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How Communication "Failed" or "Saved the Day": Counterfactual Accounts of Medical Errors

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Abstract

Communication breakdowns among clinicians, patients, and family members can lead to medical errors, yet effective communication may prevent such mistakes. This investigation examined patients' and family members' experiences where they believed communication failures contributed to medical errors or where effective communication prevented a medical error ("close calls"). The study conducted a thematic analysis of open-ended responses to an online survey of patients' and family members' past experiences with medical errors or close calls. Of the 93 respondents, 56 (60%) provided stories of medical errors, and the remaining described close calls. Two predominant themes emerged in medical error stories that were attributed to health care providers—information inadequacy (eg, delayed, inaccurate) and not listening to or being dismissive of a patient's or family member's concerns. In stories of close calls, a patient's or family member's proactive communication (eg, being assertive, persistent) most often "saved the day." The findings highlight the importance of encouraging active patient/family involvement in a patient's medical care to prevent errors and of improving systems to provide meaningful information in a timely manner.

Keywords

physician–patient relations, physician–patient communication, patient engagement, patient safety, patient activation

Introduction

Medical errors are one of the major causes of death in the United States and worldwide (1). While there are several factors associated with medical errors, problems in communication are major contributors (2,3). While effective communication is critical to providing safe care (4–6), what counts as "poor" or "good" communication in the context of medical errors needs more study. This investigation examines patients' and family members' accounts of the role communication played in causing or preventing medical errors. We acknowledge that patients' and family members' perceptions of medical errors and "close calls" (where something almost went wrong) may differ from those of medical professionals (7). However, the views of patients and family members are essential, as they are the closest observers of patient care and can provide important insights throughout the care process (8). Themes that emerge from patients' and family members' stories could help inform health care practices aimed at preventing medical errors or mitigating the consequences of patient-perceived errors (9).

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Inherent in patients' accounts of medical errors or "close calls" are counterfactuals. That is, when thinking about what went wrong and how it could (should) have been avoided, individuals mentally simulate alternatives that are *more desirable* than reality (10). This kind of "upward" counterfactual thinking includes thoughts of how a bad outcome might have been prevented (11). For example, a patient may believe "If only the doctor listened to me" or "The surgeon should have talked to the radiologist." Studying these accounts provides insight into what patients/family members retrospectively see as *causing* medical errors (12,13).

Conversely, descriptions of close calls are mental projections of alternatives that are *worse* than reality (10). This "downward" counterfactual thinking occurs less often because people usually accept desirable outcomes at face value (14). In describing close calls, patients' and families' stories might include statements like, "Fortunately, I refused to accept that as the only treatment" or "Good thing the doctor checked with the pathologist to get the right diagnosis." Retrospective accounts of close calls could inform communicative actions which patients and family members see as *preventing* medical errors.

This investigation examined 2 research questions. First, when asked to describe a medical error or close call, what types of events do patients and family members identify (eg, missed diagnosis, medication errors, and procedural incompetence)? Second, what communication-related themes are reflected in patients' and family members' accounts of *medical errors* and of *close calls*?

Method

Participants and Procedure

Following approval from the Wake Forest University Institutional Review Board, research participants were recruited through an international online panel, Amazon's Mechanical Turk (MTurk), based on their willingness to share an experience of something that went wrong or almost went wrong in their medical care or the care of a loved one. After completing a brief eligibility question, respondents were linked to the Tell My Medical Story Questionnaire.

The questionnaire asked participants to provide basic demographic information and to report their role (ie, patient, family member) in the event. Next, participants described either what went wrong or what almost went wrong and provided details. Our use of an open-ended question to elicit accounts of their experiences was expected to produce stories that identified an outcome (a medical error or close call), protagonist and/or antagonist (eg, clinician, patient, family, and health care organization), and some (in)action connecting the culpable (or laudable) party to the outcome.

If a participant selected something that *did* go wrong, he or she received this prompt: "When things go wrong, and someone is harmed, people often think about what could or should have been done differently. They might have thoughts like, 'I wish that I had . . . ' 'Someone should have . . . ' Thinking of the event you described, what should have been done differently?" If a participant selected something that *almost* went wrong, he or she received these instructions: Sometimes things start to go wrong, but harm is avoided. In those cases, people sometimes think about what prevented things from getting worse. They might have thoughts like "Thank goodness for . . . " or "If not for . . . " Thinking of the event you described, what prevented things from getting worse?

Data Analysis

These accounts were analyzed using thematic analysis based on the approach of Braun and Clarke (15). Two investigators (K.M. and C.B.) reviewed a sample of responses from the survey (eg, what happened, who did what). The 2 investigators generated an initial set of codes to capture salient content and themes, discussed and reconciled the codes, and then created a preliminary master code list. Events were coded with respect to the event chosen (medical error or close call) and what if any aspects of communication were represented in the account. Next, 3 investigators (K.M., C.B., and A.A.) applied the coding scheme to responses from 3 to 5 participants (each), met to clarify coding definitions, and made final modifications to the coding scheme. One team member (A.A.) then coded the entire set of responses with a second team member (K.M. or C.B.) reviewing 10% of the responses to check consistency. Summary tables were created showing the respondents' coded comments, the corresponding code, and sample quotes.

Results

Research Participants

One-hundred and five adults completed the questionnaire. However, 12 participants failed to fully complete the survey or provided event details that were not consistent with survey instructions. The final sample consisted of 93 adults (M_{age} = 40.5 years, standard deviation = 14; range: 19-81). Of these, 65 (69.8%) identified as patients, 26 (28.0%) as a family member of a patient, and 2 (2.2%) as a friend or proxy.

Types of Events

Proportionally more respondents (60%) reported on a medical error compared to 40% who reported a close call. The most common medical event was misdiagnosis (n = 31), followed by problems with medical procedures (n = 23) and medication complications (n = 22). The remaining 17 stories addressed other medical problems (eg, access to care, difficulty finding qualified physicians).

Table 1. Illustrative Examples of Communication-Related Events Reported.

Event Type Sample quotes
Providers not listening (noted by 29 respondents)
Something DID go wrong:
"I went to the doctor numerous times to present my worries but was always turned away because they said it was normal. After being in excruciating pain for weeks, they finally did a test on the bile in the line and found out that it was indeed a staph infection that needed treatment immediately."
Something ALMOST went wrong:
"I had given them my medical history and list of allergies, including antibiotic, which have a massively different effect on me than on others, ie, making an infection worse, or nearly putting me in a coma. I, again, when the doctor asked, told them I am allergic to antibiotics . . . The doctor acknowledged it, and still, as I left and was handed my Rx, when arriving to the pharmacy, I noticed that he had prescribed me Amoxicillin."
Insufficient or delayed information giving (noted by 19 respondents)
Something DID go wrong:
"When my grandmother was released from the hospital after having had a stroke, we weren't instructed about the ways in which her medications were changed. So when she got home we weren't sure about which meds she should continue, which she needed to order etc. It was a sloppy transition and was nerve-wracking for everyone."
Something ALMOST went wrong:
"My doctor was not clear on when I should return for checkups and as a result I waited too long to be able to adequately completely control my condition. I was left was a lot of pain."
Poor interprofessional communication (noted by 14 respondents)
Something DID go wrong:
"She told me that she would put a referral in at the hospital to contact me as soon as possible for surgery. Well, it has been a month and a half since my appointment and I have not heard from the hospital . . . I have a feeling the referral did not even go through."
Something ALMOST went wrong:
"Whenever I see a new doctor, I make sure to tell them I'm allergic to NSAID's . . . I went to an emergency clinic with a bad migraine headache and told them my typical allergy. I saw the physician and he prescribed me an injection—I don't remember the name of the drug, but it's one that I know I cannot take because it's a strong anti-inflammatory. The nurse came in to give me the shot, and my husband just happened to ask, 'So that's not an NSAID, right?' She said it was a very powerful NSAID"
Lack of sensitivity, caring (noted by 9 respondents)
Something DID go wrong:
". . . When I woke up, I had a bruise from my crotch to my ankle where I had bled internally from the convulsion. No one came to apologize or explain what had happened and I never saw the cardiologist again. I feel like I was lucky to make it out alive from that one."
Something ALMOST went wrong:
"One of the most memorable things that stick out in my mind with this experience is that the doctor's son was graduating the day my son was born, so in hindsight, I felt as though he was trying to rush my labor for his own convenience . . . "
Conflicting information given (noted by 3 respondents)
Something DID go wrong:
"We got conflicting reports from the doctors who visited. One said the tumor was stage 4, another said 3, and one said while it was a 3, it was more on the 2 side. Stage 4 meant he had a year to live, stage 3 gave him 3 to 5 years and stage 2 would mean he had up to 9 . . . "
Something ALMOST went wrong:
"One doctor told us it'll heal, not to worry. Another doctor told us that by not knowing this we may have caused a long time damage to the shoulder . . . "

In 61 (64%) accounts, communication played a prominent role, 38 of which were from the "what went wrong" group and 23 from the "almost went wrong" group (see Table 1). Of those reporting medical errors, the most common communication problem was the provider not listening to or ignoring the patients'/family members' question or concern (n = 19). This was also the most common in the close call accounts (n = 10). The next most common was insufficient or delayed information (n = 10 in medical error group; n = 9 in close call group). Several respondents in both groups identified communication problems within the clinical team and their frustration when interacting with insensitive or uncaring clinicians.

Medical Errors: Where Communication Went Wrong

The stories describing medical errors were often attributed to communication failures by health care providers. These mostly focused not on what clinicians did but on *what they did not do*. The most common was the perception clinicians were not paying attention to or listening to the patient's or family's concerns (see Table 1). Examples include:

> My injury should have been treated for MRSA from the start. Instead I went through a vicious cycle that lasted over a year. I kept saying the same thing over and over. I was ignored over and over. And the situation got serious.

> She could have taken him to a different hospital . . . The doctors could have been more understanding and listened to my uncle and had they immediately treated him he would likely still be here today.

The second most common communication theme focused on clinicians' failure to provide timely and sufficient information:

> I wish the first doctor would have leveled with me about my condition. I wish the second doctor would have told me that vocal therapy was an option that wouldn't correct my throat issue in the long run. I wish the vocal therapist would have told me the same thing.
>
> They should have advised me that I had an infection. They should have advised me of the signs and symptoms to look for. They should have told me when to go to the ER or the doctor's office. I wish I had known there was an infection instead of thinking it was just flu-like.

The final provider-focused theme identified communication problems among the clinical team.

> Most of these incidents would have been averted, if they had listened to each other, or at least made sure that they understood what was being said.
>
> Doctors should have communicated with each other to make sure medications did not contradict each other. The nursing home staff should have also checked on that

There were, however, exceptions to attributing medical errors to clinicians. Several respondents blamed themselves for not being more proactive and assertive.

> I should have done more research and (gotten) more opinions. I did not know that the cough was a sign of an asthma attack. I should have been more persistent and asked more questions, pushed for the right doctors.
>
> I wish I had insisted on having a thorough blood testing done, and stressed more to my doctor about how bad the pain was and that my periods were so heavy.

Close Calls: Good Thing That . . .

By far the most common theme associated with why a medical error was avoided was proactive communication by a patient or family member. These included being more assertive, speaking up, seeking more information, or taking other action (eg, a second opinion).

> Things did not get worse because I suggested that the nurse run some other tests instead of assuming my wife was having a heart attack. This saved us some grief because . . . the nurse (was) assuming the situation was worse than it was.
>
> If my son and I had not spoken up and insisted on the endoscopy that day, the cancer would not have been caught . . . and the outcome could have been much worse or even fatal.

Interestingly, a number of the stories of how patients' and family members' assertiveness prevented a medical error were prefaced by the need to be persistent.

> The fact that I kept voicing my concern about my father-in-law's recovery and . . . why hadn't the surgeon okayed the insurance form asking if nursing home care was necessary . . . I am thankful that it finally sunk into someone's head that there was an issue and the procedure was rescheduled, but am not happy about the time it wasted
>
> My parents keep forcing the issue, they wanted to know why I was hospitalized every Winter. The medication that I was given for years did not help me and my parents were not satisfied with the outcome.

Several respondents did give clinicians credit for preventing an adverse event. These included taking the patient's concerns seriously:

> I finally saw a caregiver who actually listened to my concerns and did something about it instead of treating me as a hypochondriac and brushing me off

and good communication among the clinical team:

> I think that the original doctor realizing that (it was) something other than a simple infection and her diligence in reaching out to my personal doctor, then a specialist . . . I finally got a person that knew what the problem was. (Now)I am apparently cancer free.

Advice for Clinicians and Patients/Families

Communication-related recommendations fell under 2 overarching themes—provider-focused communication and patient/family communication (see Table 2). For health care providers, the advice centered on taking patients/family members' questions and concerns seriously and providing meaningful information in a timely manner. By far, the most common advice offered for patients and family were to be more assertive and proactive, specifically by asking questions, reporting concerns, following up, and getting second opinions.

Discussion

This investigation examined patients' and family members' retrospective accounts of experiences with either medical errors or close calls (ie, where something almost went wrong in care). Although asking respondents to engage in counterfactual thinking may produce accounts susceptible to hindsight bias (13), these stories nevertheless represent the reality understood by patients and families regarding the role of communication in contributing to or preventing medical errors. Consistent with the principles of quality improvement (16), our findings may inform communication practices to lessen the likelihood of medical mishaps.

Table 2. How Poor Communication Could Have Been Better and How Effective Communication Prevented Things From Getting Worse.

	All respondents, n = 93	What should have been done differently? (medical error),[a] n = 56	What prevented things from getting worse? (close calls),[b] n = 37
Provider-focused communication			
Taking patient concerns seriously; listening to patient/family member; provider asking appropriate questions	16	14	2
Providing timely, sufficient, complete information; educate the patient	12	12	0
Improved interprovider or intrateam communication; providers communicating with each other	6	5	1
Involvement of a second provider who offered information, or suggested a different course of action	4	0	4
Acknowledgement and responsiveness to new information (eg, test results).	3	0	3
Patient/family member focused			
Patient and/or family member being assertive in asking questions; speaking up, repeating concerns, following up	21	9	12
Information from some other source (eg, friend, internet) led to asking questions	3	0	3
Family member suggested a different course of action	2	0	2

[a] Participants who reported a medical error were asked: When things go wrong, and someone is harmed, people often think about what could or should have been done differently. They might have thoughts like, "I wish that I had . . . " "Someone should have . . . " "Why didn't anyone . . . ?" Thinking of the event you described, what should have been done differently?

[b] Participants who reported a close call were asked: Sometimes things start to go wrong, but harm is avoided. In those cases, people sometimes think gratefully about what prevented things from getting worse. They might have thoughts like "Thank goodness for . . . " "I am so glad that . . . " or "If not for . . . " Thinking of the event you described, what prevented things from getting worse?

Heroes and Villains

The parties cited as responsible and the role communication played differed between respondents reporting a medical error compared to those recounting a close call. For those recounting medical errors, health care providers were most often the party responsible for communication failures. Consistent with research across various health care settings (17,18), communication problems were about information exchange, which fell into 2 categories. First, there were *errors of omission* in which needed information was insufficient, inaccurate, or delayed. These accounts often took the form of "if we only had known" and "they should have told us." Respondents rarely attributed errors to clinician malice; instead, they blamed health care providers' inattention to what information patients needed and what information should have been provided sooner.

A second category of communication failures focused on the *relational context* of information exchange. A number of respondents believed that they had important information to share and questions needing answers. Yet, clinicians' responses to their concerns were perceived as dismissive, uncaring, or unimportant (eg, "we were an annoyance," "just a number," "having a typical reaction"). These respondents believed they were not being treated as partners in care.

By contrast, in most of close calls, the patient or family member was credited for preventing a medical error. What most often saved the day was communication that was proactive and assertive (19), such as being persistent in expressing concerns, insisting on a second opinion, and asking questions (see Table 1) until an appropriate response from health care providers was obtained. What is interesting about the close call stories was that being successfully assertive often required considerable effort, such as having to ask, request, or express something repeatedly (eg, "continually reminding doctors," and "I kept voicing my concern").

Advice to Patients and Families: Speak Up!

The apparent simplicity of the recommendation, "speak up!" belies the challenges patients and family members face in following this advice. Patients in worse health, less educated, and older are often reluctant to speak up in discussions with clinicians (20–22). Other reasons include uncertainty about *how* to voice one's concerns (23,24), the perception that providers are too busy (25), and worry that speaking up may result in one being labeled a complainer (26). Our findings underscore the need for providers to actively encourage patients and family members to speak up if they believe something is wrong with their care, and to make it easy, comfortable, and safe to do so (27).

Practice Implications

Improving team communication (eg, huddles and handoffs) (28–30) and implementing Electronic Health Record (EHR) alerts and tracking (31–33) can help prevent medical errors. However, patients and family members believe their

communication problems with clinicians also contribute to medical errors (3,21). Our findings provide important contextual detail of the nature of these communication failures (or saviors) as seen through the eyes of patients and family members.

First, health care providers need systems in place to ensure patients and families receive relevant information in a timely manner. Patients and families see inadequacies of information as avoidable and distressing communication breakdowns (17) that can contribute to medical errors and perhaps legal action (34). Because patients need information and support in difficult situations (35), health care providers can use simple communication strategies to mitigate problems associated with unmet information needs. These include explicitly setting expectations (eg, when to expect information) (36), apologies for actual or anticipated delays (37), and validating a patient's or family member's concerns (38).

Second, while clinicians may *assume* they are taking patients' concerns seriously, what is important is that patients and family *believe* clinicians are listening, showing interest, and acknowledging concerns. Some malpractice claims accuse clinicians of insensitivity to or disregard of patients' worries and questions (39). Communication that reflects attentiveness and respect include empathic statements ("I can see how that would concern you"), probing ("Tell me more about that"), accommodating ("Ok, I'll check into that"), and not interrupting (40).

Finally, many clinics post signs or pamphlets encouraging patients to "speak up" if they believe something in the patient's care is not going well (41,42). However, signage promoting the legitimacy of patients and families "speaking up" should be coupled with specific communicative actions to take (ask a question, bring up a concern, and talk to someone immediately) (43). Finally, patients and family often ask questions or express concerns to individual members of the clinical team (eg, a nurse and a technician). If so, this could be valuable information to share within "huddles" coordinating care or handoffs in care transition to ensure the patient's voice is heard.

Limitations

The investigation had limitations. Patients and family members' accounts represented past experiences that may have occurred relatively recently or months ago. Thus, their stories may be influenced by retrospective sense-making. Second, respondents described any event that they considered a medical error or close call; we did not verify that the events occurred as described, and some events may not be classified as medical errors by patient safety experts. Finally, the sample size and the qualitative nature of the data did not allow for making generalizations regarding differences associated with gender, age, race/ethnicity, or family status. More systematic, larger scale investigations are needed.

Conclusion

From the perspective of these respondents, health care providers most often contributed to medical errors by not providing needed information in a timely manner and by not being attentive to a patient's or family member's questions or concerns. Patients and families most often saved the day by being assertive in expressing their concerns or by taking additional action (eg, getting second opinion). Health care providers need practices in place that meet a patient's or family member's information needs in a timely manner and that foster a clinical environment supportive of patients and families speaking up when they believe something is not right about their care. While emphasizing the importance of concise and respectful communication among the clinical team, interprofessional education should also stress a team member's responsibility to share with the team any concerns expressed by a patient or family.

Authors' Note

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