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Developing the Improving Post-event Analysis and Communication Together (IMPACT) Tool to Involve Patients and Families in Post-Event Analysis

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Developing the Improving Post-event Analysis and Communication Together (IMPACT) Tool to Involve Patients and Families in Post-Event Analysis

Abstract

The analysis of harmful errors is typically led by a team within the hospital and includes clinicians and staff who were involved at the time of the event. However, the patient and family are often left out of this process and are not asked to participate in the investigation. Because little guidance is available for facilitating patient input, an interprofessional team convened to develop a semi-structured tool to be used in eliciting patient feedback. Some 72 persons who had experienced adverse events were interviewed. Using a thematic analysis approach, the team learned that 51% of the interviewees preferred to participate in event analysis directly through an interview and 47% recommended that patients and families should be offered the opportunity to provide their views immediately (within 24-48 hours of the event). The resulting tool, IMPACT, incorporates a conversational flow of questions that allows patients to tell their story, focus their attention on specific causative factors, and give recommendations to improve healthcare in their institutions or to prevent further harm.

Keywords

post-event analysis, thematic analysis, IMPACT tool, healthcare quality improvement, interprofessional

Cover Page Footnote

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Introduction

Tremendous efforts to improve patient safety have been made in the last 10 years, yet over 150,000 patients annually experience preventable harm due to errors in healthcare (Classen et al., 2011; James, 2013). When an error causes harm, an analysis is normally conducted to help clinicians and hospital leaders understand the causes or contributing factors of the event in order to prevent similar occurrences in future patients (Etchegaray et al., 2014; Wu, Boyle, Wallace, & Mazor, 2013). The analysis of harmful errors is typically led by a team within the hospital and includes the clinicians and staff who were involved or present at the time of the event. However, the patient and family are often left out of this process and are not asked to participate in the investigation (Millman, Pronovost, Makary, & Wu, 2011). Because the patients and families experienced the harm and often directly observed what happened, their perspectives of what they believe led to the error would serve as valuable input.

Patients and families want to play a role in improving safety practices. They want to tell their story and what they witnessed after adverse events (Wu et al., 2013; Zimmerman & Amori, 2007). Study results suggest patients can identify errors and adverse events not otherwise reported or documented in the medical records (Mazor et al., 2012; Mazor, Goff, Dodd, Velten, & Walsh, 2010; Millman et al., 2011; Schwappach, 2008). Patients desire open conversations about the event and expect an apology and some assurance of actions to prevent future events (Wu et al., 2013; Zimmerman & Amori, 2007). Without this conversation, many patients and families feel providers show a lack of respect for them and the trauma they experienced (Duclos et al., 2005; Vincent, 2003; Vincent & Coulter, 2002). However, little guidance is available for facilitating this type of conversation. Although hospital administrators agree that patients and families should be engaged, they and expert groups remain uncertain about the best practices to accomplish this task (Etchegaray et al., 2014; National Patient Safety Foundation, 2015).

Etchegaray et al. (2014) noted several approaches for engaging patients and families in the process of analysis and learning after an adverse event. For example, the authors recommend that patients could be interviewed about the causes, given a survey to record the unexpected event they experienced, asked to share their testimony during patient safety training programs, or participate in a formal root cause and event analysis. However, a review of medical literature resulted in little information about patient preferences or tools to facilitate these types of interactions with patients.

Aims of the Project Initiative

To address this knowledge gap, a knowledgeable interprofessional research team with expertise in error disclosure practices was convened. Team members represented the professions of nursing, psychology, medicine, public health, and patient safety. The team developed a format for interviewing and an initial interview guide, which in the final revision was named *Improving Post-event Analysis and Communication Together (IMPACT)* tool. The intent of the research initiative was to interview patients and families that had experienced harmful events and to conduct a content analysis of the resulting qualitative interview data. Project aims were as follows: 1) to identify patient and family recommendations and preferences for providing input in an analysis of harmful events they encountered, and 2) to develop a patient-centered interview tool (i.e. IMPACT) to elicit patient and family perspectives of harmful events that healthcare organizations can use for inputting this perspective into a formal analysis.

Methods

Volunteer subjects were interviewed using a semi-structured interview format designed to collect qualitative data for a thematic content analysis. Interprofessional team members then conducted

a directed qualitative content analysis of transcripts that, according to Hsieh and Shannon (2005), could be used to construct a “contextual meaning” of written data obtained from interviews to understand a particular experience. In this sense, predetermined variables were used to guide data categorization and the initial coding assigned to subject’s statements. These codes were subsequently used in the analysis.

Participant Recruitment

The research proposal was reviewed and approved by the university’s Committee for the Protection of Human Subjects prior to initiation of project activities. To recruit sample participants, risk managers in 20 affiliated hospitals contacted patients or families who had experienced a harmful event by phone or letter to participate in the study. Upon request, three patient advocacy groups (Consumers Union, Connecticut Patient Group, and ProPublica) emailed information about the study to patients and families who had experienced harm. Interested participants asked for information and provided informed consent. Participants who had received a disclosure about a harmful event and were not currently involved in legal action about that event were included in the study. Of the final number of participants (n = 72), 37 were patients and 35 were family members.

Interview Data Collection

Three members of the interprofessional team conducted and audiotaped interviews over a 2 year period (August 2012 and July 2014). The team members were trained in using a semi-structured interview guide for qualitative interviewing. Time of interviews ranged from 30 minutes to 2 hours. An external service transcribed the audio files. Transcriptions were uploaded to a password protected shared drive and entered into data management software (ATLAS.ti, Version 7). The team members matched the audio files with the transcripts to verify accuracy.

Semi-structured Interview Format

Interview questions were designed to elicit information on what patients and families believed were the causes of the harmful event they experienced and their preferences or recommendations for participating in a post-event analysis. Two types of questions, prompted and unprompted, were used to identify what patients knew about the contributing causes of their events. Examples of both prompted and unprompted questions are shown in Table 1. Unprompted questions were posed to allow participants to tell their story of what they thought may have caused the event, whereas prompted questions invited participants specifically to consider nine common contributing factors (e.g. communication issues, nurse supervision, medical devices) as possible causes of the event. Each contributing factor question began with a definition and example. Based on the depth of the response, additional probing questions, such as “why you think the particular factor caused the event” and “how you became aware of this information” were asked. Lastly, participants were asked to provide recommendations related to patients and families being involved in an analysis of harmful events and to comment on anything else they felt relevant.

Table 1: Purpose and Sample Questions in Original Semi-structured Interview Guide		
Section	Research Purpose	Sample Question
1.	Establish rapport with informant	<ul style="list-style-type: none"> • How are you today? • How long have you lived in xx city?
2.	Invite narrative description of the event and affirm that harm and disclosure occurred.	<ul style="list-style-type: none"> • Would you please describe the unexpected event that happened to you? • Could you describe the harm you experienced from this unexpected event?
3.	Obtain an unprompted , narrative view by the informant of the contributing factors of the event	<ul style="list-style-type: none"> • Could you please tell me what you think contributed to the event you experienced?
4.	<p>Prompt more detailed information from the informant nine specific contributing factors:</p> <ol style="list-style-type: none"> 1. <i>Communication</i> 2. <i>Documentation</i> 3. <i>Environment</i> 4. <i>Equipment</i> 5. <i>Human Factors</i> 6. <i>Safety policies/procedures</i> 7. <i>Staff qualifications/knowledge</i> 8. <i>Staffing</i> 9. <i>Supervision/Support</i> 	<ul style="list-style-type: none"> • Do you think any issues of <i>supervision</i> among hospital staff may have contributed to the event you (or your family member/friend) experienced? <ul style="list-style-type: none"> ○ Tell us a little more about why you think that may have caused the event you experienced? ○ How did you find out that this <i>supervision</i> issue may have contributed to the event you (or your family member/friend) experienced? ...from your own observation, from a family member or friend, from your doctor, your nurse, or another staff member)?
5.	Identify how patients and families would like to participate in the analysis of their events	<ul style="list-style-type: none"> • Should hospitals ask a patient and/or family to participate in an event investigation? If so, how should they participate? • When would be the best time to ask a patient and/or family to share their perspectives about an unexpected event?
6.	Conclude the interview and allow for additional comments not asked.	<ul style="list-style-type: none"> • Is there anything else you want to say about the unexpected event you experienced or its causes before we conclude the interview?

Transcript Analysis

The transcripts were analyzed using a thematic content analysis technique (Crabtree & Miller, 1999). Team members individually analyzed the initial six interviews, and then met to reach consensus on a set of codes and definitions. A subset of three interviews was randomly selected and re-coded by one member to assess agreement of interpretation. New codes were created as additional concepts emerged in the analysis. The team used a consensus method for resolving disagreements.

To address the aim of identifying patient and family recommendations for providing input in the analysis of harmful events, direct quotations coded as “recommendations”, “event investigation method” and “best time to participate” were thematically analyzed. To address the aim of developing

a patient-centered interview tool for eliciting patient and family perspectives of their harmful events, the team used an interview guide to leverage their experience to categorize patient and family responses to the interview questions.

Principal Findings

Demographics

Of the 70 participants interviewed, 37 were patients and 35 were family members of patients who had experienced a harmful error. The cases reviewed were considered “closed” to legal claims, either due to the statute of limitations or because a closed claim agreement was in effect. A majority of the participants were female (77%), between 46 and 64 years of age at the time of the interview (58%), Caucasian (78%), and were recruited through consumer interest groups (76%). The types of preventable errors they experienced occurred primarily in inpatient settings (70%), involved infections (25%), medication errors (18%) or diagnostic errors (15%) and resulted in permanent harm (39%) or death (36%). The adverse events of the participants spanned a time frame of 14 years as shown in Figure 1. For 38% of the 72 participants, the adverse event had occurred at least 5 to 7 years or more previous to the interview. Three of the adverse events had occurred within the previous two years.

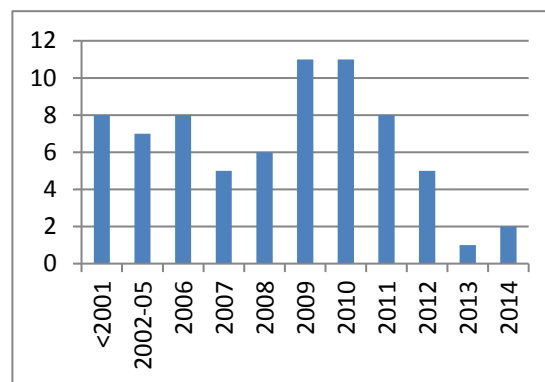


Figure 1. Harm Events by Year (n = 72)

Patient and Family

Preferences

Patient and family preferences for participating in post event analysis are shown in Table 2. A large percentage of participants (51%) preferred to participate in event analysis directly through an interview. Participants indicated that personnel should ask for their feedback and to listen to what they have to say. The reasons given were as follows: 1) to help those involved gain a deeper understanding of what happened and identify the causes of the event; 2) to present recommendations which might prevent future patients from being harmed and provide insight about quality issues; and 3) to promote their personal emotional healing and obtain post-event support. Some patients and families also believed that sharing their story before the hospital board, a safety committee, or presenting at conferences for doctors and nurses would help healthcare providers to develop a better understanding of the impact of the event on patients and their families.

Table 2: Patient and Family Preferences for Participating in Post Event Analysis	
Preferences for participating	# participants*
Conduct interview or ask patients for their perspectives	37
Invite them to meetings with Hospital Board/ Hospital Administration/ Quality Review Board	10
Complete a survey or questionnaire or written statement about the event	6
Depends on patient preference or understanding of the issues	6
Report issues to the hospital or a higher authority	5
Did not have an answer	5
Inform patients that an investigation is taking place	3
Should not participate, not qualified	3
<i>*Some participants gave more than one preference in response to this question.</i>	

While the majority of patients and families wanted to have a direct conversation, some (13%) preferred to provide written details, including writing a narrative, or completing a survey after discharge, about the event and their experience. They recommended a self-addressed stamped envelope should accompany the survey to make it easier to return. A small minority (4%) stated they did not feel qualified to participate in the investigation but wanted at least to know that the event was being investigated.

On the question of the best time to ask for input, participants thought that the best time was probably unique to the patient, family, and situation. One interviewee summarized this perspective as follows:

I think one of the things that is difficult about this is that people vary a lot, so what you need is training that makes people sensitive to human variability. It's just going to be different for different families and in different situations. (Interview #13)

Almost half of the participants (47%) recommended that patients and families should be offered the opportunity to provide their views immediately (within 24-48 hours of the event) while memories of events are fresh. Others recommended waiting a month (15%), 6 months (6%), or even a year (4%) post-event. For many (39%), the timing was dependent on when patients and family thought they were able to talk about the event. They felt they had been too angry or emotional to talk about it immediately. In addition, the severity or type of the harmful event was a factor in giving feedback. Some participants indicated that often more time was needed to heal. Others noted that tissues may be recalled over time which should be reported. Thus, more than one conversation would be beneficial. Others recommended that healthcare organizations customize the timing based on the severity of the event, the patient or family's emotional state, and the preferences of the patients and family. One patient articulated the diversity of thoughts when considering the timing of feedback or input, as follows:

I almost think it has to go in stages...at the time that it's being noticed, obviously it should be brought up. And then, depending upon what the unexpected event is... something like 30 days after to do a second inquiry to evaluate what the impact was of the unexpected event...But in the case of a death, 30 days may be too soon because people are still in shock and

may not have gotten all the information that they as a family can later get...I think when it's fresh, there's a lot of anger, maybe denial and disappointment. So, particularly if there's a death involved, that there needs to be some healing time between the time of the death and the time of discussion...and that's different for everybody, but I'm thinking four or five months at least. (Interview #11)

Another question related to third party patient advocacy. Talking to a third party who could possibly advocate for them about their concerns was preferred in 10% of patients and families. Others noted a conflict in dealing with healthcare providers. These views are summarized as follows:

I would have, at that time, really liked to have seen that there would have been somebody to whom I could have said, "I want to talk to somebody about this problem," and had them show up. A third party to whom I could have turned. There was no such person." and "maybe if there was some sort of true patient advocate... somebody that the hospital could contract with that's not an employee of the hospital, like an independent contact person specifically for the family. (Interview #40)

Hospitals need to realize that the vast majority of patients and family members find hospital settings and dealing with healthcare professionals to be intimidating. And they need to do the best they can to make sure that they're not feeding into that intimidation. (Interview #21)

Interviewees also voiced a desire to share their views with other members of the healthcare team in a friendly manner. When asked about participating in a root cause analysis meeting, several participants echoed the need to create an environment conducive for patients and families to share their story. They recommended meeting at a round table so that no one person is at the head, involving only a small group of people, introducing each person present, and sharing information for the purpose of uncovering the facts. These perspectives are summarized as follows:

I think the more opportunity to provide the dialog, direct dialog, between—you know, among patient, families, and health provider, and that is better for everyone. ... I think the more opportunity to provide the dialog, direct dialog, between—you know, among patient, families, and health provider, and that is better for everyone. (Interview #22)

I think there should be some kind of like debriefing event. Where the patient or the guardian/caretaker of the patient is invited to a friendly, open roundtable of like the hospital. Somebody from all the way up to the CEO's office sits down with maybe one of the clinical social workers, sits down, to a note taker. But there has to be somebody that is on the side of the patient. I cannot stress enough, the patient advocate, their check is being signed by the hospital. It just doesn't seem like their alliance is strictly with the patient. (Interview #67)

Production of Final Product: IMPACT Tool

Several revisions occurred throughout the interview process and upon review by potential users. The final form of the IMPACT tool is shown in Appendix A. During the interview process, the team members became concerned that the length of the interview could present a barrier for clinical use. To shorten the process as well as improve clarity and reduce confusion, several questions were removed. For example, questions not clinically relevant to the healthcare organization conducting a post-event conversation with their own patients were deleted. Because interviewers within their own facility would know answers such as location of the event, location of disclosure, and type of harm, these questions

were also removed. Clarifying statements, such as definitions of contributing factors, were not helpful to most participants and were deleted early in the interview process. As a result, participants provided more organic responses to the contributing factor questions rather than trying to associate their responses to our examples. This did not hold true for questions about human factors. The term “human factors” was difficult for patients to understand without including specific examples. Therefore, these descriptors were retained in the final version.

While definitions of the contributing factor prompts were generally distracting and thus removed, the prompting questions proved useful. At first, patients and families provided limited information about contributing factors related to their own events. However, prompting patients and families about each contributing factor facilitated a more thorough recounting. By quantifying the factors cited using prompted questions, participants contributed up to 50% additional information about the causes of the event. Results showed 2.17 factors cited using unprompted questions versus 3.64 factors cited using prompted questions. Some participants expressed that answering the prompts helped them feel the discussion was more thorough and that they were able to recall facts to provide additional information about the context of the event or describe latent factors that could lead to other preventable harm. For example, they cited negative staff or physician attitudes which adversely impacted communication and actions on behalf of hospital personnel they perceived as uncaring after the death of a loved one.

Probing questions to clarify specific information that remained in the final interview tool were as follows. The probe “how you became aware that a particular factor was causative” was asked if it was not clear in the response. Responses suggested patients and families often had access to records, heard information from someone, or sought expert advice to learn the causes of their events. Information from this probing question was helpful in identifying the specific things they observed versus what they learned from other sources. The probe “tell us more about why you believed a specific factor was causative” often provided more details about each of the specific factors, which may not have been described in participants’ original unprompted narrative.

After finalizing the tool, IMPACT was presented to several potential users, including risk managers affiliated with the research organization. A teleconference was used to obtain input from the risk managers, who agreed that IMPACT would be a useful way to engage patients and families in a conversation about harmful events. However, the risk managers expressed some concern about discussing specific contributing factors with patients and families and wanted to have support from their leadership before reviewing events in that level of detail. They also recommended that training in use of the tool would be helpful.

The tool was also presented to a multidisciplinary group of experts in communicating with patients and families after adverse events. This group, which included patient and family advocates, recommended making the tool conversational and to include tips in how to carry out a conversation that was sensitive to the needs of post-harm patients and families. In addition to the IMPACT tool, they recommended development of an accompanying guide for users to help them prepare for supporting patients and families through this type of conversation. This led to the development of the Guide to Using IMPACT, as shown in Appendix B.

Discussion

Principal Findings

Evidence suggests that after a harmful event, patients and families prefer a conversation-style interview over surveys, written reports, or hospital meeting participation as a way to

provide their input. Using a structured interview tool, such as IMPACT, and asking prompting questions about contributing factors helped patients and families to recall important information attributable to the specific causes of their event. The IMPACT tool also helped to surface latent system and process issues that, left undetected or uncorrected, could lead to additional preventable harm.

Conducting the ideal patient-centered interview depends on multiple patient-specific factors and should be customized on a case by case basis. Patients and families need time to process what happened, reflect with their families, and come to an understanding of the adverse event or heal from feelings of loss. Despite the seriousness of the event, patients and families want to choose when this conversation should occur, and they prefer multiple opportunities to provide their input. Involving a third party to conduct the interview and to assist patients and families during these difficult conversations has been supported in literature (Zimmerman & Amori, 2007) and may be preferable for some patients and families as a way to feel like they are being heard by an objective listener.

To promote emotional healing and post-event support, patients and families could benefit from opportunities to input information in some form or to debrief after the event. In previous studies, patients and families have stated that open communication with hospital personnel made them feel valued when they knew their narrative would be acknowledged in an incident report, or an event analysis, and used to guide preventive efforts (Duclos et al., 2005; Entwistle et al., 2010; Friedman, Provan, Moore, & Hanneman, 2008; Millman et al., 2011; Weingart et al., 2005). Others indicated that post-event interaction with hospital personnel was fundamental for emotional healing, post-event support, and maintaining medical care (Duclos et al., 2005; Friedman et al., 2008; Weingart et al., 2005). One IMPACT reviewer shared the following:

One of the things I've learned as a grief and trauma specialist is we need people to be able to tell their story over and over and over again to someone who's willing to listen. And by doing so, it deescalates the trauma impact." (Interview #57)

Using debriefing as a strategy to engage those impacted by critical incidents with an avenue to reflect, learn, analyze, and heal is used across many disciplines (Runnacles et al., 2014). In healthcare, teams or individuals often learn or are guided through a series of non-punitive questions designed to invite reflection and to generate improvement. After traumatic events, debriefing has been considered therapeutic as it encourages those harmed to talk about the event and express their emotions (Raphael & Wilson, 2000). To this end, the IMPACT tool incorporates a conversational flow of questions that allows patients to tell their story, focus their attention on specific causative factors, and give recommendations to improve healthcare in their institutions. As patients and families tell their story, they share their feelings associated with the event, thus allowing interviewers to provide or refer for post-event emotional support.

The best person to carry out the debriefing may depend on the situation. Research on healthcare team debriefing suggests one effective approach is for an objective facilitator to guide groups through structured questions to enhance learning and ensure the most important information is covered (Tannenbaum & Cerasoli, 2013). As stated in Raphael and Wilson (200), the facilitator should be trusted by those in the debriefing and be comfortable navigating through conversations on sensitive issues that may arise. Also, after an event such as a death, this role may be best filled by a mental health professional trained in critical incident management. For a facilitator using IMPACT with patients and families in a post-event interview or debriefing session could be an effective means for facilitating emotional healing.

Strengths and Limitations

As the first published study to elicit observations of the contributing factors leading to harmful events and to seek recommendations for how to best involve patients and families in post-event activities, the study is unique in literature. Observations and recommendations from over 70 patients and families who experienced harmful events were analyzed and adapted to create a patient-centered tool. Like others involved in patient engagement programs (Kemper, Blackburn, Doyle, & Hyman, 2013), we found that patients and families experiencing a negative outcome desire to improve a system that failed them, and that they can offer valuable input in the development of a tool such as IMPACT.

As a limitation, the interprofessional interview team members were not able to enroll an ethnically diverse array of participants or interview a majority of participants close to the actual occurrence of their adverse event. The number of harmful events covered a wide span of years, with 15 of the 72 adverse events occurring some 11 to 13 years ago. Because most study participants were recruited from online patient safety advocacy networks, they may have been more willing to tell their story than the average patient. Also, they may have been more adept than the average patient in recommending ways to engage patients and families in post-event adverse situation analysis.

Unanswered Questions and Future Research

Because use of IMPACT could have important implications in quality improvement and patient safety, it would be useful to know if this interview method is more effective than other methods currently in use. Likewise, future research could investigate how much more information collected using IMPACT adds to what hospital personnel actually know about the causes of harmful events. Also, unanswered questions remain concerning the best person to use this tool with patients and families and in what clinical settings it is best applied. A large body of literature on communicating with patients and families in post-event analyses is available (Duclos et al., 2005; Gallagher, Denham, Leape, Amori, & Levinson, 2007; Gallagher et al., 2006; Wu et al., 2013). However, talking about the event is often difficult for both patients and clinicians as the emotional context as well as feelings of fear and guilt perpetuate situations of isolation for both parties (Bell, Moorman, & Delbanco, 2010; Duclos et al., 2005; Entwistle et al., 2010). Training clinicians in how to conduct difficult post-event conversations may allay clinician fears and promote confidence to communicate with patients and families (Bell et al., 2010). A tool such as IMPACT may be a helpful addition to assist clinicians, quality improvement professionals, or other personnel in eliciting important information witnessed from patients and families point of view, while also providing patients and families with a way to tell their story. In order to avoid possible discomfort, create a safe space, and promote transparent communication, additional research is needed to address the identity and potential role of the clinician.

Incorporating IMPACT in practice needs to be addressed in the context of debriefing to ascertain how the tool could be used to provide post-event support. Benefits would be realized in helping patients and families to manage stress and promote emotional healing (Vincent & Coulter, 2002). Careful consideration and evaluation should be given to identify persons with the ability to effectively assist patients and families through a debriefing, while also obtaining important information to help prevent future events. Etchegaray et al. (2014) suggested that post-event conversations with patients and families be aligned with the disclosure process to support open communication. However a clear distinction should be made between the responsibilities of a clinician in the disclosure process versus a debriefing process to maximize the benefits for patients, families and healthcare organizations.

Implications for Practice

Use of IMPACT can provide healthcare organizations with a patient-centered tool to conduct a thoughtful conversation with patients and families about what caused their harmful event. These conversations, in turn, may help health care institutions uncover information and perspectives otherwise missing from post-event analyses, thus potentiating institutional learning after harmful events. We believe IMPACT can help provide patients and families who experience a harmful event what they most want - to have an open door for communication. In the words of one participant, “*Hold focus groups. Hold these interviews. Communicate with us. Don’t shun us.*” (Interview #57).

References

- Bell, S. K., Moorman, D. W., & Delbanco, T. (2010). Improving the patient, family, and clinician experience after harmful events: The “when things go wrong” curriculum. *Academic Medicine: Journal of the Association of American Medical Colleges*, 85(6), 1010-1017. <http://doi.org/10.1097/ACM.0b013e3181dbedd7>
- Classen, D. C., Resar, R., Griffin, F., Federico, F., Frankel, T., Kimmel, N., ... James, B. C. (2011). “Global trigger tool” shows that adverse events in hospitals may be ten times greater than previously measured. *Health Affairs (Project Hope)*, 30(4), 581-589. <http://doi.org/10.1377/hlthaff.2011.0190>
- Crabtree, B., & Miller, W. (Eds.). (1999). *Doing Qualitative Research* (2nd ed.). Thousand Oaks, Ca.: Sage Publications Inc.
- Duclos, C. W., Eichler, M., Taylor, L., Quintela, J., Main, D. S., Pace, W., & Staton, E. W. (2005). Patient perspectives of patient-provider communication after adverse events. *International Journal for Quality in Health Care*, 17(6), 479-486. Retrieved from <http://doi.org/10.1093/intqhc/mzi065>
- Entwistle, V. A., McCaughan, D., Watt, I. S., Birks, Y., Hall, J., Peat, M., ... Wright, J. (2010). Speaking up about safety concerns: Multi-setting qualitative study of patients’ views and experiences. *Quality and Safety in Health Care*, 19(6), e33-e33. Retrieved from <http://doi.org/10.1136/qshc.2009.039743>
- Etchegaray, J. M., Ottosen, M. J., Burress, L., Sage, W. M., Bell, S. K., Gallagher, T. H., & Thomas, E. J. (2014). Structuring patient and family involvement in medical error event disclosure and analysis. *Health Affairs*, 33(1), 46-52. Retrieved from <http://doi.org/10.1377/hlthaff.2013.0831>
- Friedman, S. M., Provan, D., Moore, S., & Hanneman, K. (2008). Errors, near misses and adverse events in the emergency department: What can patients tell us? *CJEM*, 10(5), 421-427.
- Gallagher, T. H., Denham, C. R., Leape, L. L., Amori, G., & Levinson, W. (2007). Disclosing unanticipated outcomes to patients: The art and practice. *Journal of Patient Safety*, 3(3), 158.
- Gallagher, T. H., Garbutt, J. M., Waterman, A. D., Flum, D. R., Larson, E. B., Waterman, B. M., ... Levinson, W. (2006). Choosing your words carefully: How physicians would disclose harmful medical errors to patients. *Archives of Internal Medicine*, 166(15), 1585-1593. Retrieved from <http://doi.org/10.1001/archinte.166.15.1585>
- Hsieh, H. & Shannon, S.E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, 15(9), 1277-1288. DOI: 10.1177/1049732305276687

- James, J. T. (2013). A new, evidence-based estimate of patient harms associated with hospital care. *Journal of Patient Safety*, 9(3), 122-128. Retrieved from <http://doi.org/10.1097/PTS.0b013e3182948a69>
- Kemper, C., Blackburn, C., Doyle, J. A., & Hyman, D. (2013). Engaging patients and families in system-level improvement: a safety imperative. *Nursing Administration Quarterly*, 37(3), 203-215. Retrieved from <http://doi.org/10.1097/NAQ.0b013e318295f61e>
- Mazor, K. M., Goff, S. L., Dodd, K. S., Velten, S. J., & Walsh, K. E. (2010). Parents' perceptions of medical errors. *Journal of Patient Safety*, 6(2), 102-107. Retrieved from <http://doi.org/10.1097/PTS.0b013e3181ddfc0>
- Mazor, K. M., Roblin, D. W., Greene, S. M., Lemay, C. A., Firneno, C. L., Calvi, J., ... Gallagher, T. H. (2012). Toward patient-centered cancer care: Patient perceptions of problematic events, impact, and response. *Journal of Clinical Oncology: Official Journal of the American Society of Clinical Oncology*, 30(15), 1784-1790. Retrieved from <http://doi.org/10.1200/JCO.2011.38.1384>
- Millman, E. A., Pronovost, P. J., Makary, M. A., & Wu, A. W. (2011). Patient-assisted incident reporting: Including the patient in patient safety. *Journal of Patient Safety*, 7(2), 106-108. Retrieved from <http://doi.org/10.1097/PTS.0b013e31821b3c5f>
- National Patient Safety Foundation. (2015). Shining a light, safer health care through transparency: A report of the roundtable on transparency. *Lucian Leape Institute*. Retrieved from <http://www.npsf.org/?shiningalight>
- Raphael, B., & Wilson, J. (Eds.). (2000). *Psychological debriefing: Theory, practice and evidence*. Cambridge, UK: Cambridge University Press.
- Runnacles, J., Thomas, L., Sevdalis, N., Kneebone, R., Arora, S., & Cooper, M. (2014). Development of a tool to improve performance debriefing and learning: The Paediatric Objective Structured Assessment of Debriefing (OSAD) tool. *Postgraduate Medical Journal*, 90(1069), 613-621. Retrieved from <http://doi.org/10.1136/postgradmedj-2012-131676>
- Schwappach, D. L. (2008). "Against the silence": Development and first results of a patient survey to assess experiences of safety-related events in hospital. *BMC Health Services Research*, 8(1), 59. Retrieved from <http://doi.org/10.1186/1472-6963-8-59>
- Tannenbaum, S. I., & Cerasoli, C. P. (2013). Do team and individual debriefs enhance performance? A meta-analysis. *Human Factors*, 55(1), 231-245.
- Vincent, C. (2003). Understanding and responding to adverse events. *New England Journal of Medicine*, 348(11), 1051-1056. Retrieved from <http://doi.org/10.1056/NEJMp020760>
- Vincent, C. A., & Coulter, A. (2002). Patient safety: What about the patient? *Quality and Safety in Health Care*, 11(1), 76-80. Retrieved from <http://doi.org/10.1136/qhc.11.1.76>
- Weingart, S. N., Pagovich, O., Sands, D. Z., Li, J. M., Aronson, M. D., Davis, R. B., ... Phillips, R. S. (2005). What can hospitalized patients tell us about adverse events? Learning from patient-reported incidents. *Journal of General Internal Medicine*, 20(9), 830-836. Retrieved from <http://doi.org/10.1111/j.1525-1497.2005.0180.x>

- Wu, A. W., Boyle, D. J., Wallace, G., & Mazor, K. M. (2013). Disclosure of adverse events in the United States and Canada: An update and a proposed framework for improvement. *Journal of Public Health Research*, 2(3), e32. Retrieved from <http://doi.org/10.4081/jphr.2013.e32>
- Zimmerman, T. M., & Amori, G. (2007). Including patients in root cause and system failure analysis: Legal and psychological implications. *Journal of Healthcare Risk Management: The Journal of the American Society for Healthcare Risk Management*, 27(2), 27-34. Retrieved from <http://doi.org/10.1002/jhrm.5600270206>

Appendix A: Improving Post-event Analysis and Communication Together (IMPACT) Tool

IMPACT is a 5-step, patient-centered interview tool to engage patients and families in organizational learning after a harmful event.

STEP 1: BUILDING RAPPORT

- Thank you for taking time to talk to us/me. I understand that _____ occurred _____ (indicate the time frame). Please know how sorry I am for you that this has happened. This must have been a very difficult time for you. Generally speaking how have things been for you and your family since this time?
- Since we last spoke, have you (or your family member) needed any further treatment or procedures (outside the hospital/clinic)?

STEP 2: TELLING THEIR STORY

- We want to learn as much as we can about your experience so that we can try to prevent this from happening in the future. We like to hear about your experience - what you observed, what happened to you (or your family member/friend)?
- I understand that though telling your story to me may be emotional or difficult and I want you to know that if at some point you want to stop or take a break that is ok. You have already been through a lot and we don't want you to feel any more uncomfortable. So I will take my cues from you as we are talking.

This is what I heard you say about what happened....

- What do you think caused this to happen? (*the event)?

STEP 3: DIVING DEEPER

- Do you think what happened had anything to do with... (*ask about relevant contributing factors such as those in bold type below*)?

- physical environment of the hospital/clinic
- knowledge level or skill of any of your caregivers
- rules or guidelines the hospital/clinic uses
- supervision among hospital/clinic staff (*i.e. how less-experienced clinicians are supervised or guided by more-experienced clinicians*)
- medical equipment or devices used in healthcare
- information in the medical record or hospital/clinic chart
- communication issues
- human factors of hospital staff *such as being distracted, interrupted, stressed, or fatigued while doing their work*
- staff availability, *such as how quickly they respond to issues...*

Use the following probing questions to clarify any responses given by the patient or family about the factors they believe contributed to the event:

- Can you say a little more about why you think this may have caused (*the event)?

— How did you come to know this information?

This is what I heard you describe as the possible causes to what happened....

- Are there any other concerns that we have not discussed that you think are important to talk about?

STEP 4: RECOMMENDATIONS AND LEARNING

- What recommendations or improvements do you think could be done to prevent this from happening in the future?
- Would you like to continue to be involved as a partner to help us learn from (*the event)?
- Some patients like to learn more about our Patient and Family Advisory Council, or potentially participate in teaching sessions for our clinicians. Others like to... etc. Do any of these possibilities interest you? Are there other ways you would like to stay involved?

STEP 5: THANKS

- This concludes our interview. Thank you so much for taking the time to go through this experience again with me. This has been very helpful to us. We appreciate everything you shared with us today. We will write out the information you gave to us today and will share it with hospital leaders and the clinical team making improvements.
- We would be open to talk with you again at another time if there is anything more you think of to share. Would you be willing to talk with us again if we learn more information to share with you?

Or (if you need to end the conversation early because the patient or family is having difficulty or is emotionally upset.)

We understand that this has been an emotional experience for you and will be glad to continue our conversation at a later time. Thank you so much for taking the time to share with us today. Here is my card to call if I can help you with anything. May I call you again to check on you?

Appendix B: Guide for Using IMPACT (IMproving Post-event Analysis and Communication Together)

This guide will assist interviewers in using IMPACT which is a 5-step patient-centered interview tool to engage patients and families in organizational learning after a harmful event.

Patients and families experiencing harmful events under our care can be our greatest allies in learning more about how to best support harmed patients/families, and how to prevent these harmful events from reoccurring. The purpose of the IMPACT tool is to guide health care leaders and clinicians through conversations with patients and families to learn what they know about the harmful event they experienced, what they need in a vulnerable time, and how we can partner with them to help prevent future occurrences. The IMPACT tool is designed to be used in a series of post-event conversations that include an explanation about why the event occurred, an apology, reassurances to improve safety, and discussions about compensation, if indicated. Not all the IMPACT questions will, or should, necessarily be asked at the first conversation.

Preparatory Conversations:

During the disclosure process, as clinicians are sharing information with patients and families about the event, patients and families should also be asked to share their own views about what happened. Ask them what observations or conversations did they experience which could help in learning what happened? Convey a desire to maintain an open dialogue with the patient and family over time to continue to learn and hear about anything they would like to share. Ask their permission to continue these conversations. Identify the best way to contact the patient and family (ie phone numbers, email, letters to their home) and provide a specific contact person for the family so they know who to turn to with questions or additional information.

After discharge, inviting patients and families to participate in this type of conversation will require thoughtful consideration of how this event has impacted them. Expressing concern for them by learning how the patient and family is doing provides insight into their readiness for this type of conversation and builds rapport. Let patients and families know that hearing their views of the event is important but the timing for the conversation varies by family and is based solely on their preference. It can be helpful to provide patients and families with examples of timing such as some patients and families prefer to talk about this right away while it is fresh in their minds. Others have told us that they need and prefer several months before they want to consider such a conversation. Convey the importance of learning their views regardless of the time they choose to have the conversation.

The Setting:

1. Use a room which feels comfortable, preferably private and quiet, with a round table to allow everyone to have good eye contact.
2. Allow the patient and or family to have another family member or patient advocate accompany them for support while keeping the number of total participants to five or six maximum.
3. Ask clinicians present to not wear a lab coat and to silence beepers or sign them out if possible.
4. Have water available at the table and tissues.
5. Seat the patient/family member near the door so that if they feel uncomfortable, it is easy for them to step out.
6. Make sure the leaders and clinicians set aside the full time to be part of this meeting so that they are present (and not being paged away)
7. Establish how much time everyone has set aside for this meeting, and that there will be an opportunity for additional meetings.

The Interviewer:

1. Identify interviewers that the patient and family trusts and would see as an advocate for them. This could be patient relations representative, clinician, and/or risk manager who they developed a relationship with and who is familiar with the situation surrounding the harm.
2. Consider whether a third party, not affiliated the clinical team, may be offered to the patient and family to facilitate the interview.
3. Ask the patient who they would be comfortable talking with.
4. Ensure the interviewer has enough information and familiarity about the situation to allow for a productive exchange with the patient and family.

Tips in Conducting the Interview:

1. Base the order and selection of interview questions on the type of event and what might be preferable to the individual patient and family. For example, if a family is still struggling with providing care to a patient who was injured, it may be helpful to begin with learning how the patient is doing. Secondly, offer patients and families the opportunity to openly tell their views about what they experienced at the outset which allows them to bring up the issues most concerning to them.
2. Create an environment of hospitality for the interview with the persons present. Ensure a comfortable room with tissues, water and seating around a round table and introductions of all persons present.
3. Provide patient and family with feedback about what is known to have been the cause and what has transpired to correct the problem from reoccurring.
4. Be prepared for emotional conversations and before asking them to retell their experience, prepare them for, and support them through, this possibility.
5. Be prepared for the possibility that the person becomes unable to continue. Is there someone who can further support them ... help them get to their car, get home, call them later, talk to them about getting further support etc. (PTSD, depression, anger).

Phases of the Interview Guide:

IMPACT is a guide to help clinicians have a meaningful conversation with patients (and their families) who experience an adverse event.

Be aware that patients and families might be angry or overwhelmed with current circumstances in their healthcare. Be open to call back at another time that is more convenient. Listen for words or expressions that they need help and seek to understand what they need. If possible, offer referrals or to find support to assist them. Follow-up with them to ensure their needs have been met at subsequent conversations.

During the interview, all of the questions may not be appropriate for every patient or for one sitting. Choose those questions which seem appropriate and relevant at the time of the conversation based on the patient and families' current health or emotional status. Prepare for more than one conversation, occurring across several months, as the best way to invite patients in learning while respecting the impact of the experience on them. There are 5 phases to an effective interview with patients and families. Each phase is important in helping patients and families through this type of conversation:

- 1) *Building Rapport*
- 2) *Telling Their Story*
- 3) *Diving Deeper*
- 4) *Recommendations and Learning*
- 5) *Appreciation / Thanks / Next Steps / Further Engagement*

Be patient as you go through these phases of the conversation with patients and families. It may be that in the first conversation, the patient and family are only able to allow for building rapport and hearing their story. Watch for signs that the patient and family are unable to continue, like tears or lack of response to questions. If this happens ask if they would prefer to stop the conversation and resume

at another time. Regardless of the time spent or information gathered, thank the patient and or family members participating and clarify their preference for next steps. See the IMPACT tool for suggested phrases to use at each stage of this interview. Document each conversation so that those following up will know what transpired. It may help to set up simulations of these conversations to provide users with confidence with recognizing cues and learning how to navigate through the interview based on a variety of patients and family responses.