Whose Voices are Heard in Patient Safety Incident Reports?

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Abstract

Patient safety incident reporting systems are used to monitor adverse events, generate information for risk management and to improve patient safety. A number of electronic reporting systems have been developed, but their data elements appear relatively similar. An inductive data analysis was carried out to find out especially what is the content of descriptions of contributing factors of adverse events. The data consisted of incident reports entered in a hospital based reporting system in the years 2008-2010. Overall, 82 reports of 785 contained free text information about patients’ and relatives’ involvement in the events reported by staff. We found that patients themselves noticed almost half of these incidents. Of the incidents they noticed, most resulted in moderate harm.

Introduction

The importance of patient safety has increased the use of incident reporting systems for adverse events to be able to monitor these events. The impact of the 1999 Institute of Medicine Report appears to have been crucial, with many activities starting around the year 2000\textsuperscript{1,2}. In many countries the development of nationwide incident reporting systems of patient adverse events and near misses has proceeded and most commonly is part of the framework of quality of care, followed by risk management and clinical governance. Further, either dedicated organizations or structures existing within the framework of health ministries have been utilized for coordinating national reporting activities. Overall, there appear to be at least three different types of national patient safety incident reporting systems: systems for sentinel events only (often obligatory by law), systems focusing on specific clinical domains (reporting often voluntary) and healthcare system-wide, comprehensive reporting systems (which include both adverse events and 'near misses').\textsuperscript{3}

Whether mandatory or voluntary the role of the reporter is obvious in the reporting system. The role of patients’ and relatives remain scarce in the incident reporting systems thus most systems are targeting clinicians. However, there are various methods and systems which prove that a vast number of unintended consequences as for instance infections appear often after discharge at home or in primary care. Previous studies also support that families and patients can be involved with improving safety in health care.\textsuperscript{4-6} The WHO Patient Safety Alliance has suggested it would be valuable to develop opportunities for consumer voices to be heard. They can contribute in creating public awareness about inherent health-care risks, educating the public about systems approaches to risk management, reporting errors or health-care failures in ways that contribute to systemic learning, disseminating research and sharing solutions that can prevent patient harm.\textsuperscript{7}

Patient involvement in her/his care is often connected to the concept of empowerment which can be divided into various dimensions of being cognitively able to manage symptoms during caring process. Based on studies empowerment can consists of the following dimensions: bio-physiological, functional, experiential, ethical, social and financial knowledge areas of empowerment.\textsuperscript{8,9} These knowledge areas can be considered with respect to the patient’s ability to report adverse events or
near misses. Many patients should be able to recognize, differentiate and assess unintended symptoms and harmful consequences. Some will have the courage to intervene in discussions and decision making.

The purpose of this paper is to discuss how patients or their relatives’ voices are heard in the present incident reporting system used in one university hospital. The ultimate aim is to capture the prevalence of patients’ involvement in the existing system before the actual reporting system developed for patients will be implemented.

**Background**

Based on Runciman (2002) the main points when establishing a reporting system are the following: identification of events that are low-frequency on the organization level, but through aggregation can allow the early recognition of previously unknown hazards; possibility to identify common contributing factors, through the analysis of many events at different locations; central analysis allows the dissemination of individual organizations’ experiences and best practices; and better understanding of types of injuries and their respective causes can guide preventive efforts. On the basis of the Australian Patient Safety experience, Runciman also indicated three specific requirements that a national incident reporting system should fulfill in order to be effective: national standards for the basic attributes of the system, use of a common classification system for patient safety and need for feedback and evidence of action from the national to the local level.

The opportunity to learn from experience and monitor progress as well as share lessons learned within one’s own organization in error prevention has been set as a leading objective for reporters. This requires gathering valid data from incidents. Adverse events and near misses are most often recorded into reporting systems anonymously by the staff, and reporting is voluntary.

The reports can be structured based on background variables e.g. organization attributes and timing, incident attributes e.g. near miss or adverse event, contributing factors e.g. human or environmental factors and consequences to subject e.g. severity or consequences to organization e.g. resource. To be able to describe contributing factors the reporter must produce free text information about the incident. This text needs to be interpreted by a reviewer to be able to give feedback to the reporter. According to Murff et al (2003) the reader generates meaning from the text by transforming the written information into some semantic form or conceptual message. In this sense, the reviewer constructs a situation model of the scenario described in the free text and is able to send feedback as action taken or improvements made to reporters and managers. King et al (2010) also stress the importance of appropriate terminology especially in system designed for patients. In addition, they emphasize the importance of quick response and feedback to reports made by patients or relatives.

**Materials and methods**

The study hospital implemented an electronic incident reporting system in 2007, known as HaiPro, to increase the documentation of adverse events and near miss situations in order to utilize these data for quality improvement. The HaiPro system enables anonymity, confidentiality and freedom from sanctions. Further, the HaiPro approach incorporates a system model that takes into consideration the features of natural human behavior and the pathway of divergent events development. The local incident reporting system is meant to prevent adverse events through the improvement of operational procedures. Prior to data collection, research permission for this study was obtained from the organization as a database holder, but according to organization policy the approval of ethics committee was not needed. The data consisted of near misses and adverse events incident reports (N=806) reported under the category information management, one out of the main 14 categories of the events in reporting system from January 2008 through end of December 2010. All hospital specialties and health professionals were included in the study. The basic principles of research ethics were considered and strictly followed during the study and the data were stored in a secure place.

The data were gathered first by printing the reports from the electronic information system by one of the researchers. Due to duplicate reports the final data (n=785) were entered into a data extraction
sheet developed for this study in Microsoft Excel 2007. Background variables were obtained from the reports: profession of the reporter, time of occurrence and event type. As more specific incident descriptions (text information of the incident, consequences for the patient and organization, and reviewer’s comprehension how this kind of incident could be prevented) are entered into the system as narrative free text inductive content analysis were used to gain first more detailed information from the reports in 2008 (n= 245). Concerning the study focus, patient and relatives’ involvement four variables: by what means (tools) the voices are heard, in which phase of the caring process, what is the contributing factor that the voice is heard, and what is the reason why the voice is heard, with meaningful variable values could be defined based on the analysis. The data also from 2009 (n=230) and 2010 (n= 310) could then be classified based on the analysis. Further, to check the reliability of the coding two persons independently classified 30 reports and the disagreements (n= 6 items) in coding were resolved by referring to the original free text descriptions. Descriptive statistics (SPSS) were used to describe the variance and correlations of the variables.

Results

The results indicate that although patients or relatives are not actual reporters their voices could be heard through narrative free text descriptions documented by the staff. More than 10% of all reports (n=785) in 2008-2010 contained information about patients or relatives as subjects in the incident. The incidents (N=82) where patients' and relatives' voices could be identified occurred mostly on Thursdays (25%) and the report was most often recorded by a nurse (48%).

The event type was most often an adverse event which the patient was aware of (46%). In 18 % of the incidents patients were informed afterwards about the adverse event. In 11 % of the incidents patients’ awareness about the event could not be decided. Almost one third of the events were near misses (24%).

The consequences for the patient and organization were mostly minimal. In one case, the consequence was severe for the patient and in 25 cases there was no harm. However, in about one third of the reported events the harm level was moderate. The reporters assed that the events most often caused image harm (39%) or extra work (28%) as a consequence to the organization.

Concerning feedback almost half of the events were in the review process, and 22% not yet been reviewed. However, more than 30% were finished and the feedback with suggestions to prevent the event to occur again was sent to reporter and manager.

The contributing factor confirming the patient’s involvement was most often patient’s own notification (58%). Table 1 describes the variance of the contributing factors (Table 1).

Table 1. Contributing factors for patients’ involvement in reporting

<table>
<thead>
<tr>
<th>Contributing factor</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient notices the risk at hospital</td>
<td>46</td>
<td>57,5%</td>
</tr>
<tr>
<td>Staff identifies the risk at hospital</td>
<td>8</td>
<td>16,6%</td>
</tr>
<tr>
<td>Relatives correct the wrong information</td>
<td>6</td>
<td>7,5%</td>
</tr>
<tr>
<td>The risk is checked from patient</td>
<td>4</td>
<td>5%</td>
</tr>
<tr>
<td>The risk is checked from relatives</td>
<td>3</td>
<td>3,8%</td>
</tr>
<tr>
<td>Other e.g. unmet needs for care or instruction</td>
<td>13</td>
<td>16,3%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>100%</td>
</tr>
</tbody>
</table>

There were various reasons why the patient’s voice was heard. The reasons were noticed both by patients and relatives. One third of the cases concerned uncertainty of the continuity of care reported by patients and nearly 20 % reported by relatives. Patients were also concern about ineffectiveness of outcomes of care. Both patients and relative worried about changes in their quality of life (12%).
There were also other reasons (16%) e.g. patient receives other patient’s records by mail and asks for help how to handle the situation or patient is not satisfied with the counseling or treatment.

The means (tools) the voices were heard was most often a phone call (43%) following interaction (e.g. discussion) with health professionals (30%) on the ward. More than 20% were various means e.g. patient comes to the outpatient clinic or to the ward from home or ombudsman or relatives calls. In more than half of the cases the voice was heard during the hospital stay. In 43% of the cases the voice was heard after hospital care delivery.

Patients were especially likely to note harm occurring after discharge, and continuity of care issues were especially prominent here.

Discussion

Patients clearly have the potential to be important allies regarding improving safety, as they suffer the consequences of harm. Patients may also be helpful in improving the reporting of safety events. In this study, the following questions were posed based on the reports made by the staff: by what means (tools) the voices were heard; in which phase of the caring process; why the voice was heard; and, what were the contributing factors when the voice was heard.

We evaluated incident reports of adverse events and near misses during a three year period recorded into the electronic system by university hospital staff. The reported events in this study were recorded under the category of information management and the reporters were either participants of the events or observers for the events. Even so, the reporters had tried to construct the situation as accurately as possible. However, the descriptions varied both in length and detail and some scenarios were hard to interpret.

The majority of the reports were recorded by nurses, which has also been the result in many other studies. However, in this study the number of events reported by physicians was slightly higher than usual. A small minority of the reports were entered to system by staff during the weekends. This seems logical as so many incidents were informed by patients or relatives after discharge by calling to hospital on working days. Additionally, nearly half of the events concerned the continuity of care after discharge which however is not dependent on the days of the week.

Learning from errors and/or ‘close call’ situations is a clear objective for incidents reporting systems. The reporters are entitled to describe the events with narrative free text. As clinical documents recorded by the staff usually contain accurate description about patient status and procedures this kind of free text information is challenged both to produce and interpret. It seems that when producing the descriptions of the events especially as an observer of the event the actor changes. In this study in all cases the actors were patients or relatives than usually the actors are members of the staff whose actions have contributed adverse events or near misses. This reflects that there really is a need to develop a reporting system for patients as well. As stressed the importance of feedback in previous studies, the reviewing process is also challenged in this hospital. In this study nearly 70% of the reports were either under reviewing or untouched.

The results of this study also reflect to the idea of patient empowerment by knowledge. Based on the analysis of the reported events many similarities could be found in knowledge areas of the concept of empowerment. Patients should be aware of biophysiological factors e.g. illness, symptoms, treatment and complications in order to understand the risk of adverse event. They should understand the functions for mobility, rest, nutrition and body hygiene as well as experiences from earlier hospital visits. There are also ethical dimensions as confidentiality and participation in decision making, and social dimensions e.g. social support from families or other patients. The financial dimension can also be stressful when financial benefits are neglected or the cost of care or medication increases based on unintended consequences.

In Kuzel’s and his associates’ (2004) study patient mostly were concerned about psychological and emotional harms referring to breakdowns in the clinician-patient relation. Patients also reported
physical harms eg. pain, bruising, worsening medical condition, and adverse drug reactions. In our study patients and relatives were also concern about the continuity of care based on the reports. Almost half of the voices were heard based on uncertainty of the continuity of care. However, patient seldom reported about physical harms in our study, although they felt sometimes that their quality of life had worsened after the hospital stay.

There are limitations to this study. First, the results may not be generalized as the data was gathered from one university hospital. However, the HaiPro system is widely used in Finland with the recommendations from the Ministry of Health. Further the data extraction tool developed for this study may have caused inaccuracy in coding the data. Due to relatively small number of events the statistical analysis did not found significance differences between variables.

We conclude that patients can be a valuable source of adverse events, and that it will be important to enlist them to improve patients’ safety.

References