACADEMIC EMERGENCY MEDICINE 2002; 9:1156–1161.

The American health care system has recently come under intense scrutiny for its response to an acceptably high level of medical errors.\(^1\) The Institute of Medicine (IOM) has identified “effective physician communication” of medical errors and “unfettered patient access to their own medical information” as prerequisites for improved patient safety systems.\(^2\) One result is that many are calling for comprehensive medical error reporting. In fact, the Joint Commission on Accreditation of Healthcare Organizations in its 2001 standards requires hospitals to document that “Patients and, when appropriate, their families are informed about the outcomes of care, including unanticipated outcomes.”\(^3\) Despite this mandate, we know little about how and when the public wished to learn of errors committed during their medical care. Nor do we know whether our patients endorse the reporting of error to hospital committees or central reporting agencies. The objectives of this pilot study were to collect preliminary data on emergency department (ED) patients’ and their families’ preferences for: 1) medical error disclosure; 2) reporting to hospital patient safety committees, government reporting agencies, and state medical boards; and 3) the role medical educators should play in error disclosure.

METHODS

Study Design. We assessed four areas of patient and family preference for error management in the ED: 1) completeness of disclosure; 2) timing of disclosure; 3) threshold for reporting to hospital committees, state medical boards, or government agencies; and 4) the role of medical educators in teaching students how to deal with medical error. Basic demographic information and two surrogate markers of health care utilization were also collected. Pilot surveys were administered to refine survey instructions and question format. The institutional review board approved this study and written consent was waived.

Study Setting and Population. A 12-item survey instrument (Appendix A) was administered to a
convenience sample of adult ED patients and their families during the summer of 2000. The setting was a tertiary care hospital ED with 60,000 patients annually, an emergency medicine training program, and a Level 1–trauma designation.

Survey Content and Administration. Data collection was performed during a representative sample of weekdays and weekend days and the distribution of shifts included, day, evening, and night. Inclusion criteria were: being more than 18 years of age; competent to conduct the interview (i.e., conscious, not demented, delirious, intoxicated, or undergoing psychiatric evaluation), not a prisoner or in the custody of law enforcement, and English-speaking. The research assistant recruited eligible study participants after their assignment to an ED bed. Either the patient or the patient’s family member, accompanying the patient at the bedside, was allowed to complete the survey instrument. Only one survey instrument was allowed per ED patient–family unit. Surveys were distributed to participants if they meet inclusion criteria and indicated a willingness to participate in the study. A trained research assistant explained the survey to participants but did not verbally administer the survey or assist with survey completion. Medical error was not defined for the participants exclusive of the preamble on the survey instrument (Appendix A). Completed surveys were returned during the subject’s visit to the department either by returning the instrument to the research assistant or placing it directly into a data collection area within the ED.

Data Analysis. The response rate for the survey was calculated by dividing the number of completed returned surveys by the number of subjects approached to participate. A separate response rate was not calculated for family members completing the survey as only one instrument was administered per patient–family unit. A survey was judged to be completed and was included in the analysis if more than 50% of questions were answered. Questions with more than one selected answer were not scored but were tracked and maintained in a separate multiple answer category. Data were compiled anonymously and the results tabulated and reported as percent. For the analysis, data for responses b, c, and d in questions 3–5 were collapsed and reported as one percentage identified as “mistakes that could or did affect the patient’s health.” Non-response and multiple-answer categories were also pooled for analysis and are not reported unless the percentage was greater than 5%. For this reason all reported percentages may not equal 100. Statistical significance between groups was calculated using the chi-square test, and a p-value of ≤0.05 was considered significant.

RESULTS

The response rate was 80% (258/323). All returned surveys met inclusion criteria. The gender, age, and racial distribution of the respondents is compared with the demographic profile of the ED population in Table 1. Self-reported highest educational status indicated: 10% of respondents had less than a high school diploma, 53% were high school but not college graduates, 18% were college graduates, 6% had some graduate or professional school, and 13% held a graduate or professional degree.

Health care utilization was evaluated using two surrogate markers: the number of physician visits per year and the number of hospital admissions per year. Physician visits per year were categorized as: “low,” one to three physician visits per year; “intermediate,” three to ten physician visits per year; and “high,” more than ten physician visits per year. Forty-seven percent of the respondents reported low physician utilization. Of the remaining respondents, 30% reported intermediate, and 23% reported high physician utilization.

Similarly, hospital admissions were categorized as low utilization for those respondents with no hospital admissions in the past year, intermediate for respondents with one to three hospital admissions, and high for respondents with greater than three hospital admissions. A significant majority of the respondents, 75%, had low hospital utilization, while 23% of the respondents reported intermediate utilization and only 2% reported high utilization of hospital services.

| TABLE 1. Demographic Profile of the Survey Participants and the Emergency Department (ED) Population |
|---|---|---|---|---|---|
| Age (Years) | Gender | Race |
| 18–30 | 31–40 | 41–50 | 51–60 | >60 | Male | Female | White | African American | Hispanic | Other* |
| Study population | 25% | 20% | 21% | 17% | 16% | 35% | 65% | 72% | 22% | 2.4% | 2% |
| ED population | 25% | 20% | 19% | 13% | 24% | 47% | 53% | 58% | 33% | 6% | 2.5% |

*Other category represents Asian Americans, Pacific Islanders, and Native Americans.
Respondents indicated that if a medical error occurred during the course of their health care delivery, a majority (88%) would want to know everything about the mistake. All remaining respondents (12%) indicated they would only want to know about the mistake if it could or did affect their health. No respondent wished to limit information about the mistake to billing information.

When queried as to whether they would like to learn of a possible mistake in health care delivery, a majority of the respondents (76%) wished to learn about the mistake as soon as it was detected. A smaller percentage (23%) wished to learn of the mistake as soon as the full extent of the error was known. Only 1% of the respondents wished to wait until after discharge from the hospital to learn about the mistake.

The respondents were also queried as to the threshold for reporting errors to government agencies, state medical boards, or hospital committees. The threshold levels were: all mistakes, mistakes that could or did affect the patient’s health, mistakes that affect the patient’s bill, or no mistake (Table 2).

The respondents were asked what role physician educators should take in dealing with medical mistakes. The largest number of the respondents (37%) felt educators should focus on teaching students to be honest and compassionate. Approximately one fourth of the respondents (24%) felt instructors should teach students how to tell patients about mistakes, while 17% felt instructors should focus on developing systems to detect mistakes. Only 9% of the respondents felt that the most important role for instructors was to set an example of error-free medicine. No respondent felt the most important role for educators was to punish students who commit an error. Thirteen percent of the respondents either selected multiple answers (10%) or did not answer this question (3%).

In general, there was no impact of age, sex, race, educational status, or health care utilization on the responses of the respondents (NS with \( \chi^2 \) test). In two categories, however, this did not hold true. Patient age did influence the timing a respondent preferred to learn of a possible health care mistake, with respondents greater than the age of 40 years preferring to delay notification of the mistake until the full extent of the error was known (\( p = 0.01 \)). The educational status of the individual respondent did appear to significantly influence the threshold for reporting a medical error to the state medical board, with respondents having less than or equal to a high school diploma preferring to report all errors to the state medical board (\( p = 0.01 \)).

### DISCUSSION

Medical error, long ignored as a significant etiology of patient morbidity and mortality in our health system, is now receiving significant national attention. Although much has been written on the moral and ethical duty of the physician to disclose error, there is little evidence that addresses the wishes of patients and their families following a medical mistake. This study addresses these issues in an ED setting. Our results indicate an overwhelming majority of respondents want full disclosure of any medical mistake. Most respondents also indicate they wish to learn of the error as soon as it is detected. In fact, the data suggest that for most patients, even if providers do not know the full extent of the error, they should inform the patient that a mistake has occurred.

To the best of our knowledge, there is only one other empirical study evaluating patient preferences for error disclosure. Witman et al. evaluated patient attitudes toward physician error in an internal medicine (IM) clinic. The authors queried IM outpatient patients outside the hospital setting and based their questions on specific case vignettes of medical error. They found that most patients desired physicians to actively acknowledge error. Our data conducted in an ED environment support this conclusion.

The ED has been identified as a high-risk area for medical error. Patients and their families who present to the ED are typically unknown to the ED staff and have an acute problem that may require an intervention. Both of these conditions coupled with the complex milieu of the ED increase the likelihood of ED medical error. Therefore, it is critical to our practice to understand patient preferences for error disclosure.

Physician disclosure patterns have been studied outside the ED environment. We know that few, if any, physicians acknowledge error openly to pa-
patients or their peers. This trend begins during medical school, is reinforced by the current paradigms of residency training, and continues into practice. More than a decade ago, Wu et al. published a multicenter study in JAMA where only 24% of 114 houseofficers reported discussing actual medical errors with the involved patient or the patient’s family. In a more recent study by Vincent of European intensive care unit physicians, 70% felt they should give complete details of an iatrogenic incident to the patient, yet only 32% actually disclosed the error. Sweet and Bernat gave American internists hypothetical cases involving medical error and asked whether they would disclose the mistake. If the case involved a minor error, 96% reported that they would tell the patient of the mistake. However, if the error resulted in the death of the patient, only 76% of physicians would identify the death as error-related. Although there appear to be differences between specialties, cultures, and experience levels, all published studies show that error disclosure does not automatically follow even when an error is recognized.

When asked “why should physicians disclose errors to patients?” physicians endorsed the core value of truthfulness as the most important motivation for error disclosure. Our data indicate that patients and families also value truthfulness. An overwhelming majority of the respondents wished to learn of all errors, and only a small minority (12%) gave physicians the choice of limiting disclosure only to “errors that could affect health.” This observation is also supported by the respondents’ endorsement of “teaching students honesty and compassion” and “teaching students how to tell patients about mistakes” as important roles for medical educators. These findings and the current literature suggest that patients have a desire to learn of errors and that both patients and physicians endorse truthfulness in error disclosure.

Physician disclosure of error is supported at least in part by the American Medical Association code of ethical conduct. This code states that in reference to significant medical complications, which may be the result of physician error, “the physician is ethically required to inform the patient of all the facts necessary to ensure understanding of what has occurred.” Furthermore, full disclosure is required to ensure patients can make informed decisions about their medical care. Although the code addresses “significant” error, it says nothing about the physician’s duty to disclose all error. Our data suggest that patients may wish to learn of more than “significant” error. In fact, a majority wish to be informed of all errors and more than 90% of the respondents endorse a reporting threshold of at the minimum “errors which could or did affect the patient’s health” to government, state, and hospital patient safety agencies. These results indicate that further study of ED patient wishes for full disclosure and broad reporting preferences are warranted.

LIMITATIONS

Our study has several significant limitations. First, the study population was a convenience sample of patients and families seeking care in our ED. This population’s demographic distribution closely matches that of our ED and gives our study a high degree of internal validity; however, it may not be representative of the population as a whole. This significantly limits the ability of the results to be generalized to a more ethnically diverse population. Second, because the instrument was self-administered, there was no sampling of patients unable to complete the instrument for any reason such as severe illness or illiteracy. Third, the small total number of surveys limits the power of the survey instrument to detect smaller differences in patient preferences as to management of possible medical errors.

This instrument sampled patients and their families who were actively receiving medical care and therefore at risk for a medical error. These data may differ significantly from a similar data set collected from the same population in a non-medical setting. Importantly, these data may have more relevance to our clinical practice than data collected in an out-of-hospital environment in populations remote from medical care. Further investigation is required to determine whether there are significant differences between these two populations, the actively at-risk population and those remote from medical treatment. The distinction between these two populations could have important implications for additional data collection on this topic. Additional study is also required to better define age- and educational-level-related preferences in the timing of disclosure. More specific questioning should occur on how the public believes medical educators should teach students to disclose medical error and whether patient preferences differ when asked about specific types of error.

CONCLUSIONS

These pilot data suggest that regardless of health care utilization, patients want full disclosure of medical errors and most patients wish to learn of
these errors as soon as they are identified. Further, patients endorse reporting of errors to hospital committees and state and federal agencies charged with enhancing patient safety. Additional study is required to confirm these observations in specific examples of medical error explicit for error type and severity.

Effective physician education, communication, and management strategies for error disclosure can be developed only if we understand how and when the public wishes to learn of our errors. These inferences cannot be drawn without a comprehensive assessment of the wishes of our patients who are the recipients of both our mistakes and explanations.

References


APPENDIX A

The Survey Instrument

Modern health care is a complicated process. During the delivery of your health care many things could go wrong. Most would in no way impact on your health. The following survey is designed to determine what your wishes would be if something did go wrong in the administration of your health care.

For each of the following questions please select only the ONE best answer.

1. If a medical mistake did happen I would want to know
   - [ ] Everything about the mistake.
   - [x] Only things about the mistake that affect my health.
   - [ ] Only things about the mistake that could affect my health.
   - [ ] Only things about the mistake that cause me physical harm.
   - [ ] Only things about the mistake that affect my bill.

2. If a medical mistake happened to me, I would want to know about it
   - [ ] As soon as it was detected.
   - [ ] As soon as the extent of the mistake was known.
   - [ ] After I was well and discharged from the hospital.
   - [ ] I do not want to know about it.

3. If a medical mistake happens do you think the care provider should be reported to a government-reporting agency?
   - [ ] For all mistakes no matter how trivial.
   - [ ] For mistakes that affect the health of the patient.
   - [ ] For mistakes that could affect the health of the patient.
   - [ ] For mistakes that cause the patient physical harm.
   - [ ] For mistakes that affect the patients bill.
   - [ ] Never, I do not feel medical mistakes should be reported to the government.

4. If a medical mistake happens do you think the care provider should be reported to the state medical board?
   - [ ] For all mistakes no matter how trivial.
   - [ ] For mistakes that affect the health of the patient.
   - [ ] For mistakes that could affect the health of the patient.
   - [ ] For mistakes that cause the patient physical harm.
   - [ ] For mistakes that affect the patients bill.
   - [ ] Never, I do not feel medical mistakes should be reported to the state medical board.

5. If a medical mistake happens do you think the care provider should be reported to a hospital committee focusing on mistakes?
a) □ For all mistakes no matter how trivial.
b) □ For mistakes that affect the health of the patient.
c) □ For mistakes that could affect the health of the patient.
d) □ For mistakes that cause the patient physical harm.
e) □ For mistakes that affect the patients bill.
f) □ Never, I do not feel medical mistakes should be reported to a hospital committee.

6. What role should people who teach physicians take in dealing with medical mistakes?
   □ Teachers should teach their students how to tell patients about mistakes.
   □ Teachers should teach their students how to be honest and compassionate.
   □ Teachers should develop systems to detect medical mistakes.
   □ Teachers should always set an example of error free medicine.
   □ Teachers should punish students who commit a medical error.

7. I am:
   □ 18–30 years old
   □ 31–40 years old
   □ 41–50 years old
   □ 51–60 years old
   □ >61 years old

8. I am a:
   □ Male
   □ Female

9. I am:
   □ White/Caucasian
   □ Black/African American
   □ Hispanic/Latino
   □ Asian American
   □ Native American
   □ Other

10. How many times during the past year did you visit a doctor?
    □ I did not visit a doctor in the last year.
    □ Less than 3 times
    □ 3–6 times
    □ 6–10 times
    □ More than 10 times

11. How many times were you admitted to the hospital in the last year?
    □ None, I was not admitted to the hospital in the last year.
    □ One to 3 times
    □ More than 3 times

12. What is the highest level of education you have obtained?
    □ Some high school
    □ High school graduate
    □ Some college courses
    □ College graduate
    □ Some graduate or professional school
    □ Graduate or professional degree

This is the END.
When finished please place your survey in the box or return it to the Research Assistant
THANK YOU