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NEW SOUTH WALES



CENTRE FOR CLINICAL GOVERNANCE RESEARCH

EVALUATION OF THE INCIDENT INFORMATION MANAGEMENT SYSTEM IN NEW SOUTH WALES: STUDY NUMBER 4



ANALYSIS OF THE SUCCESS OF THE
REACH OF IIMS WITHIN THE HEALTH
SYSTEM

The Centre for Clinical Governance Research in Health undertakes strategic research, evaluations and research-based projects of national and international standing with a core interest to investigate health sector issues of policy, culture, systems, governance and leadership.

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2. I. Travaglia, J.F. II. Hunter, C. III. Carroll, K. IV. Braithwaite, J. V. University of New South Wales. Centre for Clinical Governance Research in Health.

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1 ABBREVIATIONS AND DEFINITIONS

1.1 Abbreviations

AHS	Area Health Service
CCGR	Centre for Clinical Governance Research at University of NSW
CEC	Clinical Excellence Commission
CGU	Clinical Governance Unit
IIMS	Incident Information Management System
NSW Health	NSW Department of Health
PSCQP	Patient Safety and Clinical Quality Program
PHO	Public Health Organisation
PSI	Patient Safety International
QSB	Quality and Safety Branch, NSW Health
RCA	Root Cause Analysis
RIB	Reportable Incident Brief
ROI	Return on Investment
SAC	Severity Assessment Code
SIP	Safety Improvement Program
SIM	Strategic Information Management Branch, NSW Health

1.2 Definitions

Clinical Practice Improvement	A combination of tools, techniques, skills and attributes designed to enhance care inputs, structures, cultures, processes, outputs or outcomes.
Culture	The configuration of attitudes, values, beliefs, meanings, behaviours and practices which together can be seen to be definitive of 'what people are' or 'where people come from'. Culture can be seen as a 'state' or something people possess, while it appears more fruitful to regard it as performance and also a process.
Ethnography	A research technique used for describing what human beings do in selected settings, usually comprising 'participant observation', field notes, narrative accounts, interviews, and other qualitative research methods.
Evaluation	The systematic examination of a policy, program or project aimed at assessing its merit, value, worth, relevance or contribution.
Formative Evaluation	Evaluation conducted during a course of a policy's, program's or project's life.
Innovation	The rate, propensity, capacity and effectiveness in adopting new ideas, practices or behaviours.
Leximancer	A software package which identifies the key ideas, concepts and themes in text-based documents, allowing researchers to examine the concepts, and the relationships between them, in detail.
Organisational Culture	The collective set of relationships in organisations that differentiate one group from another in terms of dress, attitudes, values, behaviours, beliefs, language and shared meaning.
Summative Evaluation	Evaluation conducted at the end of a policy's, program's or project's life.
Triangulation	A multi-method research or evaluation design which adduces converging or diverging evidence drawn from pluralist sources to illuminate an object of inquiry.

2 EXECUTIVE SUMMARY

This report outlines the results of study 4 in the evaluation of NSW Health's Incident Information Management System (IIMS). This study examines the reach of IIMS within the health system, that is, the current depth and breadth of understanding of IIMS by employees of health services. We also looked at the processes in place for maintaining and developing levels of awareness. The researchers employed mixed methods, utilising a small walk around-survey, as well as focus groups, in-depth interviews and an ethnographic study. A quantitative analysis of the awareness of health workers is also dealt with in study 5, *Assessment of the satisfaction of IIMS users with the system*. This study should be read in conjunction with that document.

The study found that levels of awareness were high across Area Health Services (AHSs). There were some notable exceptions: hospitality staff, older staff members and staff members in facilities or units with managers who did not encourage reporting were considered to have lower levels of awareness. Medical practitioners were generally regarded, and regarded themselves, as having lower levels of awareness, and nurses and pharmacists had higher levels. Most notably, many of the assumed reasons for failing to notify incidents through IIMS did not seem to apply to the cohort studied in this report. Fear of litigation or retribution did not apparently affect reporting rates. The most important factors, apart from issues of time and general workload, were the need to: have professional concerns acknowledged; receive effective and timely feedback from IIMS and those associated with it; and be shown evidence of the value of IIMS to practitioners.

3 INTRODUCTION

3.1 Overview

The NSW Department of Health (NSW Health) commissioned the Centre for Clinical Governance Research (CCGR) at University of New South Wales to conduct a formal evaluation of its Incident Information Management System (IIMS) as part of a contract to identify and evaluate a Knowledge Management program for Quality and Safety Branch. NSW Health needed the evaluation to assess the success of the implementation and effects of the program against the project objectives and key expected benefits.

The objective of IIMS at the time the evaluation was commissioned was to provide an electronic system that:

- Recorded all healthcare incidents
- Assisted managers through a workflow module to manage the incidents that occurred in their area
- Recorded the results of reviews or investigations of incidents
- Provided reports on all incidents that had been recorded in the system.

The evaluation aims to utilise the multi-method, triangulated approach employed in the *Evaluation of the Safety Improvement Program*, conducted by CCGR for the Clinical Excellence Commission (CEC) and NSW Health in 2004-2005. The IIMS evaluation was agreed to be a synthesis of 10 inter-related studies (Table 1). This evaluation was conducted by A/Professor Jeffrey Braithwaite, Ms Jo Travaglia, Conjoint A/Professor Mary T. Westbrook, Dr Christine Jorm, Dr Cynthia Hunter, Ms Katherine Carroll, A/Professor Rick Iedema and Ms Mahalakshmi Ekambareshwar.

Table 1: Evaluation studies

STUDY	TITLE	COMMENTS, ACTIONS AND TIMEFRAMES	LED BY/TEAM
Study #1	Literature review	<ul style="list-style-type: none"> ▪ National and international peer reviewed and professional journals ▪ Databases ▪ Websites ▪ Relevant industry and research bodies 	Christine Jorm, Jeffrey Braithwaite, Jo Travaglia
Study #2	Review of the education and training program	<ul style="list-style-type: none"> ▪ Prospective analysis of IIMS' face to face and online training ▪ Retrospective analysis of IIMS' pilot training program evaluation forms 	Mahalakshmi Ekambareshwar, Jo Travaglia, Jeffrey Braithwaite, Mary Westbrook
Study #3	Review of the project implementation process for IIMS	<ul style="list-style-type: none"> ▪ Interviews with key stakeholders ▪ Review of project implementation plan ▪ Questionnaire 	Jeffrey Braithwaite, Jo Travaglia

Study #4	Analysis of the success of the “reach” of IIMS within the health system	<ul style="list-style-type: none"> ▪ Interviews ▪ Focus groups ▪ Walk around survey 	Jo Travaglia, Jeffrey Braithwaite, Cynthia Hunter, Katherine Carroll
Study #5	Assessment of the satisfaction of IIMS users with the system	<ul style="list-style-type: none"> ▪ Questionnaire ▪ Comparison with international and industry programs 	Mary Westbrook, Jo Travaglia, Jeffrey Braithwaite
Study #6	Map of the facility processes involved in implementing IIMS and handling incidents	<ul style="list-style-type: none"> ▪ Interviews with key stakeholders ▪ Focus group of key stakeholders 	Jo Travaglia, Christine Jorm, Jeffrey Braithwaite, Mary Westbrook
Study #7	Examination of incident reports and management responses	<ul style="list-style-type: none"> ▪ Comparison of IIMS with other reporting mechanisms pre- and post- IIMS ▪ Comparison with international approaches 	Jo Travaglia, Jeffrey Braithwaite, Mary Westbrook
Study #8	Review of the dissemination of lessons learned	<ul style="list-style-type: none"> ▪ Questionnaire ▪ Interviews with key stakeholders 	Jo Travaglia, Jeffrey Braithwaite, Mary Westbrook
Study #9	Assessment of the value and use of IIMS to the CEC	<ul style="list-style-type: none"> ▪ Interviews with CEC staff 	Jeffrey Braithwaite, Jo Travaglia
Study #10	Examination of the reporting processes, including change in management of RIBS post IIMS	<ul style="list-style-type: none"> ▪ NSW Health data ▪ Interviews with Quality and Safety Branch staff 	Jo Travaglia, Jeffrey Braithwaite

Having presented the results of study 3, the *Review of the project implementation process for IIMS*, we turn to the results of study 4. This study was the *Analysis of the success of the reach of IIMS within the health system*. This report documents the outcomes of this study. This component of the evaluation was conducted by Ms Jo Travaglia, Dr Cynthia Hunter, Ms Katherine Carroll and A/Professor Jeffrey Braithwaite.

3.2 About this report

The next section, section 4, *Methods*, documents the way we went about conducting the interviews, focus groups and the walk around strategy. Section 5 presents our findings, and section 6 discusses the findings in relation to the key research questions. The conclusion, section 7, briefly outlines the implications of these findings for the evaluation of IIMS as a whole.

4 METHODS

In this study we employed four methods to sample the level of awareness of IIMS across the NSW health system, and the processes utilised for maintaining and extending that level of awareness. A qualitative analysis of certain aspects of the reach of IIMS is also dealt with in study 5, *Assessment of satisfaction of IIMS users with the system*, and this study should be read in conjunction with that document. In study 4 we asked the central questions: how well is IIMS understood by the staff of health services and how is that level of awareness being facilitated?

Firstly, we interviewed 15 key stakeholders in-depth, drawn from AHSs across the state. These interviews were conducted in May and June, 2006. Each participant was a senior AHS staff member with responsibility for IIMS and its implementation. To preserve anonymity further details of their demographic characteristics are not reported. Interviews lasted approximately one hour.

Secondly, we conducted focus groups with medical practitioners, nursing staff and pharmacists. These were conducted in various locations, lasted about an hour, and were based on semi-structured questions about IIMS and IIMS reporting. Four medical practitioners, four nursing staff and eight pharmacists were present at the groups. Thirdly, we conducted brief walk around surveys of hospital staff in three different hospitals in March and May 2006. The survey was based on similar questionnaires in the public domain.¹⁻⁶ The survey included questions about whether individuals had reported, what type of reporting system was in place, and what types of incidents had been reported and why. The survey also included a 19 question Likert scale on reasons for not reporting. Finally, we conducted an in-depth ethnographic study of the use of IIMS in an individual hospital. This hospital is de-identified to maintain confidentiality.

5 FINDINGS

Awareness and depth of understanding of incident monitoring systems on levels of reporting are known to vary across professions and service types.^{7 8} Reporting is not solely dependent on awareness – many individuals are aware of reporting structures, but choose not to report for fear of legal or personal reprisals or resistance to “informing” on colleagues, amongst other issues.^{5 9} The IIMS implementation project was introduced with a strong focus on awareness and skills training for IIMS. Part of that project included the development of training materials including a CD/DVD, a training video and an online training program. An IIMS training manual was developed for AHS service trainers. Our review of the formal aspects of IIMS training is addressed in study 2 of this evaluation series.

In this study, we take a sounding of the overall levels of awareness and understanding about IIMS at AHS, facility, professional and individual levels and relate this to the variety of awareness-raising activities conducted at those levels. While this study is meant to address awareness issues within AHSs and health service facilities, it is important to note that both the CEC and NSW Health continue to be involved in awareness-raising sessions, particularly for senior staff of AHS and peak interest groups such as the Greater Metropolitan Clinical Taskforces (GMCT). Thus this is formative rather than summative evaluation, as awareness-raising is an ongoing strategy.

5.1 Awareness at AHS level

All 15 AHS staff interviewed agreed that awareness and understanding of IIMS at an AHS level was high. Estimates varied, but most indicated that there was a 90 to 100% level of awareness about IIMS at senior staff levels throughout health services. This was attributed to two factors: reporting requirements, in particular NSW Health key performance indicators about IIMS, root cause analyses (RCAs) and reportable incident briefs (RIBs) and the ongoing process of IIMS training and awareness activities.

Awareness activities at AHS level are generally centred on, and are considered the responsibility of, Clinical Governance Units. Interviewees indicated that IIMS data were regularly presented at AHS quality and safety committees.

Across AHSs levels of awareness and understanding of IIMS were considered very high in Ambulance and Justice Health. This was attributed to the culture of the services, the types of risks and incidents faced, and the professional backgrounds of staff. Justice Health, for example, is almost entirely staffed by nurses, and we know from various studies that nurses' reporting rates are high compared with other groups. AHSs in which pre-existing incident reporting systems were in place might also, logically, experience higher levels of awareness and reporting with IIMS.

Significant variations in both awareness and reporting rates were reported within AHSs. One explanation presented for this was that in the amalgamation of health services, different systems and cultures of incident reporting continue to affect overall reporting rates. In rural

AHSs the higher median age of staff, difficulties in attracting IIMS and Patient Safety Managers and Officers, and the age and availability of computers were all said to contribute to differences in awareness and reporting rates.

5.2 Awareness at facility level

A sounding of awareness at facility level was taken in two ways. The managers interviewed, as the persons primarily responsible for IIMS awareness, were asked about general awareness and understanding of staff across the AHS. Secondly, walk around surveys were conducted in three case study areas, two in metropolitan Sydney and one in a regional city.

Interviews with managers

Awareness levels were based on managers' knowledge of reporting rates and interactions with staff and managers. Awareness and understanding of IIMS at facility level varied greatly. Variations were seen to occur across professional groups and service types. Recency of employment, age, familiarity with and access to computers were also considered important factors in awareness. Professional staff were seen as having a significantly higher level of awareness to general staff, with nurses, allied health and medical practitioners ranked in order of awareness from highest to lowest.

Concern was expressed about awareness and use of IIMS by general staff, in particular those in hospitality groups. An inverse effect was seen as occurring. Professional staff were seen as having very high overall rates of reporting on Occupational Health and Safety Issues (OH&S) because of fear of later complications. General staff, however, were seen as having low levels of both awareness and reporting, despite their involvement in, and being witness to, both OH&S and clinical incidents. Responses in the comments section in the IIMS survey reported in study 5 gave some indication why this might be an issue.

Walk around survey

Three case study areas were chosen for a small walk around survey. Over three days, researchers approached hospital staff in the three hospitals and asked them to complete a two page survey form (see Appendix 1). The survey was intended to be a sounding at a facility level of general levels of awareness. No distinction was made between clinical and general staff. A total of 30 individuals responded.

Of the 30 respondents, six (20%) were from AHS 1, 17 (57%) from AHS 2, and seven (23%) from AHS 3. Only one respondent did not know if the hospital had an incident reporting system. The remainder did (96% recognition). Respondents were asked to describe how the system operates. The results are presented in Table 2.

Table 2: Descriptions of incident reporting systems from a sample of 30 staff

DESCRIPTION	NUMBER AND PERCENTAGE (N=30)
Computer based reporting	16 (53%)
IIMS mentioned by name	6 (20%)

Reporting process described (without mention of computer program)	2 (7%)
No/unable to provide a description	2 (7%)
No response	4 (13%)

A total of 73% of the respondents was able to identify IIMS either by name, or that reporting occurred via a computerised program. Only 2 respondents (7%) were unable to describe a system at all. Of the participants who responded (n=29), 17 (59%) had completed an incident form at some point. Of these respondents, 16 indicated the type of form they had used, with 88% (n=14) having used only the online IIMS program and 2 (12%) having used a paper form.

Participants were asked about the types of incidents they had reported, and the reasons for reporting. Incidents are presented in Table 3 and reasons in Table 4.

Table 3: Types of incidents reported and reasons for reporting

TYPES OF INCIDENTS	NUMBER (MULTIPLE RESPONSES POSSIBLE)
Medication errors	13
Patient care	10
Clinical or medical (IV burns, incorrect strapping)	4
Falls or injuries to staff	5
Clinical practice	2
Equipment problems or faulty products	2
Patient falls	2
Near misses	1
Complaints	1
Documentation	1
Workload	1
Wrong patient	1
Visitor injury	1

The types of incidents reported follow the general of patterns of incident reporting in many modern health services internationally. While the ranking may differ across samples or jurisdiction (with patient falls often ranking highly with medications as the most commonly reported incident), the general pattern: medications, patient care, falls, equipment issues, and so on recurr.^{10 11 12} The reasons participants gave for reporting are shown in Table 4.

Table 4: Reasons for reporting

REASONS FOR REPORTING	NUMBER (MULTIPLE RESPONSES POSSIBLE)
Prevention of future errors/learning from errors	8
Role/duty of care	5
Concern for patient safety	3
Concern for staff	2

Legal or policy issues	2
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While the sample size is small and thus it is not possible to generalise, it should be noted that reasons for reporting seem to highlight an improvement, rather than punitive, perspective to incident monitoring. Prevention of errors and learning from them head the list, along with role appropriate behaviours and concerns for patient safety. Personal concerns are the last two reasons for reporting. This type of awareness fits with a systems perspective on patient safety, and the use of IIMS as a tool for the prevention of future incidents through the learning and development of staff.¹³

There were 22 participants in the sample who had not completed an IIMS report. The final set of questions captured the reasons why these participants had not reported, despite their awareness of IIMS.

Table 5: Reasons for not reporting incidents (n=22)

I DON'T REPORT INCIDENTS BECAUSE:	STRONGLY AGREE	AGREE	NEITHER AGREE NOR DISAGREE	DIS-AGREE	STRONGLY DIS-AGREE
I am worried about disciplinary action (n=22)	0	0	2 (9%)	8 (36%)	12 (55%)
When the ward is busy I forget to make a report (n=20)	0	8 (40%)	1(5%)	7 (35%)	4 (20%)
I am worried about litigation (n=22)	0	1 (4.5%)	1 (4.5%)	8 (36%)	12 (55%)
The incident form takes too long to fill out and I just don't have time (n=22)	0	7 (32%)	5 (23%)	6 (27%)	4 (18%)
My co-workers may be unsupportive (n=22)	0	1 (4.5%)	3 (14%)	8 (36%)	10 (45.5%)
I don't know whose responsibility it is to make a report (n=22)	0	3 (14%)	3 (14%)	7 (32%)	9 (40%)
I don't want the case discussed in meetings (n=22)	0	0	0	11 (50%)	11(50%)
I don't feel confident that the form is anonymous (n=22)	0	2 (9%)	3 (14%)	6 (27%)	11(50%)
Adverse incident reporting is unlikely to lead to system changes that will improve the quality of care (N=22)	0	3 (14%)	2 (9%)	12 (55%)	5 (23%)
I don't want to get into trouble (N=22)	0	0	1(4.5%)	11(50%)	10 (45.5%)
Junior staff are often blamed unfairly for adverse incidents (n=21)	0	3 (14%)	1(5%)	8 (38%)	9 (43%)
When the incident does not eventuate or a correction was made (a near miss) then I don't see any point in reporting it (n=22)	0	1(4.5%)	1(4.5%)	12 (55%)	8 (36%)
If I report something, I never get any feedback on what action is	2 (9%)	5 (24%)	5 (24%)	4 (19%)	5 (24%)

taken(n=21)					
The IIMS form is too complicated and requires too much detail (n=21)	2 (9%)	4 (19%)	5 (24%)	4 (19%)	6 (29%)
I feel that if I discuss the case with the person involved nothing else needs to be done (n=22)	0	1 (4%)	7 (32%)	7(32%)	7 (32%)
I worry about who else is privy to the information that I disclose (n=22)	0	3 (14%)	1 (4.5%)	8 (36%)	10 (45.5%)
The incident was too trivial (n=22)	2 (9%)	2 (9%)	6 (27%)	7 (32%)	5 (23%)
It's not my responsibility to report somebody else's mistakes (n=21)	0	0	1(5%)	9 (43%)	11(52%)
Even if I don't give my details I'm sure that they'll track me down (n=22)	0	0	3 (14%)	8(36%)	11(50%)

The top five reasons for not reporting (based on strongly agree/agree) were: when the ward is busy I forget to make a report (40%); if I report something, I never get any feedback on what action is taken (35%); the incident form takes too long to fill out (32%); and the IIMS form is too complicated and requires too much detail (28%). These are recurring concerns in other studies in this evaluation series. They demonstrate levels of reflexivity and awareness about the process – participants are not only aware of their responsibility to report, and why they do not do it (business, time, detail) but also what their expectations are (feedback).

All respondents (100%) disagreed or disagreed strongly with the statement that they did not want their case discussed in meetings. Respondents also disagreed or disagreed strongly with: not wanting to get into trouble (95.5%); it is not my responsibility to report someone else's mistakes (95%); I am worried about disciplinary action (91%); that they don't see any point in reporting eg near misses (91%). Respondents disagreed less with: I feel that if I discuss the case with the person involved nothing else needs to be done (64%) and; the incident was too trivial (55%).

The responses in Table 5 suggest respondents had good levels of understanding of the purposes of IIMS. They run counter to the literature which argues that health services staff do not report because they fear litigation or disciplinary action, but they support the view that the complexity of reporting, the IIMS system itself, the time taken to notify and the need for feedback are important factors.^{9 14}

5.3 Awareness at professional level

Managers universally nominated nurses as the most frequent notifiers, and as having the most developed understanding of the use of the IIMS system. This was supported by nurses' high reporting rates. Estimates varied, but most respondents thought between 60-90% of nurses had a good understanding of IIMS and its functions.

Allied health professionals were also considered to have a good understanding of IIMS (with similar, if slightly lower levels of awareness). Factors differentiated allied health staff from nursing on incident reporting. For instance, overall rates of reporting of allied health staff were lower. Unlike clinicians, however, this was not attributed to lack of awareness, understanding or commitment, but rather to a lack of incidents in their domains of activity. Two reasons were posited for this lower rate of incidents. The first was that apart from “high risk” areas such as mental health and physiotherapy allied health work was less likely to attract significant risks or incidents. Secondly, many of the incidents that did involve allied health were seen to occur in wards, and were therefore as likely to be reported by nurses as by allied health professionals.

Where pharmacists were identified, they were seen as having very high levels of awareness of IIMS, at similar levels to nurses. Pharmacists were seen to be in a special category as IIMS notifiers because of their knowledge of medical errors and incidents.

Focus groups

The findings from the managers’ interviews were supported by the focus groups. The main questions centred on participants’ professional experiences and responses to IIMS as a whole; their experiences with the IIMS system: their perceptions of issues or barriers relating to reporting; and feedback of IIMS data. The perceptions of professionals were consistent both within and across focus groups. Nurses and pharmacists were considered to have the best level of awareness and knowledge of IIMS.

Medical practitioners’ focus groups

Medical practitioners were perceived both by themselves, and other health professionals, as having a low level of use of IIMS. All the medical practitioners in the focus group had heard of IIMS and all had received some form of introduction or training to the program. Two of the practitioners were actively involved in using the system: one as a way of researching falls and the second to review medication errors. None had ever used IIMS to notify an incident.

The major reason identified by medical practitioners for not notifying was that they saw little output from IIMS. They indicated they were not averse to notifying; they had no concerns about confidentiality or security. Three additional issues were identified: the need for accountability of staff, as well as monitoring of incidents; the need for relevant and useful feedback about IIMS, including assistance in notifying and obtaining reports; and the use of IIMS as a way of addressing professional differences, both within and across professions.

Nursing focus groups

As predicted from the managers’ interviews, the nursing focus group displayed high levels of awareness about IIMS, the notification process and reporting processes. The group was atypical in one sense: the members were all from a unit which had a long-standing culture of reporting, and of using IIMS data to design quality improvement strategies and programs. Reporting was seen as essential to both quality improvement and professional development.

Data from IIMS was presented regularly to inform the team about incidents and near misses. Trends were tracked at a team, issue and individual level. The Clinical Nurse Consultant and the Nurse Unit Manager worked closely to ensure high rates of reporting and provide feedback on reports that were made. Low levels of SAC1 incidents in the institution meant

that staff spent more time on near misses and potential hazards. This was seen as a positive measure, focusing on prevention rather than mediation of incidents.

It was noted that although nurses had high reporting rates compared to other health professionals, it should not be assumed that all nurses reported. Variations in reporting culture, ascribed primarily to the attitudes of managers and senior staff, were said to impinge directly on levels of awareness and support of IIMS.

Pharmacists' focus groups

Pharmacists expressed interest in two types of issue relating to IIMS. Firstly, they notified of incidents in which they or their colleagues were involved, as is the case for other health professional groups. Secondly, they were interested in medication errors, which were amongst the most commonly reported incidents. Those errors were most often reported by nursing and other staff, but were of professional relevance to pharmacists.

Awareness of IIMS across the profession was considered very high. Along with this awareness, however, came a level of frustration. Many hospital pharmacies had their own incident monitoring systems before the institutionalisation of IIMS. As they were tailored to the needs of pharmacists, they were considered by many to be superior to IIMS. The shift to IIMS, along with the associated software problems, and increased demands on them in their role in reviewing medications errors, have affected many pharmacists' attitudes towards the system. One issue of professional concern must be noted: the lack of a "pharmacist" category in IIMS was considered to be short-sighted, even disrespectful, given the strong involvement of pharmacists in incident monitoring and management processes. The absence of this category in the current program is a result of the NSW Data Set rather than the software, as the category is available in AIMS, the parent IIMS software.

5.4 Awareness of individuals

In addition to the analysis of awareness of IIMS through the survey in study 5, a focused ethnographic study was conducted to examine the awareness and understanding of IIMS at an individual level. One of the researchers, an anthropologist, has spent six months "embedded" within two specialist units for a number of days each week. During May 2006 the researcher observed and recorded, with their approval, staff interactions with IIMS.

The general view within the unit was that incidents should be reported regularly and this is what the researcher witnessed. The researcher observed three cases being reported; one during night shift and two during day shift. The complexity and "unwieldiness" of the form meant that two of the three notifiers needed prompting by senior staff in order to complete the categories.

Several staff members complained of not ever having received feedback from their reporting. Others thought it was a helpful system which needed some upgrading to make it easier to use. A minor point, but of interest, was that several people were not sure what the researcher meant when she said 'IIMS'. On the computer screen the system comes under a "safety" icon, and the confusion was compounded by the previous use of another incident reporting system

in that facility with a similar name.

The researcher's observations led her to believe that nursing staff who work in specialist units are much more likely to be exposed to the critical effects on patients of adverse events than allied health professionals whose contact with wards and inpatients is limited. There is a correlation between the intensity of focus required in critical nursing care, level and amount of technology in use and vigilance compared with the relatively low levels and use of technology in outpatient care.

Appendix 2 presents two transcriptions of interviews with two senior doctors, and brings out their perspectives on the IIMS system. They are mindful of the professional and political consequences for staff of reporting serious incidents and they understand the early development of the system at the hospital. They reflect an understanding of the pitfalls such as the lack of feedback, as well as ethical and other issues. At the same time they acknowledge that hospitals need systems in place to report serious errors.

6 DISCUSSION

The need for awareness about the function, use and purpose of incident reporting systems has been cited as one of the major factors affecting their use by health professionals. A recent Australian study found that while most doctors and nurses were aware of incident monitoring systems there were differences in their understanding of the use and value of those systems. Nurses were more likely than doctors to know how to access a report, to have completed a report, and to know what to do with a report.²

Evidence from the interviews, focus groups and ethnographic observation in this study supports that conclusion. This study suggests, however, that some of the traditional reasons for reluctance to notify, such as fear of litigation or disciplinary action, do not appear to be an issue with IIMS. A major issue for all groups is the need to understand the outputs, and even more importantly the outcomes, of the notification process. People want feedback on the data they submit. There is also a desire for recognition, both within the software, and in the incident reporting program in general, of the needs and contribution of different professionals to IIMS.

A significant amount of activity has and is going on to train people to use IIMS (see Study 2). The results of this study would indicate that that awareness-raising is working in general, although there are areas of concern, particularly with regard to the use of IIMS by hospitality staff. The next step in the IIMS process lies in creating an increased level of understanding about the value of the IIMS system, and providing feedback to participants on a regular basis. Three aspects of IIMS are highlighted by this study.

Firstly, an interesting aspect of this study was that within the general discussions about IIMS awareness a number of professional groups were notable by their absence. Dentists, public health and community health workers (apart from mental health), amongst others, were not mentioned in relation to incident reporting or monitoring. These groups were not actively identified by the researcher in the interview process, so conclusions drawn from this absence in the general dialogue about incidents must be at best, tentative. However, it is important to note that the more generally held assumption that certain groups (apart from medical practitioners) do not notify because they are not generally involved in, or witness incidents, needs to be tested.

Secondly, the “patchy” nature of awareness of IIMS needs to be explored in greater detail. Some of these issues are taken up in study 5, but a more in-depth analysis of the impact, for example, of managers’ attitudes and workplace culture on rates of reporting in an Australian context, could significantly contribute to better understanding and improved future reporting rates of IIMS.

Finally the issue of translation of awareness into understanding requires immediate attention. This is important for two reasons. The first is that without this translation, IIMS might be used as a notification database, rather than a quality improvement tool. Secondly, IIMS has been introduced at a time of significant change and anxiety in the health service. At the moment awareness is high, but as this, and other studies in this evaluation show, so are levels of frustration with the software. In order to build a culture where IIMS is an integral part of safety and quality improvement, the value of IIMS and its responsiveness to the needs of health

professionals must be addressed. Otherwise, there is a risk that what are essentially positive attitudes towards the program could become hardened against it.

7 CONCLUSION

Awareness of IIMS is high across the system as a whole, but this awareness is not evenly dispersed, nor has it been successfully converted into widespread understanding of the value of IIMS. Hospitality staff, older staff members and staff members in facilities or units with managers who did not encourage reporting were considered to have lower levels of awareness. Medical practitioners were generally regarded, and regarded themselves, as having lower levels of awareness, and nurses and pharmacists as having high levels.

Most notably, many of the “traditional” reasons for not notifying did not seem to apply to the cohort studied in this report. Fear of litigation or retribution did not affect rates. The most important factors, apart from issues of time and general workload were the need to: have professional concerns acknowledged; receive effective and timely feedback from IIMS and those associated with it; and be shown evidence of the value of IIMS to practitioners.

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9 APPENDIX

9.1 Walk around survey form

Date:	Location:
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1. Does this hospital have an incident reporting system?


Yes No Don't know

2. Can you tell me in a few words how it operates?

3. Have you ever filled in an incident form?

Yes No

If **yes**, go to question 4. If **no**, go to the questions on the back of this page. 



4. For the incidents that you report, do you:

- a) use only a paper form
- b) use only the IIMS online program
- c) use both
- d) use neither

5. What type or types of incidents have you reported?

6. What made you report these incidents?

7. If you have never reported an incident, can you tell us why?

8. Can you please complete the questions on the back of this page?

Thank you

We would like your opinions on the following statements for each statement below circle a number from the scale to indicate how much you agree or disagree

I don't report incidents because:	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
I am worried about disciplinary action	1	2	3	4	5
When the ward is busy I forget to make a report	1	2	3	4	5
I am worried about litigation	1	2	3	4	5
The incident form takes too long to fill out and I just don't have time	1	2	3	4	5
My co-workers may be unsupportive	1	2	3	4	5
I don't know whose responsibility it is to make a report	1	2	3	4	5
I don't want the case discussed in meetings	1	2	3	4	5
I don't feel confident that the form is anonymous	1	2	3	4	5
Adverse incident reporting is unlikely to lead to system changes that will improve the quality of care	1	2	3	4	5
I don't want to get into trouble	1	2	3	4	5
Junior staff are often blamed unfairly for adverse incidents	1	2	3	4	5
When the incident does not eventuate or a correction was made (a near miss) then I don't see any point in reporting it	1	2	3	4	5
If I report something, I never get any feedback on what action is taken	1	2	3	4	5
The IIMS form is too complicated and requires too much detail	1	2	3	4	5
I feel that if I discuss the case with the person involved nothing else needs to be done	1	2	3	4	5
I worry about who else is privy to the information that I disclose	1	2	3	4	5
The incident was too trivial	1	2	3	4	5
It's not my responsibility to report somebody else's mistakes	1	2	3	4	5
Even if I don't give my details I'm sure that they'll track me down	1	2	3	4	5

Please give any other comments/reason(s) for not reporting incidents

Thank you for your contribution to this evaluation

9.2 Interview accounts of individuals' awareness of IIMS

Medical Staff Member of specialist unit one

Staff Member (SM): when I saw the word IIMS I went ugh!

Researcher (R): yes, that is an issue. I just wanted to know what you thought about IIMS and how appropriate you think it is, whether nurses use it enough or whether the registrars use it enough just a general outline of what you think of IIMS.

SM: I think that I was pleased with the idea at the beginning, in fact we've practiced it ourselves we are very forthcoming in this unit through our practice of saying if something goes wrong, and document it. But then along comes a system which wants to do the right thing but ended up being this very arduous, non helpful system where you can't just write what's happened, you have to fit it into categories and the categories are made for adult – problems. They are not made for [our patients]. What happens on our ward doesn't fit into the [general] categories. It becomes you are trying to put things into a box where it's not meant to go into. So it becomes meaningless, in my opinion. Also we ended up overusing it for trivial things. So about half of them, at least in the beginning were things that I would have thought are not even an incident. A bit of elastoplast got on the skin and there was a bit of redness afterwards which disappeared a day later. Now that's not an incident, you know. Whereas the really major issues were not being documented.

R: why don't you think they were being documented?

SM: because they are too complex to be put in, say for instance the fact that one day we had 35 [patients] on the emergency list because they were shutting down theatres. Now when we do that then it means the major incident when a [person] might get their theatre cancelled, or a real major problem happens with one of our colleagues doesn't get onto the system.

We were documenting trivial things. There are some important things that get documented for instance, burns from some drugs that were causing tissue damage and scarring, they were very important. It was a mixture of the inane and the very important things, and then avoidance of huge issues. The hospital is aware of it, so it is being modified. The fact that it takes so much time means that most of the [doctors] don't use it.

R: right.

SM: We're too busy. We were happy in the past of putting a note in the charts speaking to the [patients], sorting it out. We're not going to sit there for ½ hour documenting something. It's unhelpful, you can't print out from it, and you can't even look and see what you've done. It goes in anonymously. I think when things go in anonymously too, they're not used properly. The Notifier should be identified as should the patient. Why is it anonymous, I don't get that?

R: what about if they are reporting about another clinician though?

SM: that's different. No that's different, I agree. But that could go in a separate document to the head of the hospital. If there is a major concern about a person's practice there are avenues for that.

R: who collects them? who reads them? Who does something about them?

SM: what's happening is that the nursing staff has taken that over. We've been talking recently about who should look at it. We are probably going to go back to looking at it as a unit, as a management group so the nurses and the [doctors]. It's still in development. It's been a relief for me personally that the nursing staff is beginning to see the issues with it that you saw.

R: well that might be a learning process ... How long has it been in place?

SM: it started last year. There were other forms of it. There have always been reporting. And the bits of paper were actually more useful you could just pull out a form and fill it in. you weren't confined by these categories what everybody wants to categorize things ...

R: everything, I know and then it gets set in concrete. And the whole process or issue can lose its meaning.

SM: exactly that's my problem with it. And also there is a lot of control about what actually ends up going straight to the DOH

R: who has that control?

SM: the hospital.

R: Right. so things that you might want to see go through get up there ... don't? or?

SM: No, I haven't had that impression but I am always suspicious when there are barriers to things. I think our hospital is actually pretty good about being upfront. We've had this service improvement unit which is very good ...because ...

R: the one that X's been involved in do you mean?

SM: no, the service improvement unit where Y, (questioning demeanour) he's very open, his attitude is: We should look into things, parents need to know that's the way we see it. It's a system that needs improving.

R: right but it's only been around a little while has it?

SM: Yes, but I mean it's been there forever in another form.

R: Yes, of course. I have got some forms here I that I was going to ask some of the nurses to fill out, if they would. Somebody else in the centre I work in is trying to do something about this. If you're happy to fill it out that would be great too. They just want good feedback as to whether it is being used or not.

SM: IS FILLING OUT THE FORM

R: do you think a lot of the nurses use it?

SM: I think you'll find that it's the same people using it

R: so if I go to the clinical coordinators they'll know

SM: I think they'd be the people who would know.

R: yeah, OK.

SM: STILL FILLING IN FORM audible comments.

SM: shall I just put unwieldy, doesn't suit paediatric system. Categories not helpful. Oh good, I am glad someone is looking into the system I mean, we realize it's got teething problems. The idea's great.

R: great, thank you.

SM: I'm delighted. We stopped doing it out of sheer annoyance. It was a shame. I think I was one of the main culprits of putting the nurses off doing it. And now we've come full circle It is of course a requirement.

Medical staff member of specialist unit two

Researcher (R): It's incident information – it's IIMS – have a look – Incident Information Management System. Do you use it?

Medical Staff Member (SM): No.

R: Why don't you use it?

SM: Maybe it's the software that's called IIMS; I think it's even changed the name. I'd use this for a SAC1 or SAC2. I'm not going to use it for all this other stuff – why, because I don't have enough hours in the day, because I don't think anyone looks at the data, I know no one looks at the data in fact, it's not even whether they do or they don't, I know that they don't. They only look at SAC1 and SAC2, and SAC1 and SAC2 are important for the hospital in terms of their safety profile with the minister. So I know why they do that and I don't think that's unreasonable. But they happen so rarely and they're major, major?? operated on type of thing – the stuff that really happens frequently is SAC4, that sort of stuff. In the end, it's all very nice to put it in there but if you don't do anything with it I think that's almost worse. I think it's worse to be anal and put it in there and then not actually act on it. In fact I think you might be liable. That's part of it – I think there is a liability. I'm sure this would be with other people too – if something has happened and you put it in there and don't do anything about it and somehow – God knows how, freedom of information, lawyers dig it up – then I think you're stuffed ... but all the little tiny things that happen all the time – you know, I do what I can, but what about pharmacy stuffing up on Tuesday morning?

R: Absolutely, yes, but you didn't report that...

SM: Didn't report it. What are we going to do about it? Tell pharmacy to employ more senior staff. It's just out there, it's never going to get fixed, so if I report it and there's some problem, then, you start to get a bit pragmatic about it and you know what you can probably fix and you know what you probably can't fix. That's my guess...

R: Staff specialists will say who has time as a staff specialist to sit down for half an hour and wade through those forms...

SM: Absolutely. Do you think I could have done that on Tuesday morning? (laughing)

R: Exactly. One person has said the categories [don't fit the patient profile of this service]...

SM: Yes, it's a hopeless form.

R: What I was getting around to with this is that X told me they have a system or had a system similar to here where things were sort of in-house and they got dealt with in-house and things moved on from there. Then they were told they had to use this and it's a pain in the bum, but because of all the reasons we've mentioned now and others as well...

SM: This never works because you're collecting data for someone else. There's no ownership. When you don't have ownership in the health system and people are overworked and all the rest of it, they do not do it. It's guaranteed not to happen.

R: Have they ever been to an in-service meeting?

SS: No – but they don't even look at it. They've got four people or something; they can barely do the SAC1. So that's probably never going to happen. They want the individual departments to own it but they're not resourced properly to do this, it's a fulltime job to do this for a department like [this]. We've got OH&S people they walk around the corridors and there are things on the floor. They should be doing this. I'm not going to go there, it's a whole leap – I mean, eventually I might, but ... that's probably what I think about it.

What they did in the States in a few units – I've got a few publications – to try and actually improve use of this sort of system, is that they give all the staff hand-held devices. A lot of the States now are completely paperless, people walk around with those tablets sort of thing, like in intensive cares, and what they do is actually put the software on that, so as soon as something happens it's documented, it only takes one or two minutes, there's a whole drop-down box and bang, bang, bang, and because you're doing it there the day and the date and the person and all of that is automatically there. So really all you're writing is the comment box – cannula fell out, [patient] bled, yadda yadda yadda. At the end of the week or two weeks there is some person who actually sits down and looks at it all and tries to pick a pattern and report, as I said – ten cannulas fallen out this week – and then they might actually go and talk to that person.

R: So with a system like this, it still ends up being – because it's not working very well, whether it will ever work very well, who knows...

SS: If you talk to the service improvement unit about it...