



THE UNIVERSITY OF
NEW SOUTH WALES



CENTRE FOR CLINICAL GOVERNANCE RESEARCH

EVALUATION OF THE INCIDENT INFORMATION MANAGEMENT SYSTEM IN NEW SOUTH WALES: STUDY NUMBER 7



EXAMINATION OF INCIDENT REPORTS AND
MANAGEMENT RESPONSES

***The Centre for Clinical Governance Research in Health
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2. I. Travaglia, J.F. II. Braithwaite, J. III. 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 7 in the evaluation of NSW Health's Incident Information Management System (IIMS). This study examines the questions: how does IIMS compare to other international methods of data collection? What are current perceptions about the quality, reliability and comprehensiveness of IIMS data? What are the current patterns of reporting and reporting to incidents? What metrics are being conducted?

Five methods were employed to address these questions. Firstly, we interviewed the Directors of Clinical Governance from nine Area Health Services (AHS). Secondly we interviewed 15 key stakeholders in-depth, drawn from each AHS. Participants were senior staff members with responsibility for IIMS and its implementation. Thirdly, we conducted individual focus groups with medical staff (n=4), nursing staff (n=4) and pharmacists (n=7). Fourthly we reviewed extant data on reportable incident brief trends drawn from IIMS. Finally we compared our findings with the international literature on incident reporting.

IIMS has taken its place as the incident management system for health services in NSW and is acknowledged as an advance in the management of patient safety and quality matters compared with previous systems. It is being adopted nationally and internationally, and is the system of choice for other jurisdictions. While it is not without problems, including constraints with the current software capabilities and variable reporting quality and levels, this system has improved health services' ability to identify and learn from common incidents and errors. Critiques of the system might be read in the light of this progress.

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, 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, 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 ▪ Interviews and focus groups with users ▪ 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 6, the *Map of the facility processes involved in implementing IIMS and handling incidents*, we turn to the results of study 7, *Examination of incident reports and management responses*. This study centred on the quality and comprehensiveness of incident reports. This report documents the outcomes of this study. This component of the evaluation was conducted by Ms Jo Travaglia and A/Professor Jeffrey Braithwaite.

3.2 About this report

The next section, section 4, *Methods*, documents the way we went about conducting the research and assessing the way incidents are reported and management has responded. Section 5 presents our findings and discussion, and section 6 the conclusion, which briefly outlines the implications of these findings for the evaluation of IIMS as a whole.

4 METHODS

In this study we employed five methods to investigate the way in which IIMS data were being handled across the State. Firstly, we interviewed the Directors of Clinical Governance from nine AHSs. Secondly, we interviewed a total of 15 key stakeholders in-depth, drawn from each AHS. Participants were senior staff members with responsibility for IIMS and its implementation across their health system. Thirdly, we conducted individual focus groups with medical staff (n=4), nursing staff (n=4) and pharmacists (n=7). Fourthly, we reviewed extant data on reportable incident brief trends drawn from IIMS. Finally, we compared our findings with the international literature on incident reporting.

In this study we sought answers to a number of questions. These included: how does IIMS compare to other international methods of data collection? What are current perceptions about the quality, reliability and comprehensiveness of IIMS data? What are the current patterns of reporting and reporting to incidents? What metrics are being conducted?

5 FINDINGS AND DISCUSSION

In this study we examined the type and quality of incident reporting through IIMS compared with international experiences. Incident reporting systems have been categorised into two broad types: those that focus on learning and systems changes, and those that seek to ensure public accountability. Learning systems encourage the reporting of all incident types, including near-misses, and ask local managers and clinicians to monitor and manage their own incidents, whereas accountability systems tend to be run by centralised agencies and are usually centred on sentinel events.¹ Although categorised as a learning system for health services, IIMS allows for the recording, analysis and centralised reporting, and therefore the assigning of accountability for the addressing, of incidents. This study examines IIMS from the perspective of its role as both a learning, and an accountability, system.

5.1 Methods of reporting in NSW

Prior to the implementation of IIMS there was no State-wide, centralised data collection system for all forms of medical errors in NSW. IIMS has now taken that role. There were systems of incident monitoring in place prior to IIMS, but many of these were ad hoc paper or database systems that had been constructed by the services or departments with responsibility in some way for safety and quality. In a small number of cases, IIMS replaced a previous version of the Australian Incident Monitoring System (AIMS)² or another, similar, commercial product. This evaluation found, as noted in other reports in this evaluation series, that IIMS is considered a significant improvement on most of the small, paper based systems that preceded it; what one respondent called the “black holes” where incident forms were collected, filed, and never seen again.

In other instances, however, systems have continued to fulfil a particular function. Three broad types of systems remain in operation: State-wide registers (for example for needlestick injuries); parallel AHS systems (for example alternative complaints or OH&S databases, as well as parallel RCA and RIBS databases); and some local departmental systems (where specific services or units collect their own data, for example intensive or palliative care, mental health or pharmacy).

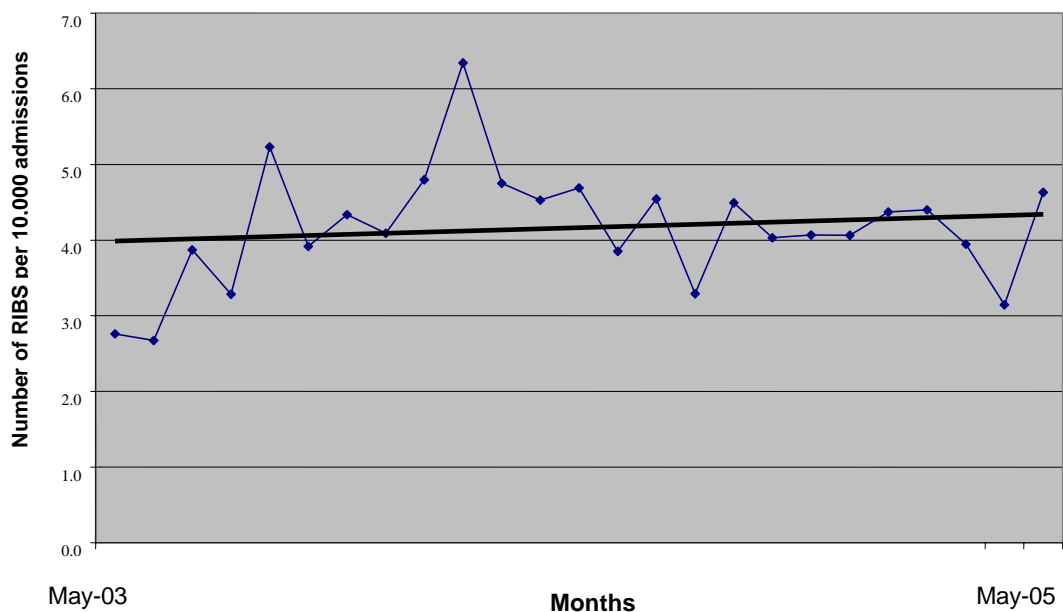
While there is a move to migrate or link as many of the existing State-wide systems to IIMS as possible, there is some resistance to the removal of local AHS, facility or departmental databases. These systems are maintained for a combination of technological and human factors. The most commonly cited reason was that it was easier to extract data and follow incidents using these simpler systems (eg, in the case of RCA and RIBS databases). They were also seen as more effective because they have either been constructed by the users (their colleagues or peers) or because the firm supplying them was able to provide the required modifications (such as in the case of the OH&S databases). For some groups this was a matter of history, and fear of losing existing data in the migration to IIMS. The final reason given was that these databases employ the specific terminology and contexts of the users (for example pharmacy).

Some previous systems mimic IIMS' function as a database. Other ways of identifying and managing errors also exist, and while these do not replace IIMS' functions, they do represent a source of data which might be entered into IIMS. Most typically these include morbidity and mortality reviews at departmental or service levels, peer reviews, chart and medical record reviews.³⁻⁶ One AHS had an external provider conduct audits for them, while another had conducted its own focus groups to assess risk levels. The data from these types of incident monitoring approaches are not yet widely or systematically integrated into IIMS, although our study showed that Patient Safety and Risk Managers are aware of the incident information emerging from them.

5.2 Current patterns of reporting

IIMS appears to have increased the rate of reporting across the State. NSW Health in conjunction with CEC and CCGR have analysed these data, as Figure 1 shows in the case of Reportable Incident Briefs.⁷

Figure 1: SAC 1 reportable incident briefs per 10,000 patient admissions, May 2003 to May 2005



The actual increase in incidents pre- and post-IIMS is difficult to quantify for a number of reasons: there are no baseline data in AHSs where no previous system existed and the restructuring of AHSs during the implementation of IIMS reduced the capacity to compare what were already differential reporting systems and rates. Nonetheless, in our focus groups and interviews all AHSs apart from one estimated that incident numbers had either stayed the same or increased post IIMS.

Figures for actual reporting rates, apart from smaller and specialist services (such as Justice Health and NSW Ambulance Services) average some approximately 1,000 – 2,000 incidents a month in AHSs. Most AHSs expressed some levels of satisfaction with their current reporting rates, although all were seeking to improve them.

5.3 Quality, reliability and comprehensiveness of IIMS data

The quality and comprehensiveness of IIMS data is dependent on a number of factors including: who reports, how they report and what is reported. Each of these factors will be addressed in turn. The reliability of data is dependent on a combination of human and technological factors. The impact of some of these factors, such as software problems, has already been assessed in studies 4 and 6 of this evaluation series. What follows expands on rather than duplicates those issues, and should be read in conjunction with them.

5.3.1 Quality and comprehensiveness of data

Who reports?

IIMS has been described as nurse-led reporting system – as is typical of most incident monitoring systems.⁸⁻¹⁰ As a result the types of incidents which are reported tend to occur in wards and are largely, but not solely, about medications and falls.^{11,12} As well as over-reporting by one group (nurses) there is an under-reporting by other groups, notably doctors.¹³ An Australian study by Kingston, Evans and Smith *et al* (2004) found that apart from anaesthesiology, nurses initiated 88% of reports submitted to AIMS and medical staff 2%.¹⁴ Nguyen, Weinberg and Hillborne (2005) found a similar rate of 1.7% of reports from medical staff, in a study in the United States of America.¹⁵

The findings of this evaluation match the reporting rates of these studies with one notable exception. Most AHSs estimated reporting rates for their medical staff generally at around 2%. In one AHS, after intensive championing and education, including presentations at Grand Rounds and team meetings, the reporting rate for medical staff is now approaching 8% of the total reports. We do not know if this is a sustainable strategy.

Medical staff under-report for several key reasons, over and above the common issues of time and workload. Firstly, there is medical culture, including viewing reporting on their colleagues or superiors as a violation of protocol.^{9,16} Secondly, it appears that medical staff view incidents in a different way from other groups. Specifically, potentially predictable events (such as the development of deep vein thrombosis (DVT) after a procedure) are considered a known risk factor and therefore not an incident.^{17,18} Thirdly, some medical staff feel disengaged from the health system and are believed to be mistrustful of the bureaucratization of health care. As a result they feel that they have not yet been shown any clinical evidence (as opposed to being presented with bureaucratic requirements) that improvement in quality and safety of care will be realised as a result of incident monitoring.¹⁹ A final reason for not reporting is that some staff, particularly doctors, remain unaware of reporting mechanisms and processes, including whose responsibility it is to report.¹⁷ Examples of each of these

points were given to the evaluators by medical staff and managers. Apart from data on pharmacists,²⁰ there were no useful data on reporting rates of other professions or groups.

Other groups that do not currently report, although for different reasons, are patients and their carers. The Complaints module of IIMS allows for their complaints to be lodged by a staff member on their behalf. Receipt of acknowledgement is meant to occur within three days. By comparison, the National Health Service in England allows the public to report an incident or make a complaint via an internet site (although it must be noted that individual incidents are not investigated).²¹ Capturing reports by patients and carers might be the next step in improving reporting levels in NSW.

How do they report?

All IIMS reporting is now computer based, with limited paper based reporting as back-up. Paper reporting is generally used by hospitality staff and staff who do not have access to, or are uncomfortable with, computers. IIMS managers in AHSs that maintain paper based reporting either collect and enter the data directly into IIMS, or have an assistant who does so. Three AHSs have joined together to re-introduce phone based reporting, using an automated system. During the IIMS implementation phase an IIMS call centre existed, and was open to staff from all AHSs (although it was primarily used by rural staff). The call centre was disbanded largely due to cost. There were some reported problems with the call centre staff's knowledge of medical terminology.

What is reported?

The current literature suggest that there is a under-reporting of all types of incidents^{22,23} but clinical incidents in particular.^{14,24} Figures from the CEC for the last six months of 2005 indicate that across NSW on average 5,500 incidents per 100,000 separations (not including Ambulance or Justice Health) were reported. Balancing this, medication errors and falls are the two most commonly reported incidents in Australia and internationally.¹² Also under-reported are: omissions of treatment, incidents that occurred in transitions between services, incidents with onsets over time (such as DVTs and pressure sores), and incidents occurring to some longer term patients.^{8,25} Examples of these, both under and over reporting, were identified in the evaluation.

Most incidents reported have a Severity Assessment Code (SAC) rating of 2 – 4. Several AHSs indicated that there is acknowledgement that SAC 3 and 4 incidents and near misses are important sources of information about potential hazards. They monitor, but do not regularly analyse, these. This was attributed to time and workload pressures. The exception was AHSs where there are very low levels of SAC 1 and 2 incidents. In these cases the SAC 3 and 4 incidents are more likely to be reviewed and analysed regularly.

5.3.2 Issues of reliability

Three sets of issues affecting the reliability of IIMS data were identified. The first was the limitations of the data. The second were issues with IIMS Analyser, a module of IIMS that is used to extract reports. The third set of issues centred on the use of IIMS by staff to record information other than incidents.

Limitations of IIMS data

IIMS like all reporting systems has limitations. One of these, naturally enough, is that IIMS produces a record of reported incidents rather than incidents that have occurred.^{26,27} This needs to be taken into account when IIMS data are summarised and represented. It is an issue with which a number of AHSs and managers are grappling, particularly those who have not employed their data analysis staff. The UK's National Patient Safety Agency (NPSA) provides one approach to managing this aspect of IIMS data. In their Annual report (2005) they provide advice on interpretation of data.¹¹ The report highlights the following eleven "notes of caution" with incident management system data. We provide these below, and assess them against their applicability to IIMS.

1. "The data is not a complete representation of all health services and so the data is not representative of the same mix of care settings as the whole health service"

In terms of NSW the under-reporting of certain types of services, like community health, medical errors, and some rural services, is prevalent.

2. "International research suggests that there is significant under-reporting of incidents"

Our interviews and focus group work showed us that this is so in NSW, too.

3. "Reports made at local levels may not capture all types of incidents that occur"

This is true in NSW, particularly of the data not currently being entered into State-wide or duplicate systems, such as medical under-reporting.

4. "The profile of reporting organisations is not representative of the whole system, reports are more likely to come from acute hospitals"

This, too, applies in NSW.

5. "The data is confidential and therefore cannot be routinely checked with the reporter"

Notification in NSW can be anonymous, but notifiers have the choice to leave their details.

6. "There may be duplicate reports, although these are checked"

We deal with this elsewhere in this evaluation report.

7. "No reports from the public or patients included in this analysis"

The AHSs that use the Complaints module of IIMS report that they analyse data from it; some tended to leave the analysis to their Complaints Manager, and one AHS has an alternative system for complaints management.

8. **“A higher number of reported incident from one locality, service or speciality does not necessarily mean that they have a higher number of incidents, they may have a higher reporting rate”**

This, too, applies in NSW, and it may be worth investigating; as reporting matures, this variation should begin to reduce.

9. **“Incidents recorded in the system may not all be due to patient safety incidents, for example all suicides and still births are reported”**

This applies in NSW.

10. **“Deciding whether a patient safety incident has happened and whether this has led to the harming of a patient is not always straightforward”**

We have identified this phenomenon elsewhere in this evaluation series.

11. **“The level of detail collected locally varies for example some areas do not currently collect contributing factors or ethnicity”**

This applies in NSW; further work on standardising the data collection protocols is warranted.

Analyser

All respondent AHSs except one used Data Manager in preference to Analyser to extract and analyse data. One reason given for this was the perception that some reports created by Analyser in previous versions of IIMS were found to have errors in them. This was remedied somewhat by IIMS version 3.5, but difficulties with the use of Analyser remained for the majority of respondents.

Use of IIMS for issues other than patient incidents

All AHSs reported that the IIMS Complaints module had been used by staff for purposes other than patient complaints; that is, it was used largely for staff grievances. In the cases where this occurred, the incident was removed from the system. Where incidents involved a grievance about a staff member's professional behaviour, the incidents were reportedly followed up by the relevant manager.

While participants agreed that this was not appropriate there were two schools of thought about what should be done. The majority felt that staff should simply not be allowed to use the system in this way and one AHS had removed staff's capacity to report complaints. A second school of thought was that if staff were using the system in this way, there was obviously a need for a system to collect this data and an imperative to follow it up. An example of this was where staff repeatedly reported potential harm resulting from staff shortages.

5.4 Metrics: calculating harm and error

Notwithstanding that IIMS has created a great deal of data, deriving accurate measures of harm and error is challenging at this point. Two types of metrics are important in incident reporting. These are firstly, the number of incidents reported, expressed as a rate, and secondly, the impact, and in particular benefit, of reporting on those incidents (cost-benefit analysis). Many factors have made the accurate assessment of harm and incident rates difficult. These include differences in perceptions of incidents, differences in reporting cultures, under-reporting of certain types of incidents, differences in methods of calculating error rates (incident reporting systems versus record reviews versus audits) and variation in definitions of medical errors.²⁸ As discussed earlier the types of notifiers and the types of incidents notified also affect the quality of data being analysed.

Estimates vary, but the most commonly cited figure is the Institute of Medicine's (IOM) report that in the US there are between 48,000 and 98,000 deaths annually as a result of medical errors.²⁹ The Quality in Australian Healthcare Study (QAHCS) extrapolated that adverse events were associated with 16.6% of hospital admissions.⁵ The Canadian Adverse Events study found 7.5% of hospitalizations were associated with adverse events, and that one in six patients who experienced an adverse event died as a result.⁴ The New Zealand rate is estimated to be in the middle of these: 12.9% of hospital admissions are said to be associated with an adverse event.³ AHSs have begun to establish and compare benchmarks within their service. Key Performance Indicators (KPIs) are set by NSW Health and are usually based on time allowable for the completion of particular actions (for example, patients making complaints should receive acknowledgement of that complaint within three days). Outside of these measures, benchmarks have been set on reporting rates within individual wards and facilities and different levels of trend analysis are being conducted across AHSs, as a way of identifying event patterns or clusters.¹¹

As foreshadowed in the literature on patient safety, the benchmarks identified in this evaluation as most difficult to establish were the actual outcomes³⁰ for patients who had suffered adverse events, and cost-benefit estimations of the amount of time and resources spent on reporting or resolving safety issues. Lack of this information was one reason given by medical staff (in both the evaluation and the literature)¹⁹ for not reporting. For other respondents in the evaluation under-reporting, follow up of patient care and cost-benefit studies were areas for consideration and development as IIMS progressed.

5.5 Responding to incidents

The ultimate purpose of incident reporting is, according to the World Health Organization (WHO) World Alliance for Patient Safety, "... to learn from experience. It is important to remember that reporting in itself does not improve safety. It is the response to reports that can lead to change. Within a health-care institution, reporting of a serious event or serious "near-miss" should trigger an in-depth investigation to identify underlying systems failures and lead to efforts to redesign the systems to prevent recurrence."^{1: pg12} WHO provides examples of methods of learning from reporting, including: alerts, investigations of serious events; analysis

of large datasets; and systems analysis and development of recommendations.

IIMS has created a platform for the health care sector in NSW to work on these learning strategies. NSW Health has a broad lessons learned strategy, including safety alerts, a knowledge management strategy and a dedicated website to be launched in September 2006; CEC and AHSs are conducting analysis of large data sets; AHSs, facilities and teams are conducting investigations of serious events; and CEC and AHSs are beginning to conduct systems analysis and respond to recommendations. Without IIMS many of these strategies would be impossible, and the triggering of investigations, particularly those based on patterns of events or particular serious cases, would have been significantly more difficult. This was seen as a major benefit of IIMS to AHSs.

Two major issues of concern arise from this analysis. The first issue is technological. With IIMS, data are reported to AHSs as the focal point in identifying patterns or clusters of incidents, but this does not allow for the level of detail required to ensure that incidents are effectively managed at local level. Some respondents found it difficult to run audit reports which would allow for the monitoring and management of incidents at a facility or ward level. An example given was the ability to group follow-up actions assigned to incidents, so that managers are able to see, for example, the course of suggested actions in their facilities or wards. Another example was the need to analyse the data in more detail in order to identify problems with particular types of issue, for example the managements of patients' insulin. The difficulties prohibiting this level of analysis were a result of a combination of the current functioning of the software, human resources, security levels (which restrict access to information) and the number of incidents available for analysis.

This leads to the second question – that of how and what to analyse from the IIMS data. While IIMS is considered to have the most highly developed classification system of current reporting methods^{1: pg44} the benefits of the system are currently constrained by the lack of skills, methods and approaches for the analysis of incidents. The development of skills for users, managers and Clinical Government Unit staff in conducting these analyses is seen as crucial. As one participant noted, no training was or is provided in either classifying incidents for, or analysing results from, IIMS. Further development of staff is therefore appropriate, so that more value can be realised from the investment on IIMS.

6 CONCLUSION

IIMS has taken its place as the incident management system for health services across NSW and is acknowledged in most quarters as an advance in the management of patient safety and quality. It has improved health services' ability to identify and learn from common incidents and errors, and critiques of the system need to be read in the light of this success. But, as yet, some of its promises are unrealised.

Five evaluation areas were considered in this study: methods of reporting; patterns of reporting; quality, comprehensiveness and reliability of data; metrics; and responses. While the impact of parallel methods cannot be fully assessed, those which replicate key reporting areas such as RIBs and RCAs need to be monitored closely. The capacity of other incident monitoring approaches, such as case reviews and outcomes of morbidity, have not yet been fully harnessed, but can provide additional in-depth information to augment the reporting and management of incidents through IIMS.

Patterns of reporting post IIMS would indicate that the implementation has been a qualified success. Most AHSs indicated that there has been an increase in reporting rates, and all indicated an increased ability to detect incident patterns and trends. There is a general recognition that the quality, comprehensiveness and reliability of IIMS data are dependent on staff skills and motivation levels. This is true of those who do notify, and those who do not. Examples were given of where sustained interventions resulted in increased reporting rates in the short term at least. These areas are worthy of review and follow up.

The metrics of patient safety and incident reporting is complex and is being closely watched by health professionals and managers. Health services' ability to respond to incidents while having improved overall remains patchy. This is to be expected in a new system, and should be addressed through a combination of improvements to the software and the development of Clinical Governance Units' responsibilities and initiatives for improved patient safety and quality of care.

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