

ORIGINAL RESEARCH

Enhancing safety culture and event reporting: Insights from clinicians and administrators

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Abstract

Background: Although there is a growing body of literature on the effect of education strategies on the reporting rates of safety events in hospitals, less is known about what worked well and what did not work well according to those who participate in the strategies. This paper provides findings around how participants perceived a multi-pronged approach to enhancing safety culture and event reporting.

Methods: A qualitative design using focus group methodology was used to elicit the experiences of clinicians and administrators associated with the SafetyNET intervention. Content analyses was employed including initial coding; clustering of codes to categories; developing a coding schema; cross-checking the emergent coding schema with all the original transcripts; and validating the emergent themes and coding schema with the research team.

Results: In total, ten clinicians and twelve administrators participated in a series of 3 focus groups. This study revealed two key themes around how participants perceived a multi-pronged approach to enhancing safety culture and event reporting: 1) being aware of what to report and to practice safely; 2) learning impeded amidst competing priorities, beliefs, and inaccessibility. In addition, study participants recommended a variety of strategies to improve reporting safety events.

Conclusions: Nurse leaders can use study findings to inform their future efforts to enhance safety culture and reporting of and learning from safety events that are occurring in their organizations.

Key words

Event reporting, Safety culture intervention

1 Background

Improving the safety culture and reporting of safety events have been priority foci for health care organizations to reduce adverse events and promote quality care^[1-4]. As part of these foci, organizations have implemented a variety of strategies (education and training, publications and newsletters, incentives and rewards to report safety events, and online networks) to improve safety culture and reporting of safety events^[1, 5-7]. Although there is a growing body of literature on the effect of these strategies on the reporting rates of safety events, less is known about what worked well and what did not work well according to those who participate in the strategies. This is a fundamental knowledge gap given the growing recognition of the importance of context in the execution and evaluation of patient safety and quality improvement efforts^[8].

Knowledge about effective strategies is essential for nurse leaders who have an integral role in, and accountability for, quality management and performance improvement strategies in health care organizations^[9, 10]. In this context, a study was undertaken to explore clinician and administrator perceptions associated with the implementation of a patient safety network strategy aimed at enhancing safety culture and event reporting. The following research question guided this study: What are the experiences and perceptions associated with the implementation of the SafetyNET intervention?

2 Methods

2.1 Intervention description-SafetyNET

The SafetyNET program was implemented at a 500-bed, inner-city, university-affiliated, acute care hospital. As part of the hospital's corporate safety plan, a multi-pronged approach to improving event reporting and safety culture was developed using recommendations from national organizations^[11, 12] and empirical work demonstrating the effectiveness of interventions (e.g. education and training, publications and newsletters, incentives and rewards to report safety events, and online networks)^[1, 5-7, 12-16]. SafetyNET was developed with a team of researchers, administrators, clinicians, and educators with expertise in patient safety and quality improvement. Each of the education modules included key theoretical concepts and empirical evidence from the literature coupled with local data and strategies undertaken at the hospital. In addition, to ensure the content was relevant to physicians and staff at the hospital, modules were validated with representatives from key user groups including clinicians, non-clinical service providers (e.g. engineering, housekeeping), and administrators.

Launched corporately in January 2009, the SafetyNET program is accessible to all physicians and staff on-line through a desk-top icon on hospital computers. The program consists of the following core components: four on-line educational modules that were sequenced in over a six month period; four face-to-face learning series (that were video-taped and posted on the on-line forum); an on-line interactive discussion forum; and a recognition program that included highlighting patient safety champions in newsletters (also posted on the on-line forum). Table 1 provides more details about SafetyNET. In addition, the launch of this intervention included a poster campaign delineating physician and hospital staff's role in patient safety at the hospital and a video that provided local hospital data and stories on patient safety issues. During the study program implementation timeframe (January 2009 - February 22 2010), 32% (1094/3392) of physicians and staff had accessed the on-line SafetyNET program.

Table 1. SafetyNET Description

Component	Description
SafetyNET Education & Learning Series	Principles for the educational component were based on the Canadian Patient Safety Competencies Framework First Edition (CPSI) ^[20] and other key patient safety sources. An online curriculum was designed and included the following 4 curriculum modules: 1) Understanding Patient Safety; 2) Recognizing and Responding to Safety Issues; 3) Communicating to Enhance Patient Safety; and 4) Patient Safety and Your Environment. A face to face learning series was hosted in the hospital auditorium and videotaped for online access. The curriculum modules and videos were available 24-7 to all hospital staff and physicians thru a secure, online portal.
SafetyNET On-line Forum	An online discussion forum was created for staff and physicians to share patient safety/quality ideas, experiences, barriers, resources, and receive corporate patient safety updates and communication. The online discussion was linked to the curriculum modules and moderated by members of the SafetyNET research team and designated patient safety experts on a weekly basis.
SafetyNET Recognition Program & Newsletter	A SafetyNET Recognition Program was designed to honour hospital physicians and staff who went above and beyond the patient safety responsibilities that are part of their daily job activities. SafetyNET champions were peer-nominated and were presented awards by the hospital's CEO at the Town Hall events. In addition, a SafetyNET newsletter was produced and disseminated to spotlight the recognized recipient and advertise upcoming safety events and key learnings from the SafetyNET online forum.

2.2 Design and procedures

Following the year-long implementation, a qualitative design using focus group methodology was used to elicit the perceptions and experiences of clinicians and administrators associated with the SafetyNET intervention. In addition, this approach was used to provide insight into how to improve SafetyNET utilization and the culture to encourage reporting of safety events. Focus groups are a well-established qualitative method typically used to explore experiences that tap into beliefs, values and perceptions that groups of individuals ascribe to a designated topic ^[17]. An interview guide was developed by the Principal Investigator from the literature to assist and focus the discussion. Prior to the focus group sessions informed consent was obtained from participants. Focus group sessions were conducted eighteen months after the launch of the SafetyNET intervention by the same research personnel to ensure consistency. The research personnel received interview training from the Principal Investigator who has experience in qualitative methods. Due to the sensitive nature of the topic (error reporting), research personnel provided the participants with ground rules that it was a safe environment to share their perspectives openly and honestly. The sessions were audio-taped and transcribed verbatim and ranged between 45-75 minutes.

A directed content analysis approach that included the sequential steps of coding and categorizing the data was followed by developing themes to achieve theoretical saturation ^[18-21]. Three investigators (two researchers with qualitative experience and one decision maker with expertise in quality and risk) reviewed all transcripts independently and then met to determine, through consensus, the coding schema with key themes and aligned categorical data. Specifically, the content analysis method involved developing thematic statements through several levels of analysis. To ensure trustworthiness of the data, several levels of analysis were conducted including: initial coding; clustering of codes to categories; developing a coding schema; cross-checking the emergent coding schema with all the original transcripts; and validating the emergent themes and coding schema with the research team. The principal investigator compared the emergent coding schema to all the transcripts as a cross checking measure. The investigative team then reviewed and achieved consensus on the coding schema with aligned sub-themes.

Ethics approval was obtained from the institutional research ethics board.

3 Results

In total, 10 health care professionals and 12 administrators participated in a series of 3 focus groups. The demographic profile of the sample is described in Table 2. Two key themes emerged in the focus group data analysis: 1) being aware of what to report and to practice safely; 2) learning impeded amidst competing priorities, beliefs, and inaccessibility. In addition, several strategies were recommended by study participants to improving reporting safety events.

Table 2. Focus Group Demographics

Nursing Focus Group n = 6	Health Disciplines Focus Group n = 4	Administrator Focus Group n = 12
2 Staff Nurses		
2 Nurse Practitioners	1 Case Manager – physiotherapist	4 Managers – Clinical Areas
1 Clinical Nurse Specialist	2 Physiotherapists	7 Managers – Non-Clinical Areas
1 Clinical Coordinator	1 Professional Practice Leader	1 Director

3.1 Being aware of what to report and to practice safely

Study participants described being more aware of the different types of safety incidents and what should get reported. Study participants also described being more apt to report and encourage other colleagues to report safety events in the tracking system, as noted below.

“It’s [SafetyNET] actually a constant reminder to me that how we ought to be working in a safe environment and when I see things that are unsafe, how I ought to be moving forward with that.” (Nurse)

“There’s a greater awareness about what types of incidents would get documented or tracked and there’s a push to sort of make sure more of these incidents do get reported. I think sometimes the perception is the need to be something really bad sometimes before it should be reported. Often times you’ll see examples of ones that people have already done and that would have counted as an incident, or I would have realized that, or didn’t think that would have fallen in that category.” (Health Disciplines)

Study participants described being more engaged in safety dialogue in daily practice and that SafetyNET had provided an avenue to raise safety issues. Interestingly, one administrator described how a safety event was forwarded to the appropriate channel for follow-up through SafetyNET.

“I have seen or I’ve been in meetings and an incident will come up or it will be phrased as a concern through SafetyNET or as a result of SafetyNET or something was put into SafetyNET as a concern. So then that’s taken forward to the appropriate channels.” (Administrator)

All cohorts (nurses, health disciplines and administrators) reported that the existence of SafetyNET, even in its’ simplest form as a desktop icon, served to remind them to practice safely. Participants also reported reading through the online education modules and/or participating in the on-line forum discussion. Some participants viewed themselves as already safety conscious and commented that SafetyNET simply reinforced how they were practicing on a daily basis. Some participants described thinking more and reflecting on their work environment and practice to ensure patient safety as noted in the following narratives:

“It’s just a gentle reminder that that’s what we’re here about. You know, that’s what this is all about...providing safe care and I’m doing it anyway, but I feel as if right or wrong, I feel as if [hospital x] is behind me in providing safe care.” (Nurse)

“I just think the culture of safety has actually been heightened because there’s so much advertising. So even if somebody hasn’t even gone on the actual online portion, they’ve heard of it, and it just makes you think about safety a little bit more.” (Health Discipline)

“It certainly highlighted for me the importance of having open discussion around it so that you try to get root causes and understand maybe more freely what some of the issues are. I think that they’re kind of under there and they don’t bubble up.” (Administrator)

3.2 Learning impeded amidst competing priorities, beliefs, and inaccessibility

From the participant narratives, it was apparent that learning from SafetyNET was impeded amidst competing priorities, professional beliefs, lack of clarity and communication, and inaccessibility. All three cohorts (nurse, health discipline and administrators) articulated competing priorities as a major constraint to participating in SafetyNET activities. Key codes within this category included information overload, not enough time, and not a priority. Study participants described being inundated with more things to do; bombarded with on-line initiatives; and overwhelmed with so much information that they did not have the time to go on-line and read the educational modules or post a response in the on-line forum. Interestingly, the majority of the responses in this category were reported by nurses, although the idea of bombardment was echoed in the health disciplines group. A concerning observation made by one participant was that the overloading of priorities is, in itself, a safety threat that is impacting clinical outcomes:

“We’ve hit a nail on the head here with this over loading of priorities within the hospital, I believe that it actually does constitute a safety risk for patient care because we’re seeing that staff are becoming so over loaded with

information and tasks that are all priority and high importance, that the basics are going by the way side. And in some cases, it's starting to show up in terms of poor outcomes clinically.” (Nurse)

The idea that SafetyNET was not a priority emerged predominately in the nurse focus group where direct patient care activities were the focus in daily practice as one nurse described that if your day is so booked up with patient care activities that you can not do it at work, you're probably not going to do it [participate in SafetyNET] elsewhere. Time constraints and other priorities were also noted by the administrator group as hindrances to SafetyNET participation and not being top of mind.

Professional beliefs about roles and accountabilities also impeded the use of and learning from SafetyNET. Three codes within this category included a culture of fear and mistrust in sharing safety issues online; lack of relevance to daily practice; and not using personal time to engage in SafetyNET. Participants in the nurse focus group described a culture of fear still existed in the hospital despite programming like SafetyNET and other initiatives intended to facilitate dialogue around safety issues and encourage reporting. As one participant described:

“There's also a perception that it's admitting mistakes that are made, it's going to be punitive or some people are afraid of the consequences. I don't know how you fix that because I think it's a culture that's been around for a while.” (Nurse)

Several nurses described feeling uncomfortable posting details of safety events on the on-line discussion forum due to lack of trust of cyberspace. Participants also expressed concern around sharing safety events corporately, as one nurse described that you almost worry you're going to be airing our institutional laundry. Another code within this second category is the lack of relevance of SafetyNET to daily practice and was described by one nurse as nothing to do with their neck of the woods. The lack of relevance was also reported in the non-clinical staff focus groups as noted by one participant who described having difficulty finding how it applied to them. Some participants expressed that they should not have to use personal time, at work or at home, to engage in SafetyNET as noted in the following quotes.

“We're booked every forty-five minutes, I don't have those twenty minutes and we're not going to give up our lunch breaks to do that.” (Nurse)

“I don't know any people that go home at night and want to do that [go on-line to access SafetyNET learning modules] either.” (Health Disciplines)

Learning through SafetyNET was further impeded by its inaccessibility. Some focus group participants reported that the online interface was not user friendly. For nursing staff in particular, computers were not necessarily available to them for use during their work day to access the online modules.

3.3 Improving reporting safety events requires a variety of strategies

Study participants also put forward recommendations to increase the utilization of SafetyNET and to enhance reporting and learning from safety events occurring in the hospital. Three categories were part of this theme including having dedicated time and making participation mandatory; enticing and influencing through reminders, personal connection and stories; and making content relevant and user friendly to all learners. Having dedicated time and making participation in SafetyNET mandatory as a potential strategy to increase awareness of safety and risk was a category that all three cohorts recommended as noted:

“If this is as important as it appears to be then it has to be given designated time like CPR. So you have to do it every year or every year and a half. Every member of staff has to have that time designated to them to do it because it's otherwise it's hit-or-miss.” (Nurse)

“I know with other things like initiatives I get launched like; falls, delirium, restraints, there’s no choice, you have to learn it, why not take the same approach, right?” (Health Discipline)

The second category within this theme is enticing and influencing participation through reminders, personal connections and stories or as one participant noted that you have to get it into people’s top-of-mind. This category reflected different approaches to influencing people to engage in SafetyNET to report and learn from safety events. According to study participants, promoting and reminding people working at the front-line about SafetyNET is key to its success. As one participant noted:

“I think if there was more awareness for front line people about using it, like even like reminders of some sort to use it because I think when things first come out everybody knows about them, but then people forget so quickly because it’s like you got so many other things going on at the same time like this restraint stuff coming out, that I think people feel bombarded. If there was a way of kind of reminding people about it, and what it’s for is to help people.” (Administrator)

Participants in the nursing focus group noted that connecting with the project leaders was key to their involvement in SafetyNET and also emphasized the need for personal connection and direct conversation to be engaged in the initiative. Closely aligned with this need for personal connection was learning through stories as noted in the following narrative.

“Personally, I just relate more to stories, that’s just the way I learn, so to hear an actual situation or something from me it just hits home more.” (Health Disciplines)

The final category in this theme, making it relevant and user friendly to all learners, reflects how contextual learning associated with safety and risk is. The need for information that was accessible and relevant to daily practice was emphasized by study participants and is highlighted in the following quote:

“You try and choose other information that’s easily accessible and that you can utilize within your own area in terms of patient safety.” (Nurse)

Key to these efforts is recognizing that every staff member has a role in safety and learning strategies and the need to be cognizant of intergenerational differences as well as different learning needs and styles. One participant described the need for intergenerational learning as noted below:

“Inter-generational learning [is required] because you know we have many generations of people working in this facility who have different style of learning and comfort zones.” (Nurse)

4 Discussion

To our knowledge, this is one of the first studies including a qualitative lens on understanding the effect of an organization wide, multi-pronged patient safety program. Our study findings provide insight into how clinicians and administrators perceived the effectiveness of a multi-pronged strategy aimed at improving safety culture and safety event reporting. The first theme, being aware of what to report and to practice safely since the launch of SafetyNET is consistent with other studies that demonstrated interventions aimed at improving safety culture are associated with increased reporting of incidents^[5-7]. Interestingly, the view that individuals were already conscious of safety and risk did not necessarily result in everyone reporting safety events. One explanation was that despite the education and resources available to staff around classification of errors (Module # 2 in SafetyNET on-line curriculum), participants described not knowing what to report as a safety event in the Event Tracker system. This was due in part to lack of clarity at an organizational level. Clarity around what safety events should get reported is critical as clinicians may only report events that fit within the predefined scales and typologies and may not report events that are more ambiguous and/or complex^[22, 23].

The second theme, learning impeded amidst competing priorities, beliefs, and inaccessibility, speaks to the challenges that clinicians and administrators face within their daily practices. For the clinician groups, the primary focus was addressing patient care needs and issues with little time or thought put towards reporting safety events or participating in safety activities that take them away from the bedside. This finding is consistent with the dynamic view of safety which emphasizes what is deemed as a safety risk is influenced by multiple pressures and constraints^[24, 25]. Competing priorities dictate what gets attention, or becomes salient, at both individual and organizational levels^[24, 25].

The finding that fear, blame and lack of trust inhibited reporting of safety events is consistent with other studies^[2, 26-28] and the concepts of whistleblowing in medicine^[29] and nursing^[30] and psychological safety^[31]. Reporting of errors is a form of whistleblowing which is defined as a person who raises concern about wrongdoing^[29]. However, challenges remain for clinicians to 'blow the whistle' on errors they have committed or observed in practice^[29]. One explanation is that in psychologically unsafe environments people believe that if they make a mistake or ask for help or feedback, others will penalize or think less of them^[31]. The finding around how the lack of relevance of the patient safety program to daily clinical practice impeded reporting safety events is similar to the view that organisational learning systems tend to reflect priorities of management and neglect those of clinicians and serve as a barrier to reporting^[22, 23]. Thus, findings also suggest that leadership has a key role to play in creating a positive culture that is conducive for clinicians and staff to report and learn from safety events.

5 Implications

Our study findings have important implications for nurse leaders in their efforts to enhance safety cultures and reporting and learning from safety events within their organizations.

Underpinning efforts is leaders' accountability to create and sustain a just, flexible, culture, rather than a culture of fear and blame, which values both identifying vulnerabilities and weaknesses and celebrating quality care^[32, 33]. In turn, this increases the likelihood of reciprocal accountability and transparency whereby clinicians and staff feel safe to report, learn, and act on errors, adverse events, and near misses in health care^[32-34].

Study findings also point to the following recommendations. First, introduction of new safety interventions at the corporate level needs to be done in a manner that is clear to both administrators and front-line clinicians and aligns with other corporate priorities, resources and systems – yet distinguishes the new interventions from existing systems and processes. For example, confusion emerged on what should be reported on the SafetyNET on-line forum compared to what should be reported on the corporate Event Tracker system. Second, despite a corporate policy on what and how to report safety events, an explanation of how corporate safety interventions or strategies are linked to individual accountability for safe care in daily work is recommended. Key to these efforts are including personal stories, using reminders, and making content relevant and user friendly for all intended audiences^[4, 13]. In turn, this should assist with embedding error wisdom^[35] and reciprocal accountability^[32-34] whereby there is a clear idea of what safety events are to be reported and acted on. This recommendation addresses the lack of relevance of the SafetyNET intervention to daily work practices identified by some of the study respondents.

Third, organizations can invest in learning opportunities around safety by providing dedicated time and making participation mandatory in organization-wide approaches to improving safety and quality and reporting of safety events. In addition, providing computers for all staff to access the on-line educational modules and discussion forum is recommended. This is consistent with the literature around building organizational capacity for learning on safety and risk and from reported safety events^[35, 36]. Fourth, organizations need to ensure appropriate staffing levels for both learning opportunities and workloads that are conducive to having time to report. This last recommendation is based on a body of evidence around lower hospital nursing staffing ratios are linked to lower mortality rates and more positive nursing

outcomes^[37]. Study limitations include that the focus groups were conducted in one health care organization and may not be transferable to other health care settings.

6 Conclusions

This study revealed two key themes around how participants perceived a multi-pronged approach to enhancing safety culture and event reporting in a hospital setting: 1) being aware of what to report and to practice safely; 2) learning impeded amidst competing priorities, beliefs, and inaccessibility. In addition, several strategies were recommended by study participants to improve reporting safety events. Study findings add to a growing body of literature on the role that organizational and local contexts have on patient safety and quality improvement efforts. Nurse leaders can use study findings to inform their future efforts to enhance safety culture and reporting of and learning from safety events that are occurring in their organizations. Additional research efforts using a variety of methodologies are required to evaluate the impact of both organization wide and grassroots strategies aimed at enhancing safety culture and safety event reporting.

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