

Patient Safety Officers' and Nurses' Perceptions of Error Reporting Systems Within Acute Care Hospitals in Pennsylvania

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The researcher investigates perceptions that patient safety officers and registered nurses have within Pennsylvania acute care hospitals to error reporting systems. This article summarizes the findings and provides recommendations for future research. In summary, patient safety officers felt the error reporting systems in their respective hospitals worked well. The majority of nurses felt there were breakdowns in the error reporting systems could be much more effective. The ultimate purpose of this study was to provide information that may aid healthcare providers designing and implementing error reporting systems in Pennsylvania acute care hospitals.

LITERATURE REVIEW

The researcher attempted to narrow the scope of reviewed literature to that relevant to the purpose posed in this study in order to gain insight to the problem that has been stated. More specifically, the studies that were summarized focus on the following aspects of patient safety; 1) improving the error reporting system through reporting errors, 2) the culture of safety, and 3) gaps found within current research, thus verifying the need for additional studies.

There was no discrepancy found within the literature as to the notion that systems fail, but the following studies are reviewed in an attempt to delve deeper into why systems may fail. The purpose of this study was to evaluate error reporting systems through the perceptions of those involved and the following studies provide insight into various researchers' ideas and assumptions about the current state of the occurrence of medical errors. What follows is a summarization of key literature reviewed.

Medical errors have been an issue that hospitals have been studied for many years. For example, in 1996, a community hospital in the northwest formed an interdisciplinary working group in order to improve their incident reporting system. The goals of the new system were as follows; 1) reduce the time needed to complete an incident report, 2) collect more precise data about the incident, 3) allow department managers instant access to all open memos involving or generated by their departments, 4) allow ad hoc reporting by managers and administration, and 5) allow only involved parties access to memos. This new system, which turned their paper-based reporting system into a computerized system, began to be used as the organization's primary quality assurance and incident reporting tool in 1998.

Following the in-house pilot study involving two departments within this community hospital, other departments began to utilize the new system. With data collected from January 1998 to December 1999, results showed that the turnaround time for the lifecycle of an incident report decreased from 53 to 12 days, at least 20 hours a month were saved in transcription and data entry time using the new system (Cortezzo & Maass, 2000). This study is summarized as it shows one way in which a hospital took a

systematic approach to quality assurance, which in turn saved time and possibly may help to decrease the occurrence of medical errors made in the future.

A hospital in the southeast has seen a major change in the reporting of drug errors since changing its reporting system. Between 1997 and 1999, reporting increased 12%. Personnel within this particular hospital decided to take action after realizing that incident reports showed an average of 30 drug mistakes a month when the average census was 360 patients per day. They wanted a system that would promote error reporting. In the new system, patient charts were reviewed, the hospital's computer system produced seven-day summaries of drugs received by individual patients, which were compared with the orders written by the physician. Each month, reviews of ten patients in each unit were conducted. In addition, secretaries enter the patients' drug orders into the computer. Pharmacists began to fax orders that could be verified in the computer (Levenson, 2000).

The Anesthesia Patient Safety Foundation found a way to communicate research findings in an effective and targeted manner through a system-wide solution. They designed and implemented systems that reduced their error rates in the operating room 7 to 10 fold (Eisenberg, 2000). They promoted and developed technology, including standardizing dials on the anesthesiology devices used in the operating room, and eliminated variations among manufacturers. In following the basic aviation safety concepts in the operating room, they found that a culture of patient safety was created and attention was brought to eliminating errors. This included: better training, better drugs, and routines that demand evaluation of all errors. This system also created a way to gain feedback of information for a cycle of continuous learning (Eisenberg, 2000).

Goldfarb, Nash, & Pizzi (2001) state that "attention to organizational issues of structure, strategy, and culture may be a promising direction for medicine"(p. 451). The power of culture may go unrecognized as employees may assume that the dominant paradigm is simply "the way we do things here" but corporate culture is much more than that. Culture is defined as a complex framework of national, organizational, and professional attitudes and values within which groups and individuals function. In addition, it is commonly referred to as the "glue that holds the organization together." Consequently, culture is often assumed to be a contributor to organizational performance by socializing workers in a way that increases commitment to the goals of the organization. Surprisingly, at this point, research focused on promoting a culture of safety is unexplored yet warranted (Goldfarb, Nash, & Pizzi, 2001). However, the authors were successful in finding and reviewing one approach that staff within The Veterans Administration utilized in an effort to promote a culture of safety within their organization.

The Veterans Health Administration (VHA) has implemented a multifaceted safety initiative, which was designed to build a culture of safety and address system failures. The approach consisted of four elements; 1) partnering with other safety-related organizations and affiliates to demonstrate a public commitment to leadership, 2) establishing centers to direct safety efforts, 3) improving reporting systems, and 4) providing incentives to healthcare team members and division leaders.

In relation to effort 1, the VHA leadership founded the National Patient Safety Partnership, along with the American Association of Medical Colleges, the American Hospital Association, the American Medical Association, the American Nurses Association, and the Institute for Healthcare Improvement. This was done to demonstrate a public commitment to the importance of patient safety.

In an attempt to employ effort 2, centers dedicated to the promotion of patient safety were established. These consisted of the National Center for Patient Safety which directs patient safety efforts of the VHA at a national level and four Patient Safety Centers for Inquiry with primary responsibility for conducting safety-related research and development. More specifically, the purposes of the centers are to identify problems in the patient care process, implement corrective measures, and study effects. Lastly, the VHA's Virtual Learning Center was developed in an attempt to allow VHA facilities to share lessons learned.

Effort 3 was addressed through the offering of incentives designed to improve reporting efforts. Specifically, the incentives included; 1) the "carrot", which is a monetary award of up to \$5000 for individuals and teams that develop approaches to improve safety issues, and 2) the "stick" which is a performance expectation imposed on administration to improve patient safety. Administration within all

twenty-two of the VHA's regional networks must show an active involvement in safety-promoting activities, or be subject to consequences, including possible termination of employment.

Effort 4 is demonstrated through use of a two-pronged system that captures adverse events. The first system, the Patient Safety Event Registry, mandates the reporting of adverse events and near misses. Event data is then shared both regionally and nationally. The second system, the Voluntary Reporter Identity System, was developed in conjunction with the National Aeronautics and Space Administration (NASA), and allows for anonymous error reporting.

The authors explained that measuring the impact of culture on safety-related outcomes is challenging since culture is a complex and abstract construct that must be inferred from behaviors, thus analysis often relies on self-reported data. Goldfarb, Nash, & Pizzi (2001) conclude:

Research continues to develop a working model of safety culture that permits measurements of several connected concepts: individuals' perceptions and attitudes about safety, individuals' observable safety behaviors, and an organization's safety management system as evidenced by its policies and management styles. (p. 455)

Over ten years later, from the time the above mentioned studies were conducted; medical errors are still being examined in an attempt to reduce the number of occurrences. Clarke (2013) states that the Pennsylvania State Safety Authority receives over 235,000 medical error reports on an annual basis. It is legally required in the commonwealth of Pennsylvania that any medical event involving the clinical care of a patient in a licensed acute care setting be reported. This includes both series events and near misses. In addition, Pennsylvania is the only state that mandates the reporting of near-misses.

By reporting near misses, the commonwealth of Pennsylvania has a great opportunity for collaborative learning to occur without harm coming to a patient. Errors give health care professionals material that will help with reflection as reflecting upon errors is fundamental to learning (Lea & Danczak, 2014). Lea and Danczak (2014) go on to provide information about a learning session that is focused on reflection of error, classifying and preventing errors, and the skills needed to manage and disclose the error. Their specific objectives were as follows:

- Share and discuss errors they have made or have been directly involved in
- Reflect on the impact of error on themselves and others
- Gain insight into how error is sometimes minimized
- Understand a classification of common causes of errors
- Develop a skilled professional response to error practice skills required for disclosure and follow-up (p. 114)

Through their learning sessions, they found that participants showed increased confidence in managing errors when they realized that mistakes are common, they can lead to learning opportunities if acknowledge, not denied, and the needed skills with disclosure can be learned. This is important because patient safety forms the foundation of healthcare delivery. (Ulrich and Kear, 2014) state that little else can be accomplished when the patient isn't safe, or doesn't feel safe. They go on to state the complex nature of healthcare means that the process of providing a safe environment should be an ongoing process, one where every member of the healthcare team is focused and determined to do their part to create a culture of safe and provide the foundations of excellent healthcare delivery.

PURPOSE

The ultimate goal of this study was to help providers of healthcare within Pennsylvania acute care hospitals find solutions to the ever-present problem of the occurrence of medical errors. Scholarly literature states that the majority of medical errors occur due to systems that breakdown and fail healthcare workers. This study sought to provide new knowledge in regard to where one particular system

may be breaking down, specifically the error reporting system. The purpose of this study was twofold; 1) to develop two structured interview questionnaires, and 2) to conduct structured interviews as a means to collect data that focused on the occurrence of medical errors; specifically through assessing the error reporting systems within a sample of Pennsylvania acute care hospitals.

RESEARCH QUESTIONS

1. What are patient safety officers' perceptions of the error reporting system within the Pennsylvania acute care hospital in which they are employed?
2. What are nurses' perceptions of the error reporting system within the Pennsylvania acute care hospital in which they are employed?

METHODOLOGY

Using a qualitative methodology, perceptions of twenty-two healthcare professionals were collected through structured interviews. More specifically, twelve patient safety officers and ten nurses were interviewed. Interviews averaged forty-three minutes in length. The research questions provided the framework for data organization and for interpreting the perceptions of the research participants. The qualitative design was chosen for the following reasons: Qualitative research designs typically focuses on small numbers in regard to participants used for data collection purposes, thus rarely makes explicit claims about the generalizability of their accounts. Internal generalizability, the generalizability of a conclusion within the group studied, is a key issue for qualitative studies, not external generalizability (Maxwell, 1996).

Qualitative research is aimed at understanding the particular context which participants act, and the influence that this context has on their particular actions. Qualitative researchers typically study a small number of individuals and preserve the individuality of each analysis. Thus, researchers are able to understand how events, actions, and meanings are shaped by the unique circumstances in which these occur (Maxwell, 1996).

Finally, qualitative studies focus on understanding processes in which events and actions take place, rather than the specific outcomes. Qualitative research does not disregard outcomes. However, the strength of the qualitative design lies at getting at the processes that lead to particular outcomes (Maxwell, 1996).

In addition, naturalistic inquiry leads to multiple realities because of its reliance on human perception. The assumption is made that each of these multiple realities is equally legitimate. It is assumed that the idiosyncratic nature of each separate investigator, each different group of respondents, the contextual features distinguishing each setting, and the specific interaction of the values representing the relevant participants will further incline interpretations accordingly.

FINDINGS

Research Question One

What are patient safety officers' perceptions of the error reporting system within the Pennsylvania acute care hospital in which they are employed?

The purpose of this question was to gain a perspective of the current error reporting system as perceived by patient safety officers. All respondents indicated that once an error was made within their unit in the hospital, a report form is completed. All respondents stated that once the report is completed, it is then forwarded to the unit manager (where the error occurred). The unit manager keeps a copy and then forwards the report form to the patient safety officer or risk manager. All respondents stated that the severe errors, ones where patient harm has taken place, would be investigated.

From this point on, policies and procedures that were in place to correct, and ultimately prevent the errors from reoccurring, differed with each respondent. There were, however, major similarities as the

majority of the respondents implemented, to some degree, many of the same procedures. All respondents stated that the procedures that follow the occurrence of an error would be dependent upon the type and/or severity of the error itself. The majority of respondents stated that added steps, in regard to procedures, would increase with the more severe errors.

In regard to the feedback of information to staff once an error was made, corrective actions taken, and policies changed, the responses were overwhelmingly in favor of training and re-education. Specific methods of training and re-education differed with respondents, but the majority of them (11 of 12) favored an annual mandatory staff training day as the primary way to disseminate information and inform staff as to the errors that have occurred, corrective actions, follow-ups, and policy changes.

The majority of these participants stated that learning is incorporated into the occurrence of errors through the culture, essentially creating a culture that is non-punitive, promotes safety, creates a blame-free atmosphere, promotes error reporting, and assessing the current culture in order to understand what is going wrong. Even though major improvements have seem to be made in regard to promoting a blame-free environment, one that promotes error reporting, the issue of non-reporting still exists. It is difficult to assess how many errors go undetected. However, assessing only those errors that do get reported, medical mistakes account for a staggering number of deaths in the United States each year. Culture is an issue that may need to be assessed in further studies.

Many positive aspects in regard to the policies and procedures were found within the sampled hospitals. The perspectives of the patient safety officers were positive and the majority seemed to be dedicated to improving patient care in Pennsylvania. They seemed genuinely interested in finding and employing methods that may help to reduce the error rates within hospitals. It was perceived that the majority of the respondents honestly felt that they, in their position, were doing what they could to prevent errors from occurring. *"I do all I can to prevent errors but the system is not fool proof, so many errors still occur. "I try to prevent errors from occurring, but I know we still need to improve."* Even though the researcher felt that there may be ways to improve upon what is being employed, it is also felt that if presented to these respondents, they would be receptive and willing to try new procedural methodologies in order to reduce error rates and prevent their reoccurrence.

Research Question Two

What are nurses' perceptions of the error reporting system within the Pennsylvania acute care hospital in which they are employed?

All ten respondents verified the existence of an error reporting system within the hospital in which they were employed. All respondents stated that once an error has been detected, an incident form is completed. Eight respondents stated that different procedures exist depending on the type and the severity of the error. In essence, aside from completing an error reporting form following the detection of an error, there did not seem to be any consistency between respondents in regard to what follows.

Since the majority of the respondents stated that different procedures exist, responses in regard to what follows the completion of the error reporting form varied. The majority of the respondents stated that the attending physician and unit supervisor are immediately notified following the detection of an error. Only one respondent stated that the situation and factors surrounding the incident is assessed. This differs from the patient safety officers' responses in that all twelve responded that all severe errors were investigated in some manner, most typically a root cause analysis would be done. The nurses' responses, in regard to procedures following the detection of an error, focused on who would be told, rather than what would happen. In general, the nurses' responses pointed to the notion that they did not have an understanding of the workings of the entire error reporting system. This in itself may not be a problem as long as the front-line staff knows what specific part they play in the system. However, only three respondents stated that the nurse who actually made the mistake must complete the error reporting form. The majority of the respondents stated that it is the RN in charge of the patient who will actually fill out the error reporting form. In addition, only one respondent stated the nurse that made the error will, together with the unit supervisor, complete and discuss the error reporting form.

Eight respondents stated that they are made aware of errors through monthly department meetings. This tends to be more reactive, in that errors that have been made throughout the month are not made aware to staff until the department meeting. In fact, respondents noted that the error reporting system was in fact reactive instead of proactive. It was noted however that staff may be made aware of the more severe errors before a monthly meeting if felt necessary by administration. *“The system is very reactive. We do not hear about errors until after they have become a problem. It would be nice if they would address the issues before they turn into problems.”*

The majority of the respondents were not sure how corrective actions were decided upon as they are not involved in this aspect of the system. The majority however did note that once a corrective action has been implemented, the follow-up includes re-education and training. In addition, the majority of respondents stated that corrective actions are made visible to staff through education. In regard to incorporating learning into the occurrence of errors, the majority of the nurses felt that it is done through training and education as well.

The majority of the nurses noted that manuals in regard to policies and procedures exist. The problem does not lie with the existence but with the actual time it would take to look up a policy or procedure. The manuals exist, however the majority of nurses stated that they do not have the time to check the manuals before delivering care.

In general, the researcher sensed frustration in the majority of these respondents. Respondents seemed to really want to provide quality care, but many did not feel that they were provided the time to do so. *“I really want to do the right thing, but I am too busy to sit back and think about what I do before I do it. I don’t even get a break most days. Really, I am dedicated to providing quality care but sometimes it feels that it is impossible to do with the amount of work we have.”*

CONCLUSIONS

Conclusions are based upon the responses to the interview questions and the analysis of the responses. Each conclusion corresponds with a posed research question stated in this study. The conclusions cannot be generalized to all acute care hospitals within Pennsylvania. However the researcher feels that the conclusions may be used as a basis for continuing work within additional acute care hospitals in Pennsylvania. All direct quotes from participants within the stated conclusions are denoted in italics within the body of text.

Research Question One

Patient safety officers' perceptions of the error reporting system were, by majority, positive. Respondents, by majority, felt that procedures are in place, within the error reporting system, in order to detect, correct, and prevent errors. In general, members of this data set did not perceive that the error reporting system needed to be altered. Respondents felt that the system was in fact effective. Respondents stated: 1) *“We as administration do what we can to ensure the reporting of errors, this includes making sure our error reporting system exists.”* 2) *“We try to get staff to report errors, and we reduce our error rates by having an error reporting system in place.”* 3) *“We correct the errors that occur, and we strive to prevent them too.”* These comments provided much insight as the respondents feel that the system is in place, and effective. Yet, statistics show that errors are still occurring at a very high rate. This conclusion indicates that there may be a disconnect between the perceived effectiveness of the system and the actual effectiveness of the system. It is not enough to simply “have an error reporting system in place” and assume that it is effective. There were not any participants in this data set that stated that the hospital error reporting system was in need of improvement, in fact it was quite the opposite. This conclusion is based upon personal insight gained during the face-to-face interview discussions about the error reporting system.

Research Question Two

Nurses' perceptions of the error reporting system were, by majority, not as positive as the patient safety officers. These participants stated that procedures are in place, within the error reporting system that detect, correct, and prevent errors. However, this data set felt that improvements are warranted within their particular error reporting systems. Respondents stated: 1) "We don't have the opportunity to play a part in developing the procedures, we only follow them". 2) "When a new procedure is put into effect, we don't know why. We only know that we have to follow a new rule". 3) "Our system could stand some improvement, we report errors but other than that I am not sure what happens". 4) "We report errors if we have time. I don't think our system has any checks and balances so if we don't report no one will know". 5) "The system does not work too well". 6) "Changes need to be made in the system". 7) "Policies seem to be reactive instead of proactive". 8) "There are things in place to prevent the repeat of errors, but many times not used or followed. 9) "It's important to use the same policy for everything and we do not do that. We should treat each patient error the same and use the same set of checks and balances for each error." In addition, respondents were not familiar with all of the processes and procedures that encompass the error reporting system. Different respondents stated: 1) "Yes, we report errors, the system is there but all we really do is fill out a piece of paper, from there I don't know what happens. All I know is that I will hear about it if it's bad." 2) "Yes, we report errors, but I am not sure what happens after they are reported". 3) "We don't even report our own errors, it's the charge nurse that reports all errors."

There appeared to be more of a disconnect between the purpose of the error reporting system and how they, the front-line personnel, may actually play an active role in helping to reduce errors through the error reporting system itself. Respondents, by majority, did not have a complete understanding of the error reporting system and how it worked to reduce errors. This conclusion is based upon personal insight gained during the face-to-face interview discussions about the error reporting system.

RECOMMENDATIONS

Based upon both the findings and the conclusions recommendations have surfaced for healthcare providers. These personnel include hospital administration, patient safety officers, ancillary staff, and front line personnel.

The researcher felt that categorizing all healthcare personnel together would be appropriate even though each subgroup has its own duties and responsibilities. The rationale for this was that all healthcare personnel must work together, from the top down in order to address this particular problem. All levels within the hospital must be included in efforts, or recommendations, to aid in the reduction of errors.

Organizational Culture Assessment.

In regard to detection, it is suggested that administration contemplate assessing the organizational culture. This may help them begin to understand what may need to change on an organizational level in regard to the occurrence of errors, specifically the reduction of errors.

Error Reporting System Assessment.

An assessment of their current error reporting system may need to be conducted. It is suggested that before providers of healthcare can effectively implement a system that promotes the reduction of errors, they must first gain an understanding of the current system. These goals may be achieved through a strategic planning process.

Communication.

It is suggested that healthcare providers develop and implement policies and procedures that foster communication between them and the front-line personnel. This may aid in the perceived disconnect that exists.

Training as a Corrective Action Intervention.

Most significantly, it is recommended that administration, together with the training director and relevant human resource personnel, conduct a needs assessment within the organization to verify if in fact training is needed when addressing “how” medical errors are corrected and prevented. Training may not be the main issue in regard to the reoccurrence of medical errors, and a needs assessment will aid in verifying the correct plan of action.

LIMITATIONS

This study cannot be generalized to the entire population. Results are based on the interviewed respondents in this study. The researcher plans to use findings from this study as the framework for a larger scale quantitative study.

SUMMARY

In summary, even though breakdowns within the error reporting system may exist, hospital personnel seem dedicated to wanting to deliver quality care, and expressed a very high interest in playing their part to reduce the occurrence of errors. The desire to reduce medical errors exists with those surveyed. The perceived disconnect between administration and the front-line may play a crucial part in explaining why the preventive initiatives are not proving effective. Bridging the gap between these two groups may be a key factor in helping to accomplish error reduction within Pennsylvania acute care hospitals.

FUTURE RESEARCH

Clarke (2013) states that solely describing patient safety issues, and warning healthcare personnel to be more cautious is ineffective. Instead, proposals for implementation of recommendations and best practices should be proposed and disseminated in the acute care facilities. The researcher plans to work with an acute care hospital and move to an implementation stage with the recommendations that have been found in this study. By implementing recommendations, it is hoped that error reporting systems may become stronger, the perceived disconnect between administration and the front-line will be lessened, communication improved, and ultimately less medical error occurrence in Pennsylvania acute care facilities.

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