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Attitudes of doctors and nurses towards incident reporting: a qualitative analysis

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Error-free performance is a standard expected from health professionals. However, health systems and personnel are not infallible; errors are made, with high human and economic costs.[1] Adverse events are visible manifestations of errors, and most represent unintended errors of omission (usually) or commission.[2] Learning from both adverse events and near-misses is essential for improving the quality of care,[3,4] yet under-reporting remains a significant problem,[5,6] occurring at a rate of 50%–96% annually in the United States.[7]

Incident-reporting behaviour differs between medical and nursing professional groups,[5] with nurses reporting significantly more often than doctors. Outside the discipline of anaesthesiology, nurses initiated 88% and medical staff only 2% of reports submitted through the Australian Incident Monitoring System (AIMS) between 1998 and 2002.[8] These differences possibly relate to previously identified hierarchical and cultural variations.[9,10]

In view of the sensitive nature of reporting of medical errors, as well as the complexities of cultures in healthcare organisations, and to provide insight into motivating factors for reporting, we considered a qualitative study using focus groups to be the most effective means of data collection.[11] To provide social and cultural homogeneity within groups, and enable participants to explore issues relevant to them in a non-threatening environment among peers,[12,13] each focus group comprised participants from the same discipline and level of seniority.

The research aims were (i) to examine attitudes of medical and nursing staff towards reporting incidents (adverse events and near-misses), and (ii) to identify measures to facilitate incident reporting.

METHODS

Recruitment

Recruitment was through purposive sampling from five units across three tertiary metropolitan public hospitals in Adelaide, South Australia. After ethical approval was granted from each organisation, participants were sought from two medical wards, one surgical ward, one intensive care unit and

ABSTRACT

Objectives: (i) To examine attitudes of medical and nursing staff towards reporting incidents (adverse events and near-misses), and (ii) to identify measures to facilitate incident reporting.

Design: Qualitative study. In March 2002, semistructured questions were administered to five focus groups — one each for consultants, registrars, resident medical officers, senior nurses, and junior nurses.

Participants and setting: 14 medical and 19 nursing staff recruited using purposive sampling from three metropolitan public hospitals in Adelaide, South Australia.

Main outcome measures: Attitudes and barriers to incident reporting; differences in reporting behaviour between disciplines; how to facilitate incident reporting.

Results: Cultural differences between doctors and nurses, identified using Triandis' theory of social behaviour, were found to underpin attitudes to incident reporting. Nurses reported more habitually than doctors due to a culture which provided directives, protocols and the notion of security, whereas the medical culture was less transparent, favoured dealing with incidents "in-house" and was less reliant on directives. Common barriers to reporting incidents included time constraints, unsatisfactory processes, deficiencies in knowledge, cultural norms, inadequate feedback, beliefs about risk, and a perceived lack of value in the process.

Conclusions: Strategies to improve incident reporting must address cultural issues.

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one emergency department from all the hospitals together. This provided a representative sample of a range of specialties within the hospitals. Participation was voluntary, and, to encourage attendance, staff coverage was arranged, transport costs were met, and a modest honorarium provided. Box 1 shows the demographic profile of the participants.

Focus groups

Five focus groups, each conducted over a 2-hour period, were held over 2 days from 21 to 22 March 2002 at an independent health research organisation. Each focus group was conducted by the same facilitator, who has extensive experience in health-related qualitative research. All focus groups were led using a topic guide (Box 2), and were semi-

structured with open-ended questions designed to encourage group discourse. The group was audiotaped and viewed by researchers from an adjacent viewing room.

Data analysis

Reliability was improved by an iterative approach to data categorisation.[14] Transcripts were generated from the audiotapes and independently coded by two researchers. Coding was compared and, when consensus could not be reached, a third person adjudicated.[14,15] The data were entered under thematic categories based on Triandis' behavioural modelling theory[16,17] using NUD*IST software.[18]

Triandis' theory is a comprehensive theory of social behaviour for use as a "framework for data collection"[16] and has particular rel-

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1 Demographic profile of focus-group participants

Professional group	Focus group	Position	Female	Male	Age range (years)
Nurses	1	Senior nurse*	6	5	24–47
	2	Junior nurse†	7	1	22–46
Doctors	3	Consultant	0	4	41–63
	4	Registrar	1	3	29–37
	5	Resident medical officer	4	2	24–33

* Nurses undertaking advanced clinical practice in senior management positions within the ward/unit.

† Registered nurses or enrolled nurses undertaking clinical practice under the supervision of a senior nurse.

evance for health research.[19] Triandis intended that the theory be used as a quick and imprecise way of organising a lot of information so that precise theoretical statements could be formulated.[16] The probability of behaving in a particular way is governed by Triandis' equation:

Probability of act = [$habit + intention*$] $\times$ [$motivation \times facilitating\ conditions$]

* $Intention$ = social factors (subjective culture) + affect + value of perceived consequences (positive and negative).

Due to the exploratory nature of this research, the equation was used for thematic categorisation rather than prediction of behaviour.

RESULTS

Results are discussed in the context of each component of Triandis' theory.[16,17]

Habit

In given situations, certain behaviours occur automatically and without self-instruction. These are called habits and, except for new situations (which require deliberate and controlled effort), are the most important predictors of behaviour.[17]

There were discernible differences between doctors and nurses. Doctors did not report through habit. A registrar commented: *"It just doesn't occur to me that an incident report should be made …"* and a Registered Medical Officer (RMO) said: *"We do* [complete incident reports] *but the nurses are the ones who initiate it. It's not the doctors who make that decision."* More serious events were not thought of in a reporting context, and were often not regarded as incidents, but as known complications.

Reporting by nurses is more habitual. *"Our organisation tells us that we need to fill out these forms, therefore we do. We have directives; whether we do them well or not …*

that's another question", explained a senior nurse. Habitual reporting was dependent on the type of incidents (eg, patient falls and medication errors were routinely reported) and location (eg, a skin tear occurring on the ward was more likely to be reported than if it occurred in theatre).

Intention

Intention is a self-instruction to perform an act and comprises social factors, affect and perceived consequences.[17]

Social factors

Beliefs, attitudes, ideals, roles, norms and values of peers impact on a person's decision to perform an act.[17]

General discussions revealed a preference for doctors of all seniority to keep adverse events "in-house". They believed in loyalty to colleagues, and that "whistleblowing" was both unethical and unsupportive. A consultant postulated that nurses were better at reporting incidents because of their relative powerlessness, it being their only recourse to improve a situation, while another stated: *"This* [reporting] *fits the nursing mould of thinking, which is very rigid and, you know, black and white … I see a problem, I can deal with this by communicating with the people concerned without going to paperwork. Nurses don't think like that. Nurses think this must be reported, put on paper and some action must occur that's official …".*

Nurses' concerns related more to personal protection and possible punitive repercussions than issues of loyalty. As stated by a junior nurse: *"You do* [complete an incident report] *to cover yourself".* Another spoke of system difficulties when reporting a colleague: *"… they're* [incident forms] *put up all over the place for people to just look through … if you have a box to put them into that'll be great, because people wouldn't mind filling it in. You sign it and people look at you and think, 'What's she got against me?'."* Although concern was expressed over patient wellbeing and safety, this was not reflected as strongly as the preceding issues.

Affect

Affect refers to "the emotions a person feels at the thought of the behaviour".[16]

With regard to incident reporting, doctors experienced insecurity, distrust and anxiety over the use of incident data and the potential medicolegal implications of reporting incidents. *"Unless you have protected, confidential information, you don't get the facts,"* explained a consultant. Senior doctors felt

2 Topic guide for the focus groups

- What comes to mind when you hear the word "incident reporting"?
- What is the current reporting process in your organisation?
- Can you think of any positive things that have occurred as a result of completing an incident report? Can you think of any negative things?
- How would you rate the current reporting system?
- If you were in charge of the incident reporting system, what changes, if any, would you make?
- How many times a year, on average, do people in your position fill out incident reports?
- Why do people decide to complete an incident report?
- How do you think people feel when they complete an incident report?
- Based on your experience, how many times a year should people in your position fill out an incident report?
- What makes people in your position decide not to complete a report?
- Does the seriousness of the situation have any bearing on whether an incident report is made, or not?
- On the sheet, I have listed some of the obstacles to reporting.* Do you have any comments? Which of these do you regard as the really big issues? Are there any other obstacles?
- Would having a form with the option of not identifying the reporter make a difference?
- Is there anything else we should have discussed that we haven't touched on yet?

* List available from the authors on request.

3 Summary of suggested strategies to facilitate incident reporting, based on barriers identified by focus-group participants

Barriers to incident reporting	Suggested strategies
Lack of knowledge about the process and what constitutes an incident	• Education at orientation • Ongoing education and use of case studies to highlight reportable events at departmental forums • Ability to access a reference manual about what to report
"Nursing Form" by association	• Rename/redesign the form to make it more relevant to medical staff
Time constraints and complexity of reporting form	• Simplify the reporting process — one page being the optimal length • Option of quicker reporting processes (eg, telephone reporting, online submission)
Lack of feedback when report generated	• Risk-assessment tool to prioritise action for follow-up. Type and timing of feedback given dependent on severity of incident or degree of risk to the organisation. Staff informed of follow-up processes
Lack of legal privilege afforded to the reporting process	• Education to explain current legal privilege afforded through Australian federal legislation • Confidentiality guaranteed • Increased confidentiality and security of the reporting process to prevent access to information by unauthorised personnel
Culture of blame	• Option to report anonymously to an independent body, without fear of being identified and with the option to omit identifiers of either self and/or organisation • Education
No value	• Individual/group feedback of action taken

that it took courage to publicly disclose mistakes, while an RMO described feeling *"loss of face among peers, and, yeah, sometimes embarrassment"*.

Nurses expressed a similar range of emotions, including distrust and anxiety. As stated by one senior nurse: *"I find it a little intimidating. It's very scary if something happens. I don't feel happy, because I have to fill a form out and I think I feel a little frightened that I'd get blamed for it."* They experienced frustration with the present system, which provided little feedback or incentive to report. Nurses were embarrassed at making mistakes, but accepted the need for a reporting system. Others were relieved at having dealt with an incident. Junior nurses generally perceived the culture as encouraging blame and being punitive, and they lacked trust in the organisation's ability to provide support, while some senior nurses believed the organisation itself promoted secrecy as a defence against litigation.

Perceived consequences

Perceived consequences may be positive or negative, and are often dependent on previous experiences.[17]

Negative consequences: Doctors were suspicious and worried about a process they perceived as providing no guaranteed legal protection. They were wary of a reporting system which could be used to inform against doctors, and where doctors had no right of rebuttal; for example, a registrar described an incident where *"a medical registrar couldn't attend a code black [personal threat] and the nurse went ballistic and filled out the incident report as a way of emphasising how irritated she was, and I thought that it was a very inappropriate use."*

Junior and senior nurses' concerns were predominantly over issues of blame and punishment (eg, black marks on work records, job insecurity and threats to future employment). This was most evident among junior staff, some of whom feared bullying and harassment.

Positive consequences: All doctors envisaged benefits in a system providing prompt, relevant feedback from local and global information. The knowledge gained was expected to contribute to evidence-based medicine and positively influence their work practice and environment. In agreement with nurses, they believed incident reporting could be an effective means of making governing bodies aware of problems in the health system.

Nurses believed incident reporting could provide valuable information, increase awareness and contribute to positive change through improved work conditions and nursing care (eg, additional staff, workplace support and debriefing). Documentation of procedures also provided justification for restraining aggressive patients, and defence against patient complaints.

Motivation

Motivation refers to the ability to stimulate the interest of a person in an activity, and is closely linked to perceptions of positive consequences.[17]

Both medical and nursing participants made comments that a more effective and efficient incident reporting system without threat or blame, providing prompt, relevant feedback and driving improvements in health administration, would possibly motivate medical staff to report.

Senior medical staff commented on the lack of motivation to participate in a reporting process regarded as a waste of time and of little value, and rather jokingly suggested that monetary payment for reports generated might provide greater incentive for doing so.

Nurses were frustrated and annoyed by doctors' lack of motivation to report incidents. A junior nurse explained: *"I don't see why we have to chase them [doctors] up; they're a separate entity. They're lacking with [sic] discipline, and they're lazy . . . generally it's the Medical Officers that let the side down . . .".*

Facilitating conditions

These are objective environmental factors that "several observers can agree make an act easy to do".[17]

Doctors and nurses suggested the reporting process be simplified and made less time-consuming (< 2 minutes). Both wanted clearer definition of what constituted an adverse event or a near-miss, and to see some value in the process.

Registrars suggested that the reporting process be made more relevant to doctors and less threatening by renaming the form. Awareness and knowledge of the process needed to be increased, and protection from liability of the person and information guaranteed.

Nurses wanted a more efficient, egalitarian system that did not require additional input from doctors. They advocated education at orientation for both nurses and doctors. While most nurses supported

anonymous reporting systems as a positive means of addressing the issues and not the person, senior nurses voiced concern that this would limit their ability to adequately follow up incidents.

DISCUSSION

Our qualitative study has improved understanding of the attitudes of medical and nursing health professionals towards reporting incidents, and identified process disincentives to reporting within a context of cultural variation (Box 3). Understanding the culture of an organisation is critical to making sense of the behaviour observed in it,[20] and values, beliefs and assumptions form the core of organisational culture.[21] The focus-group commentary suggested a division of cultures, in which hierarchies may impede communication, particularly across professional groups. This is likely to be compounded by traditional concepts of medical and nursing roles.

The most obvious differences in reporting behaviour related to perceived consequences of reporting — doctors were concerned mostly with outside forces (eg, coroner's inquests, litigation), whereas nurses tended to be more defensive and to feel more threatened by the organisation's response to error. Other behavioural differences could be attributed to nurses having more directives to follow protocols, the influence of social modelling, and the notion of having to "cover themselves". In contrast, the medical culture promoted privacy, was less transparent, used fewer directives and demonstrated virtually non-existent social modelling in relation to reporting incidents. This supports other research showing that protocols govern nursing practice far more than that of doctors, whose culture emphasises professional autonomy, collegiality, self-regulation and organisationally opaque systems of accountability.[11]

A strength of our research is that it allowed candid contributions by participants in single specialty groups. A search of the medical literature showed no previous reports of similar qualitative studies relating to incident reporting in Australia. However, our study has a number of limitations. Although purposive sampling allowed involvement of users and non-users of incident reporting, the voluntary nature of participation provided potential for more motivated and opinionated people to attend than if random sampling had been used. Additionally, despite using a facilitator to encourage equal contributions and a voice for all participants, focus-group dynamics may favour the group norm and silence individual voices of dissent.[11] Finally, our study was limited to public hospitals, and our findings, although consistent across three hospitals, can not be generalised to other healthcare settings. Further research is needed to determine whether the views expressed are representative of those of other healthcare sectors.

Our study has identified, in an Australian context, that innovations to improve patient safety, such as incident reporting, require cultural change. A climate that does not foster disclosure and investigation of errors has been found to be pervasive in healthcare systems both locally[22] and overseas,[23] and is clearly detrimental to patients' best interests.

Cultural change is possible, even if it is a slow process. Further research is required to test whether facilitating conditions for incident reporting alters reporting behaviour. However, this in itself is unlikely to lead to any change without the support and involvement of top-level management in the promotion of a culture of safety.

COMPETING INTERESTS

None identified.

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