News Media and Health Care Providers at the Crossroads of Medical Adverse Events

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Abstract

In 2005, Indiana Governor Mitch Daniels issued an executive order that mandated Indiana health and medical professionals to report adverse event data. Although the mandate was designed to improve patient safety, the long-term success of mandatory reporting systems depends on maximizing effective reporting of adverse events and presenting these data in ways that will change the systems causing the medical errors. Perceptions of key constituents play a role in whether reporting is more or less effective in the short term and beneficial to patients in the long term. In this study, we sought to gauge perceptions of two stakeholders integral to the success of this mandated reporting: health care providers, who report adverse events to the State; and the news media, who report results from this government-mandated reporting to the public.

Introduction

Medical adverse events are injuries—fatal or nonfatal—caused by medical management. What are more generally called "medical errors"—preventable adverse events—have been identified as one of the top 10 leading causes of death in the United States, ahead of deaths from motor vehicle accidents, breast cancer, and AIDS.[1] The frequency of medical errors is also recognized by a large proportion of patients as a serious problem; 42 percent of Americans said they had personal knowledge of an error in their own care or in the care of a relative or friend.[2] Beyond fatality and injury figures, total national costs (lost income, lost household production, disability and health care costs) associated with preventable adverse events have been estimated to range between $17 and $29 billion.[3]

Finding a "cure" for the current system, which allows between 44,000 and 98,000 medical errors per year, is a necessity for patient safety. Nearly a decade ago, the Institute of Medicine (IOM) recommended a mandatory national reporting system for adverse events, overseen at the State level, as "a comprehensive approach to improving patient safety."[1] Since that time, several States have implemented adverse event reporting systems with different levels of success. To date, most claims of success have been based on the number of events reported by different hospital staff.[4, 5] While most discussions about medical errors revolve around issues of how to correct certain behaviors thought to increase error likelihood, empirical studies often propose remedies for reducing errors by attempting to remove human error from the medical error equation.[6, 7, 8]

Although past efforts to address this important issue are notewothy, we have come to realize that the reporting of adverse events is a complicated issue involving multiple stakeholders; including patients, health care and medical professionals, and the news media. If handled correctly,

medical adverse event reporting has the potential to improve patient safety and promote the open sharing of “best practices” and strategies to avoid future adverse events. However, confusion, fear, and blame may result if adverse event data are misinterpreted or misused. Thus, a systematic study is needed of individual perceptions regarding medical error reporting, mandatory systems of reporting, and the use of data that comes from these reports.

In this study, we explore the issues of medical adverse event reporting in the State of Indiana. Given the recent implementation of adverse event reporting, Indiana provides a useful context to study key perceptual issues that might help explain the potential success or failure of different aspects of one recently developed and implemented mandatory reporting system. Specifically, our study sought to assess the perceptions of two important stakeholders: health care providers and news media reporters.

Understanding the attitudes of these two groups should provide important guidance to identify barriers to the regulation of medical adverse event reporting, conceptualize solutions to those barriers, and develop strategies for the public dissemination of data to improve patient safety. To frame the research questions of central concern for our study, the following section provides a brief overview of adverse event reporting. The methods and data collected from Indiana news media professionals and health care providers are then detailed, followed by a discussion that includes prescriptions that ultimately should affect patient safety.

Overview of Adverse Event Reporting

The realization that medical adverse events are a leading negative contributor to health care quality in the United States led to the formation of a Quality Interagency Coordination Task Force to coordinate quality improvement activities in Federal health care programs. Until the IOM’s 1999 publication of *To Err is Human*,[1] a widely-disseminated indictment of the prevalence of medical adverse events in U.S. health care, adverse event reporting was largely ignored. As of December 2006, 27 States had passed legislation, regulations, or executive orders related to adverse event reporting by hospitals.[9]

The Agency for Healthcare Research and Quality (AHRQ) defines “adverse event” as an injury or death resulting from a medical intervention, something that is not due to the underlying condition of the patient.[3] Preventable adverse events reflect two types of failure: either the correct action did not proceed as intended (e.g., an error of execution) or the original intended action was not correct (e.g., an error of planning). Errors can be diagnostic (e.g., misdiagnosis, leading to an incorrect choice of therapy, or a misinterpretation of test results); equipment-related (e.g., defibrillators with dead batteries or intravenous pumps with valves that are easily dislodged or bumped); infection-related (e.g., postsurgical wound infections); transfusion-related (e.g., giving a patient the incorrect type of blood); or misinterpretation of medical orders (e.g., failing to give a patient a particular meal ordered by a physician).[3]

The National Quality Forum’s (NQF) [10] report lists 27 types of major adverse events.[11] These include surgical events (e.g., surgery performed on the wrong body part); product or device events (e.g., patient death or injury associated with the use of contaminated drugs or devices); patient protection events (e.g., infant discharged to the wrong person); care management events (e.g., maternal death or serious disability associated with labor or delivery in a low-risk

pregnancy); environmental events (e.g., death or serious disability associated with an electric shock); and criminal events (e.g., abduction of a patient of any age), to name just a few.

Given the specificity in types of adverse events and variations in the usage of the term, implementing a universal reporting system is challenging. State agencies have been the main proponents of reporting, with particular systems tailored to the needs of medical facilities in each individual State. This study examines Indiana's implementation of a mandatory reporting system in early 2005. The following section outlines the Indiana system, its purported benefits, and perceptions that may lead to questionable success.

Reporting in Indiana: The Current Context

In January 2005, Indiana Governor Mitch Daniels issued an executive order directing Indiana health care and medical professionals to report adverse event data to the Indiana State Department of Health (ISDH).[12] In January 2006, Indiana health care and medical professionals began reporting 27 different types of serious preventable medical adverse events to the ISDH.[9]

The focus of the Indiana regulation is preventable medical adverse events, or adverse events attributable to error.[1] For example, if a patient dies from pneumonia acquired postoperatively, it is an adverse event (e.g., a serious injury or death resulting from medical management, not the underlying condition of the patient). If analysis reveals that the patient contracted pneumonia because of poor hand washing or instrument cleaning techniques by the staff, the adverse event was preventable (e.g., attributable to an error of execution). This latter example is most closely aligned with the lay notion of medical error.

According to the ISDH, the purposes of error reporting include:[12]

- Increasing awareness of medical errors.
- Collecting and analyzing data on medical errors to determine whether there are areas where mistakes could be reduced.
- Assisting health care providers in reducing medical errors.
- Providing information to patients so that they understand their role in helping to prevent errors.
- Promoting the sharing of successful solutions and improvements among health care providers.
- Instituting a culture of open discussion.
- Developing "best practices" aimed at reducing medical errors.
- Reducing health care costs through elimination of errors and duplication.

Perceptions About Reporting

Although perceptions among the general public are important with regard to mandatory medical error reporting systems, the perspective of health care leaders is crucial. The general public seems concerned primarily with errors that occur in their own care or in the care of family members. Whether reporting is mandatory is unlikely to alter these perceptions. However, for health care leaders, the nature of medical error reporting (mandatory vs. voluntary) is likely to affect perceptions of reporting.

Physicians in the United States tend to agree with patients about the importance of disclosure. In a recent survey, 77 percent of physicians felt that they should be required to tell patients when errors are made in their care.[13] Additionally, they believe the nurse and hospital have significantly less responsibility for the disclosure. This suggests that disclosure is a voluntary act on the part of the physician, who has an ethical (and personal) responsibility to report errors to patients and their families.

Despite a positive perception of error reporting to patients and families, some medical leaders nevertheless question the need and effectiveness of a mandatory reporting system. One potential reason for this resistance is that some leaders may feel they have already built a culture of openness, where medical and health care professionals do not hesitate to report medical adverse events. However, adding a layer of public error reporting could lead to a culture of fear, lessening the likelihood that errors will be reported.

Research has shown that this positive perception of physician disclosure is not always reflected in the actions of medical workers. For example, when physician trainees were queried about the most significant medical mistake they made in the last year, 24 percent reported discussing the error with the patient or family; a later study of physicians found a similar rate, 21 percent.[14] However, according to another study, physicians said that an error need not be disclosed if the harm was trivial or if the patient was unaware of the error.[13]

Health care providers often list fear of litigation as a significant reason for not disclosing medical adverse events. Another potential reason for nondisclosure is that health care professionals may fear how the news media might frame adverse events. Media reports, such as those that surfaced following the release of *To Err is Human,* tend to highlight shocking statistics and pin the blame on individuals rather than scrutinizing loopholes in the system.[1, 15, 16] Media misjudgments often lead the public to draw false or simplistic conclusions about a multifaceted problem.[17] Because of this tendency, the IOM has been critical of how the news media, including *The New York Times* and *The Washington Post*, have exclusively reported the upper end of death figures attributable to adverse events (i.e., 98,000). Only a handful of news stories explained that IOM's estimates were based on extrapolations from studies from Colorado and Utah, and from New York, at least one of which was 15 years old.[17] Nevertheless, the news media still play a key role in affecting how citizens understand and use information about health care and medical needs.[16]

Research Questions

In light of the research reviewed above, we examined how Indiana health care leaders and news media professionals perceive medical adverse events and the recent regulations. Specifically, the project aimed to (1) identify barriers to reporting, including solutions to those barriers; and (2) determine how data are best communicated to the public in order to improve patient safety.

The research presented in this article was conducted after the announcement of the reporting mandate but before the information was released to the public. The *Final Report of the Indiana Medical Error Reporting System*[18] was released subsequent to our data collection efforts. In line with suggestions from our investigation, this document included medical adverse events reported by Indiana hospitals, ambulatory surgery centers, abortion clinics, and birthing centers. The first population of interest was health care professionals. The success of the reporting system will ultimately be decided by those instructed to come forward with medical error information; this is

why the perceptions of health care professionals are important. Our study addressed the following research questions (RQs).

RQ 1: How do Indiana medical and health care professionals perceive the adverse event reporting system? An additional question was posed to address barriers that might limit the effectiveness of the reporting system. To the extent that barriers can be identified, more accurate information can be gained to gauge how the barriers might affect the reporting of adverse events.

RQ 2: What barriers do Indiana medical and health care professionals perceive would affect the reporting of adverse events to the State of Indiana?

RQ 3: What are the suggested solutions to barriers to reporting adverse events as perceived by Indiana medical and health care professionals?

It is also important to understand media perceptions of the reporting system and of medical errors in general, in order to learn how to best communicate data to them. The news media's interpretation of medical adverse events affect how they portray the issue for the public, a crucial aspect of past media releases.

RQ 4: What do Indiana news media professionals understand about medical adverse events reporting?

It is also important to identify perceptions of medical adverse events by Indiana news media professionals, since media perceptions (whether accurate or inaccurate) influence public perceptions.

RQ 5: What do Indiana news media professionals perceive as the possible causes of medical adverse events?

RQ 6: What do Indiana news media professionals perceive as the solution to adverse events?

To understand health care leaders' perceptions of medical adverse events reporting, we conducted a series of focus groups. E-mail surveys targeting Indiana news journalists were also used to gauge their perceptions of medical adverse events. In this article, we discuss each population of interest separately for ease of reading. We then present a general discussion of the studies as a cohesive unit of information with final recommendations regarding patient safety.

Perceptions of Health Care Providers

Methods

The focus group method is an effective approach for understanding how people think and feel about an issue and for identifying lay beliefs among Indiana's health care and medical providers.[19] A total of 32 adult health care professionals and/or medical providers participated in one of five focus groups, with 3 to 11 participants per group. Nurses, quality professionals, hospital executives, physicians, and public relations and marketing professionals were recruited through the Indiana Hospital and Health Association (IH&HA). Work experience among

participants in their current positions ranged from 6 months to 36 years. Participants held degrees, including BA/BS, MA/MS, RN, PhD, and MD. Informed consent was obtained, and focus groups were audiotaped for transcription purposes.

Two women and three men conducted the focus groups. The focus group moderator's guide was divided into six main topic areas. The topic areas were selected based on an informal review of existing literature in the field of adverse events and include: (1) introduction, (2) perceptions of medical adverse events and their regulation, (3) overall impact, (4) communication of data, (5) barriers to adverse event reporting, and (6) solutions to barriers. Researchers solicited input from the ISDH on questions and approval of the final moderator's guide.

The audiotapes of the focus groups were transcribed verbatim. Two coders analyzed data, and the coding scheme was cross-checked by inductive analysis where research begins with the data.[19] Data were coded and categorized into six overall categories, based on open coding, axial coding, and selective coding.[20] Initial data analysis involved open coding to identify discrete themes that were compared and grouped within broader categories.

Results: Health Care Providers

Focus group findings addressed the perceptions of health care professionals with regard to three main aspects of medical adverse event reporting: perceptions of the reporting system in Indiana (RQ1), barriers to reporting (RQ2), and solutions to those barriers (RQ3). Themes common to all stakeholder groups are addressed below. The reader is referred to Whitten, et al.,[21] for a more detailed description of themes from individual constituent groups and complete quotations for their support.

Perceptions of the Reporting System

Anxiety over public reporting. Participants were generally concerned with the media focusing on negative aspects of medical adverse events. One respondent explained, "Nothing is worse for the news media than to have a slow news day. So, they will love this because it gives them something for that week. And it's done under the guise of public service. I don't know whether they have that much of an investment in the game. For them it's like a great story to tell."

Health care providers fear the news media will sensationalize the issue of medical adverse events, shifting the focus away from the intention of the regulation. Health care professionals also fear the public might not be highly medically literate, thus reducing the likelihood that they would correctly interpret the information. This has the potential to lead to a culture of fear among health care providers, while hindering the future reporting of preventable medical adverse events. One health care provider explained, "You get concerned about people publicly sharing because they may get afraid. We have to be careful and go back to not reporting events."

Confidentiality. Instead of reporting errors to the general public, health care and medical professionals suggested error reporting information be shared only among health care organizations to improve the system. One provider said that things would be better if adverse events data were employed within the circle of health care providers: "Let's just not report this to

the public, but let's use this information in a confidential forum between health [care] systems and hospitals." The health care providers were concerned about public perception and litigation regarding public reporting of adverse events data.

Errors as an individual-level phenomenon. Many of the participants in each group focused primarily on the individual's role in any given medical error. Although this focus at the individual level is not completely without merit, it is the system that a mandatory reporting effort attempts to correct. Thus, the perception of the system is one of individual rather than system correction. Providers are cognizant that most adverse events occur because of a problem within a larger health care system. However, they are concerned that a mandatory data reporting system would limit attention paid to root causes of adverse events. Furthermore, they are concerned about how these data would be employed by State or news organizations.

Barriers to the Reporting System

Reporting as punitive. The reporting system was perceived as a punitive measure by a large portion of the participants. One respondent was very clear in stating, "There is nothing here that has anything to do with improving safety. It is just reporting events; there is not a method of sharing of solutions so the State would be better off; this is punitive reporting mechanics." This was associated with confidentiality insofar as participants viewed the mandatory nature of the system as its biggest downfall. Many participants raised concerns about the mandatory system by stating that their particular facility had been reporting errors for quite some time. These current systems are seen as more confidential, less punitive, and less intrusive to a culture of open dialogue.

Solutions

Explanation and education of the goals of the reporting system. Participants across groups highlighted the importance of education and information campaigns, which underscores the system-level nature of the issue. The majority of group members preferred instituting a system that allowed the sharing of adverse events for educational purposes. One respondent explained, "If we are not sharing, we are not learning. We can learn from each other's events." Moreover, getting out the message that reporting is a system-wide phenomenon that is nonpunitive, especially toward individuals, is likely to reduce anxiety associated with the public reporting of these events.

Many participants suggested that instead of simply reporting the number of events, preventive information should also be communicated. Most participants hoped to share information among medical institutions along with the data. One health provider explained, "If you are looking at things, and then you can see what you have done, even if there are near misses or an error, you can go in there and see what others have done or see the processes they have done and hopefully prevent an error from happening."

Summary: Health Care Providers

Health care providers acknowledge the benefits of reporting adverse medical events. They are particularly enthusiastic about the potential of employing adverse event data in instructive ways that can prevent future errors and improve patient safety. However, these same health care

providers have limited confidence that State agencies will employ and report these adverse events in constructive ways. Furthermore, there is a perception that news and other media outlets will misreport the data.

Indiana News Media Perceptions

Methods

Due to their convenience and affordability, we chose to collect data from the news media using e-mail surveys.[22] An e-mail survey was sent to one representative from each Indiana radio and television station and each daily and weekly newspaper. The *Editor & Publisher International Yearbook* lists 68 daily and 96 paid weekly Indiana newspapers.[23] A total of 14 television news stations from five major markets (Indianapolis, Fort Wayne, Terre Haute, Evansville, and South Bend) received the questionnaire, based on the Nielson Media's television market list.[24] Since few Indiana radio stations focus on news as their primary product, only one radio news station was invited to participate in the e-mail survey.

The survey targeted people who covered health news. The health beat reporter was identified through the news organization's Web site. When news organizations employed general assignment reporters instead of health/medical beat reporters (as is the case for most media organizations in Indiana[25]), the e-mail survey was addressed to a newsroom editor or director. The e-mail survey took place from November 17, 2006 to February 17, 2007. Completed questionnaires were received from 52 participants from the 179 Indiana news organizations, a response rate of 29 percent. The demographic composition of the sample is presented in Table 1 and is reflective of typical newsroom employees.[25.] Most news employees rated their understanding of health or medical issues as good (54 percent) or fair (40 percent), and they felt somewhat confident (84 percent) about covering health issues.

Table 1. Demographic characteristics of media professionals sample

Demographics		%
Race	Caucasian	92
	Other	8
Education	College degree	52
	Some college	26
Annual income	<$50,000	40
	$50,000 - $74,999	14
Sex	Male	48
	Female	52
Professional task	Editor	50
	News director	12
	Nonhealth/nonmedical beat reporter	16
	Health/medical beat reporter	14

Results: News Media Perceptions

The majority (77 percent) of Indiana journalists were familiar with the term “medical error.” They typically viewed a medical error as a mistake or misdiagnosis that occurred under the care of a hospital, employee, physician, or facility that could either injure a patient or risk the patient’s life. Most journalists learned about the issue of medical errors from the news media (48 percent) or from experience with a friend or a family member (21 percent).

Journalists predominantly believed that preventable adverse events occurred “somewhat often” (39 percent) or “not too often” (39 percent). They believed overwhelmingly (65 percent) that both individuals and the health care system could be responsible for a medical error. However, most journalists (52 percent) felt that they did not know how many Americans were affected annually. They speculated that around 5,000 people were affected annually. Answers varied regarding the proportion of medical errors that were preventable: all (14 percent), three-quarters (25 percent), half (31 percent), one-quarter (2 percent) and “don’t know” (29 percent). The majority of journalists believed that reporting medical error data should be required (98 percent), with slightly fewer journalists stating that data should be released to the public (66 percent).

Perceived Causes of Medical Errors

News media professionals in Indiana believed that medical errors involved multiple contributing factors, including communication barriers (76 percent); heavy patient loads (74 percent); overwork, stress or fatigue of providers (56 percent); and too few nurses (44 percent). They were less likely to indicate poor training of health care professionals (18 percent), increased use of computerized medical records (18 percent), and the fragmented nature of health facilities (20 percent) as causes.

Perceived Solutions

A majority of journalists thought more support was needed for individual health care providers to prevent adverse events. News media professionals indicated that “very effective” solutions to preventing medical errors included requiring hospitals to implement systems to avoid medical errors (86 percent), recording of corrective and preventive procedures (80 percent), allowing more time with patients (68 percent), increasing the number of nurses (52 percent), and reducing the number of hours doctors worked to alleviate fatigue and stress (52 percent).

Summary: News Media

In summary, Indiana news media survey respondents demonstrated an awareness of the problem of medical adverse events, but more sophisticated comprehension was not evident. Even though they did not display extensive knowledge of adverse event reporting, they overwhelmingly felt this should be mandatory, and they viewed the media as being responsible for reporting adverse events to the public. Ironically, they often learned about the concept of adverse events from other media outlets.

It is worth noting that due to the specialized nature of the stakeholder group being targeted for this study, our sample size was rather small. Future research might benefit from a larger-scale, national level analysis of perceptions of media professionals reporting health care-related issues.

Discussion: Putting These Perceptions in Context

Empirical evidence suggests that medical errors are not often disclosed, despite the fact that patients, physicians, and the public support disclosure.[14, 26] This situation may be due to a lack of disclosure guidelines for practitioners or communication from leadership implementing the change.[14, 27] Health care providers opined that medical providers should be encouraged to share and learn from one another to prevent adverse events. Education and continual communications that clearly address the goals and expected benefits of adverse event reporting should be provided by the State. This information is essential to overcome skepticism about the system's purpose. Health care professionals expressed their interest in viewing information on errors, the prescriptive practices used to correct them, and evidence-based changes occurring from their reporting of medical adverse events.

Health care professional focus groups further stated that the system should reflect a culture free of blame and a commitment to protect patients. There is a perceived need to shift the individual-based model to a system-based model, whereby medical errors would be defined as a process issue. The overarching theme propelling this mandatory change is patient safety. This is not just a hospital system issue, but an issue that involves local government officials and the public as well. The success of Indiana's mandatory reporting system depends upon communication among all three entities.

The news media play a key role in molding public perception about medical errors, and many health care organizations look to the media to communicate to the public on their behalf. Good relationships among the media, health care organizations, and the State are vital to achieving statewide patient safety improvements.

Descriptive data demonstrated that most reporters (86 percent) were general assignment reporters, editors, or news directors, which means they did not regularly cover health or medical issues. It is important, therefore, to have educational material available to the news media. Results reveal the importance of making the process and procedures of the medical error reporting systems transparent to the media, regardless of their health care background or knowledge. The goal of communication is to provide patients with information, so they can understand their medical care. The majority of the news media believed adverse events should be reported to the State, and that errors and corrective practices should also be shared with the public. Background knowledge of a statewide communication system might encourage the news media to focus less on numbers and more on how the State works to ensure a safer medical environment.[28]

The ultimate goal is to enhance patient safety using adverse event data. The challenge is to backtrack to the act of health care providers reporting adverse events and to the media communicating these errors to the public (and other media). In order to create a State-level

adverse event reporting infrastructure that meets its long-term goal of enhancing patient safety, a host of key activities must be implemented.

- The State should provide education and continual communication that clearly addresses the goals and expected benefits of medical error reporting. This information is essential to overcome skepticism about the system's purpose. To optimize effectiveness, the format, presentation style, and message strategy should be tailored for multiple audiences.
- The medical adverse event reporting system should be standardized across the State. Health care providers want to work together, but they fear that the lack of a standardized system would be a barrier to the system.
- The system should reflect a no-blame culture, and a commitment to protect patient safety should be clear in all public communications. Defining adverse events as a process issue is a necessary but delicate undertaking. Statements about medical adverse events could cause more fear than calm among the public, even if the "blame" is shifted from individuals to process. Statements should highlight the commitment of hospitals and their staff to protect patient safety in every feasible way.
- To reduce public confusion and fear, help should be provided for hospitals, so that a consistent message regarding medical errors can be presented. This could include creating media templates to assist medical organizations in responding to medical errors and providing public relations assistance for media and hospital professionals through a statewide public relations contact.
- Make the process and procedures of the medical error reporting system transparent to the media, and establish a communication sharing system before the release of any reports. Knowledge of a statewide communication sharing system would encourage the news media to focus less on numbers and more on how the State is working to ensure safer medical environments, which would be particularly important to members of the public who have been affected by a medical error.
- Provide extensive background information on medical errors and associated regulations on a continual basis. This could include the availability of a Web site that could provide in-depth information that is available in all forms for the public and the news media.
- The news media need to be educated on how medical professionals take action once a medical error has occurred. This includes educating the media on how to help the public use the data to make informed health care decisions.

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