



THE UNIVERSITY OF
NEW SOUTH WALES



CENTRE FOR CLINICAL GOVERNANCE RESEARCH

EVALUATION OF THE INCIDENT INFORMATION MANAGEMENT SYSTEM IN NEW SOUTH WALES: STUDY NUMBER 10



EXAMINATION OF THE REPORTING
PROCESSES, INCLUDING CHANGE IN
MANAGEMENT OF RIBS POST IIMS

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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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 10 in the evaluation of NSW Health's Incident Information Management System (IIMS). These studies centre on the way in which reportable incident briefs (RIBS) are managed after the implementation of IIMS.

A previous evaluation of the Safety Improvement Program conducted by the researchers in 2005 found that the activities and their management of processes with NSW Health broadly worked well, although it noted that there were some significant resource and systems constraints. This evaluation found a similar result, noting that while IIMS held great promise for the management of RIBS and RCAs, that promise was as yet unrealised.

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"> ▪ Questionnaire ▪ Interviews ▪ Focus groups ▪ Walk around survey 	Mary Westbrook, Jo Travaglia, Cynthia Hunter, Katherine Carroll, Jeffrey Braithwaite
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 ▪ 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 9, the *Assessment of the value and use of the IIMS system to the CEC*, we turn to the results of the final study of this evaluation, study 10. This study was the *Examination of the reporting processes, including change in management of RIBS post IIMS*. 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 extent to which IIMS reporting processes were effective and RIBS were managed. 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 report the results of our assessment of the management and reporting processes in NSW Health's Quality and Safety Branch (QSB). The question we sought to answer was: have QSB's reporting and management processes of RIBS changed post IIMS, and how?

In order to determine these issues we conducted an observational analysis of the IIMS process, interviewed and observed a selection of QSB staff and reviewed IIMS documentation. This included interviews with eight QSB staff in April 2006, two days of observation of the IIMS management and reporting process within NSW Health by two different researchers and review of IIMS pilot project documentation and relevant NSW Health policies, and policy changes, over the period of the evaluation.

5 FINDINGS

The introduction of IIMS has begun to have a major impact on the health system at various levels, including in NSW Health and AHSs and facilities. NSW Health's role in the implementation process was reviewed in Study 3, and various functions and roles of NSW Health are addressed in other studies in this evaluation. In this study we focus on the incident management processes within NSW Health and on the impact of IIMS incident management in general, as well as in relation to our previous evaluation of the QSB's management of RIBS in particular.

In May 2006 a new Incident Management Policy was released by NSW Health.¹ The policy covers all aspects of incident management, from notification to feedback, as well as the RIB (Reportable Incident Brief) and root cause analysis (RCA) processes. The IIMS policy reflects the role which IIMS plays in integrating what, in terms both of policy and practice, were previously separate systems.

Some aspects of the policy remain the same. RIB notifications to NSW Health continue to be required for all incidents with a Severity Assessment Code (SAC) 1. The RIB must be sent within 24 hours of its notification in IIMS. SAC 2, 3 and 4 incidents are reported to NSW Health and the Minister if they "... have potential to become matters of public interest" or which have State-wide implications. Information continues to be sent from the AHS to NSW Health's Executive Support Unit (ESU) which handles correspondence and allocates the RIBS to the relevant NSW Health Branch. The RIB information is still manually entered into the TRIM database and allocated a unique identifier, which is reported back to the AHS involved, so AHS staff can track the RIB's progress. All SAC 1 incidents are required to have an RCA conducted on them. RCA reports and key findings from SAC1 investigations have to be reported to the department within 70 calendar days of their commencement. RIBS continue to be reviewed on a daily basis by QSB and on a monthly basis by the Reportable Incident Review Committee, the peak policy and monitoring body on incidents.

In our evaluation of NSW Health's Safety Improvement Program (SIP) in 2005, we noted that "...in due course the RIB information will be processed electronically by the IIMS system, but not at this stage – perhaps in the second half of 2005."² RIBS are indeed generated from incidents recorded in IIMS, but they are not currently tracked by QSB through the IIMS database. Some AHSs continue to maintain separate RIB databases of ease of use and because of concerns about field level security, although the newest version of IIMS (version 3.5) is said to address that issue. NSW Health is still unable to extract all RIBS data through the IIMS process because of security issues, and so continues to rely on the TRIM database and the CEC to gain access to full RIBS data. The TRIM database, as we noted in the previous evaluation, has some significant limitations. It is essentially a document tracking system rather than an analytical database, and therefore has limited functionality for the purpose of incident management.

Access to IIMS data in QSB is limited by the levels of staff clearance to review data and because of the functionality of the database itself. It remains unclear as to how decisions on levels and types of clearance for staff at CEC and QSB levels were made. The monitoring of data through IIMS is said to remain problematic for both these reasons. At the time of this evaluation only one person in QSB was able to gain full access to IIMS data, and this was because they were responsible for the technological aspects of IIMS and had to have access in order to deal with issues raised by notifiers and users of the IIMS system. During this evaluation the management of the technical aspects of the system, including the Help Desk, have been moved to Health Technology, another Branch of NSW Health. At various points in time, since the end of the IIMS implementation project, QSB has brought in consultants from Communio, a consultancy company, to assist in the management of IIMS, in particular in relation to problems with the software.

The use of IIMS data is also hampered by quality of data which is entered. Mis-categorisation of incidents, missing fields and issues with the number and type of mandatory fields, for example, all affect the data outputs. The speed of the program, issues with delays in updates and “fixes” and dealing with frustration from users at AHS on similar issues, all currently detract from QSB's ability to use the system to its full advantage. Improvements in the next versions of IIMS have been foreshadowed.

The facility in IIMS which allows users to monitor and analyse findings from RCAs has only recently been introduced. It does not yet allow for the monitoring of recommendations. This continues to restrict the Branch's ability to monitor and map trends, causes and recommendations from RCA data. It is said to be addressed in version 4 of the software. In order to enhance the reliability of RCA reporting and to improve recommendations and outcomes, QSB is developing an audit mechanism for RCAs.

The Branch is also completing a new complaints policy to accompany data collection through IIMS, and the Complaints Management working party will be looking into IIMS data and examining dashboard indicators. A Safety Alert Broadcast System distributes information on safety issues via the intranet and email. The system involves three levels of notification from Safety Alerts (highest importance) through Safety Notices to more general Safety Information. This is seen as a major way for the Branch to use, and feedback, IIMS data. The Branch is also working with Clinical Governance Units, Patient Safety Managers and the AHSs clinical service redesign programs to encourage the use of IIMS in the development of safety improvement projects.

In relation to the management of the IIMS system, QSB convenes the IIMS Management Committee, a Technical Advisory Group and the User Group. The Committee and User groups have members drawn from each AHS, QSB and the CEC. The Technical Advisory Group involves more specialist staff. The Management Committee oversees broad issues in relation to IIMS and associated policies. The Technical Advisory Group undertakes higher level technical and strategic planning, and reviews the recommendations of the User Group. The User Group raises requests for modifications and enhancements to IIMS.

QSB continues to manage the processes associated with incident monitoring. The introduction of IIMS has contributed significantly to its workload, although this has lightened since the technical aspects of IIMS management have been moved to another Branch. Staff turnover, new staff appointments, recent uncertainty because of various restructuring processes and sorting out the respective roles of NSW Health and CEC have added to the challenges facing QSB.

6 DISCUSSION

At the time of the 2005 SIP evaluation we stated that "... when IIMS comes online there will be a lot more functionality, and the new system is designed to facilitate analysis of incidents."² This has not yet been fully realised. There remain issues of the functionality of, and access to, IIMS at levels appropriate to enable NSW Health to fulfil its obligations under its IIMS management aims, and associated policies.

Nonetheless, IIMS at this early stage is proving a valuable tool for QSB and NSW Health in general. As predicted in our previous evaluation IIMS has streamlined the classification of incidents. The number of reportable incidents has risen considerably, to between 10,000 - 12,000 per month. The resource issue remains. QSB has limited resources available for the monitoring and analysis of issues. While the creation of Clinical Governance Units is expected to deal with many of these issues at a local level, QSB's responsibilities remain to ensure the policy settings are conducive and safety policy is instituted, and to provide timely feedback to the health system as a whole.

In our 2005 evaluation we suggested that in order to do this, two issues needed to be resolved: a) the design and execution of sophisticated analysis of the data sets and b) sufficient staff and skills within NSW Health to do this. Ongoing turnovers in the staff of QSB and health system restructuring have not ameliorated this situation, and have contributed to the loss of corporate knowledge about the rationale for certain aspects of IIMS, including for example the issue of mandatory fields and security clearances.

7 CONCLUSION

QSB continues to manage the RIBS and IIMS processes effectively within the constraints of their resource capabilities, but resolution of key issues is needed. IIMS has contributed significantly to the work and the workload of the Branch. While it offers genuine great promise for the effective monitoring and management of incidents, including RCAs at a State-wide level, this promise has yet to be realised. Difficulties with the software are reported elsewhere in this evaluation series, are well known and are beginning to be addressed. The real question which remains is how the staff of the QSB can be resourced and supported in order to allow them to provide useful IIMS data to provide effective and timely feedback on quality and safety issues to the health system.

8 REFERENCES

1. NSW Health. *Incident Management Policy. PD2006_030*. North Sydney: NSW Health, 2006.
2. Braithwaite J, Travaglia JF, Mallock NA, Pawsey M. *Evaluation of the Safety Improvement Program in New South Wales: Study No 10 - 12: report on the management of RIB processes, reporting processes and Quality and Safety Branch functions and actions*. Sydney: Centre for Clinical Governance Research, University of NSW, 2005.