



THE UNIVERSITY OF
NEW SOUTH WALES



CENTRE FOR CLINICAL GOVERNANCE RESEARCH

EVALUATION OF THE SAFETY IMPROVEMENT PROGRAM IN NEW SOUTH WALES: OVERVIEW OF STUDIES



OVERVIEW REPORT ON THE EVALUATION
OF THE SAFETY IMPROVEMENT PROGRAM

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
DOH	NSW Department of Health
IIMS	Incident Information Management System
RCA	Root Cause Analysis
RIB	Reportable Incident Brief
ROI	Return on Investment
SIP	Safety Improvement Program
SAC	Severity Assessment Code

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.
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

In this report we present the results of multiple studies evaluating the Safety Improvement Program (SIP) in New South Wales. SIP has various components of which four are the cornerstones of the program: training a cohort of more than 2,500 clinicians in safety improvement techniques and approaches; generating and managing information about incidents; conducting root cause analyses of serious events; and making recommendations and actioning these as appropriate. We found that SIP has made considerable gains in addressing safety. A range of recommendations to further strengthen safety in NSW are made under four headings: monitoring and support for SIP; anchoring and extending the gains made by SIP; further education and training in SIP-related areas; and research, evidence and communication of SIP results.

3 RECOMMENDATIONS

From the work that follows we have developed twelve recommendations. They fall into four main headings: monitoring and support for SIP; anchoring and extending the gains made by SIP; further education and training in SIP-related areas; and research, evidence and communication of SIP results. These are as follows.

3.1 Monitoring and support for SIP

1. If the well documented positive outcomes of the SIP and RCAs are to be maintained and enhanced NSW Health and the CEC will need to continue commitment to the program. A common concern expressed on CCGR's questionnaire reported in study three was that commitment and follow-up might diminish over time.

Recommendation: Develop and publicise a plan for future sustainability of the SIP and RCA initiatives, expressing ongoing commitment to the SIP and RCA processes.

2. When developing course evaluation instruments for future courses there would be benefit in NSW Health and CEC consulting with experts in questionnaire construction. The course evaluation instrument in use could have yielded richer information if it had collected demographic data, had included more items on skills acquisition and avoided double-barrelled statements. In addition more detailed records of course changes should be made in order to evaluate the effects of such changes over time.

Recommendation: Consult with questionnaire experts to further enhance the ongoing evaluation of the SIP education processes and maintain ongoing records reflecting changes to course curricula.

3. There are identifiable risks associated with the handing over of SIP training to AHSs. The acceptance levels of SIP and the rates of reporting vary across AHSs. A peak-level process to monitor the decentralised training of staff in SIP, the reporting of incidents and the conduct of RCAs, is warranted.

Recommendation: Design a process to monitor SIP implementation on an ongoing basis and work with AHSs to encourage uniform acceptance and implementation of all aspects of SIP.

4. Concern about lack of legislative protection for those involved in SIP activities continues. It is important to have legislation in place to assure health care personnel that they are not legally exposed in participating, particularly in RCAs.

Recommendation: Once legal protection is finalised, the nature of the limits of this protection needs to be clearly communicated.

3.2 Anchoring and extending the gains made by SIP

5. This evaluation has demonstrated that SIP has helped the NSW health system make a transition from a blame culture to one that is relatively more open, although no-one doubts there is a long way to go. This represents a major shift in attitudes and values, and is exemplified by the positive, system-wide response to SIP. To make further gains, this achievement needs to be supported by regular assessment of programs.

Recommendation: Consider instituting a mechanism for assessing culture change on an ongoing basis, possibly through the regular administration of the safety climate survey each two years.

6. As the uptake of incident reporting and the number of RCAs conducted increases, more data will become available by which to understand and circulate information about the lessons learnt. It is important not only to share this information vertically, but also to mine the rich lode of this information for the benefit of many stakeholders.

Recommendation: Develop a diffusion of information strategy to optimise the learning value of the data made available through IIMS and RCAs via the Quality and Safety Branch's *Knowledge Management* and *Lessons Learnt* initiatives, CEC's forthcoming education programs and localised AHS dissemination strategies.

7. SIP training has created considerable levels of enthusiasm and positive attitudes toward the program. The questionnaire data show that when participants return to the workplace they express greater confidence in their skills than when they concluded their training, and they report that they are able to make changes in work practices as a result of SIP.

Recommendation: AHSs and local management at facility level should build communities of practice and networks of RCA team members, team leaders and trainers, and record and publicise widely the positive changes to work practices which emerge as a result of SIP.

3.3 Further education and training in SIP-related areas

8. The studies suggested that a larger cohort of staff trained in SIP would be beneficial. This might necessitate the development of a wider range of SIP training courses including shorter and possibly web-based training designed for specific needs, and refresher courses for those who were trained some time ago. There are particular needs identified to provide further training in human factors and communications skills. Complementing these strategies, there is a case based on the evaluation findings for the active development of AHS-based networks to provide support, exchanges of information and to meet the learning needs of RCA groups. The international literature is assembling a considerable volume of evidence to the effect that this approach (sometimes labelled 'communities of practice') helps leverage learning and build trust.

Recommendation: Identify further SIP development needs, diversify and deploy SIP training options and take opportunities to build a 'communities of practice' approach around SIP-trained cohorts of staff.

9. While there is considerable value in conducting RCAs, there needs to be greater recognition that RCAs are costly in terms of time and moral and emotional burden for some health professionals. While this may be true of other causal review processes, the evaluation showed that RCA processes can involve a delicate balancing of professional relationships, sometimes in close-knit workplace settings. Studies 7a and 7b particularly drew out these problems. Specific communication skills are required to undertake RCAs effectively.

Recommendation: Assess the needs of and provide appropriate support and training to those involved in RCAs.

3.4 Research, evidence and communication of SIP results

10. Clinicians generally, and doctors in particular, often seek evidence before being persuaded to participate in organisational and system-wide improvement initiatives. While this evaluation is one strategy in providing levels of evidence about SIP initiatives, there are other identifiable research and evaluation opportunities to support further gains in SIP and improve participation levels of clinical staff. These include research into the types of RCA recommendations, how they change over time, and the effectiveness of their implementation, where they have had a positive effect. Clinicians also seek recognition for their efforts, and the assignment of some form of credit points for participation, such as in continuing practice development (CPD) schemes, may be warranted.

Recommendation: Identify further research needs in safety improvement and develop a plan for meeting these, and consider ways to provide recognition for clinicians' participation in the SIP and RCA processes.

11. Many participants in the evaluation sought evidence about the end results of RCAs, and were particularly interested in the learning value of them. Others experienced various barriers in conducting RCAs. There are opportunities for researching these areas and producing de-identified data in a systematic way to inform people across the NSW health sector.

Recommendation: Design suitable ongoing data-gathering tools at State, AHS and facility level, by which to secure information about the outcomes of RCAs, and barriers to progress with RCAs, and to synthesise this de-identified data into reports, and distribute these widely.

12. Longer term, there may be pressure of work such that RCAs could become de-emphasised. The importance of the RCA strategy in managing SAC events cannot be underestimated.

Recommendation: A process is instigated to ensure that RCAs are continued as a sustainable strategy, that they remain reliable and of high quality, and that teams follow the RCA guidelines closely.

4 INTRODUCTION

4.1 The task

The NSW Department of Health (DOH) and the Clinical Excellence Commission (CEC) have commissioned the Centre for Clinical Governance Research (CCGR) at the University of New South Wales to conduct a formal evaluation of the Safety Improvement Program (SIP). This is a program to enhance safety in New South Wales. The DOH has commissioned this evaluation as part of its knowledge management program in safety and quality under CCGR's contract to *Develop and Evaluate a Knowledge Management Program for Quality Branch*. The CEC is interested in the extent to which the SIP will make health care in NSW safer and better under CCGR's contract to conduct a *Research and Evaluation Program into Safety and Quality*.

The Evaluation Protocol for this project noted: "SIP is a comprehensive safety program introduced to the NSW health system in 2002. It aims to improve patient safety by focussing on health care incident management. The objectives of SIP are:

- To make health care safer through constantly correcting system vulnerabilities by understanding why errors occur.
- To develop a culture where health care incidents are identified, reported, investigated, analysed and acted upon in a supported environment.
- To implement an information system that assists health care workers to achieve the first component."

The evaluation of SIP takes the form of 12 inter-related studies (Table 1). This report documents the overall outcomes of all the studies. This evaluation was conducted by A/Professor Jeffrey Braithwaite, Ms Jo Travaglia, Ms Nadine A. Mallock, Dr Rick Iedema, Conjoint A/Professor Mary T. Westbrook, Ms Debbi Long, Mr Peter Nugus, Ms Rowena Forsyth, Dr Christine Jorm, and Dr Marjorie Pawsey.

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 literature on patient safety and RCA processes • Appraisal of the evaluation process through the extant literature 	Peter Nugus, Jo Travaglia, Jeffrey Braithwaite
Study #2	Review of the education and training program	<ul style="list-style-type: none"> • 2 a) Triangulated review of educational value of RCA program • 2 b) Secondary analysis of SIP training program evaluation forms 	Jo Travaglia, Mary Westbrook, Peter Nugus, Rick Iedema, Debbi Long, Nadine Mallock

Study #3	Achievements of aims and objectives and stakeholder satisfaction	<ul style="list-style-type: none"> • Questionnaire to all course participants • Review of course evaluations 	Mary Westbrook, Nadine Mallock
Study #4	Ongoing applicability of training to participants	<ul style="list-style-type: none"> • Questionnaire to all course participants • Survey of international SIP programs to benchmark the current program in an international context 	Nadine Mallock, Mary Westbrook, Jeffrey Braithwaite
Study #5	Satisfaction of Faculty members	<ul style="list-style-type: none"> • Detailed interviews with faculty staff 	Debbi Long
Study #6	Program outcomes at local, area and state levels	<ul style="list-style-type: none"> • Review of RCA data submitted to the DOH • Questionnaire to all course participants • Interviews with key stakeholders 	Jo Travaglia, Jeffrey Braithwaite, Mary Westbrook, Nadine Mallock, Marjorie Pawsey
Study #7	Lessons learnt from RCAs	<ul style="list-style-type: none"> • 7 a) In-depth observation and review of RCAs in situ • 7 b) Focus groups 	Rick Iedema, Rowena Forsyth, Christine Jorm, Peter Nugus
Study #8	Return on investment	<ul style="list-style-type: none"> • Questionnaire to all course participants • Interviews with key stakeholders 	Jeffrey Braithwaite, Jo Travaglia, Mary Westbrook, Nadine Mallock
Study #9	Effectiveness of Reportable Incident Review Committee	<ul style="list-style-type: none"> • Observation of Committee • Review of outcomes 	Nadine Mallock, Jeffrey Braithwaite
Study #10	Management of RIB process	<ul style="list-style-type: none"> • Focus group • DOH data • Interviews with key stakeholders 	Jeffrey Braithwaite, Nadine Mallock, Jo Travaglia, Marjorie Pawsey
Study #11	Reporting processes	<ul style="list-style-type: none"> • Focus group • DOH data • Interviews with key stakeholders 	Jeffrey Braithwaite, Nadine Mallock, Jo Travaglia, Marjorie Pawsey
Study #12	Quality and Safety Branch functions and actions	<ul style="list-style-type: none"> • Focus group • DOH data • Interviews with key stakeholders 	Jeffrey Braithwaite, Jo Travaglia, Nadine Mallock, Marjorie Pawsey

4.2 The problem stated

Around the world patient safety represents a systems problem of considerable magnitude. Many documented studies and enquiries have argued that care can be made safer, practices can be improved, and adverse events reduced by taking a systematic approach to safety (Ballard, 2003; Ferlie and Shortell, 2001; Frankel, Gandhi and Bates, 2003; Hindle, Braithwaite and Iedema, 2004; Hoff, Jameson, Hannan, *et al.*, 2004; Ketrings and White, 2002; Runciman, 2002; Stalhandske, Bagian and Gosbee, 2002; Wilson, Runciman, Gibberd, *et al.*, 1995).

The design of a safety improvement program to inculcate safer practices system-wide is one way to tackle this. Factors affecting the success of a SIP will depend on the particular health care system, but experts suggest in the main that these will include legal, cultural, structural and financial factors (Hindle, Braithwaite and Iedema, 2004).

A SIP invariably will involve a process of: training staff in safer practices; standardising ways to assess severity; and improving the reporting and categorisation of incidents. It will also provide a method for looking at the causes of adverse events, the barriers to improving the system in order to avoid adverse events and remedies to specific adverse events or near misses.

The NSW health system's version of SIP was based on the United States of America's Veterans Administration's safety improvement program (Bagian, Gosbee, Lee, *et al.*, 2002; Stalhandske, Bagian and Gosbee, 2002). It took into account other international ideas on SIP structures and approaches. One problem is that there have been few attempts to assess the worth of SIP programs, either here or internationally. Hence, the importance of this evaluation.

In succeeding sections, the methods we designed to conduct this evaluation are described (section 4). Next, we present an overview of our findings from these studies (section 5). These findings are based on more detailed data in each of the twelve studies, and a separate report on each of these is available. Then we present a discussion of the main findings (section 6). Finally, we conclude our report (section 7), and make a series of recommendations (section 8). A set of appendices including details of the evaluation team, the terms of reference for the evaluation and a summary of the research protocol, is also provided.

5 METHODS

We list below in Table 2 the key tasks, evaluation methods and core questions posed, as drawn from the *Evaluation Protocol*. This shows the evaluation methods we used for studies 1 -12 and the core questions we sought to answer.

TABLE 2: Key study tasks, evaluation methods and core questions

KEY TASKS	EVALUATION METHODS	CORE QUESTIONS
Study 1: Conduct literature review	We: <ul style="list-style-type: none"> Gathered and examined information from international health services literature and adult education databases as well as grey literature on patient safety and the websites of key patient safety organisations 	What is known about patient safety generally and safety improvement programs specifically?
Study 2(a): Conduct participant observation of two SIP training programs	We: <ul style="list-style-type: none"> Observed training programs in September and December 2004 	What do participants in the SIP training program learn, what and how are they taught and what is the educational value received?
Study 2(b): Secondary analysis of course participants evaluations of SIP	We: <ul style="list-style-type: none"> Reviewed and statistically analysed 18 sets of questionnaires from 1,295 participants who had evaluated SIP training 	From participants' points of view, how successful has the training that they received been?
Study 3: Evaluate the various aspects of SIP via a comprehensive questionnaire	We: <ul style="list-style-type: none"> Followed up 24 SIP courses via a purpose-designed online questionnaire administered to 1,325 participants of whom 463 responded 	How satisfied were participants with SIP, the course they attended, the skills they acquired, their capacity to participate in RCAs and their views on the overall value of SIP?
Study 4: Assess the applicability of the SIP training to participants	We: <ul style="list-style-type: none"> Extracted some questionnaire items from the survey in Study 3 to elicit course participants' views on the applicability of the training course Searched the internet to identify other health and non-health safety training programs to provide an international benchmark of SIP's applicability 	In an international context how able is SIP to meet the needs of the health system?
Study 5: Interview faculty members	We: <ul style="list-style-type: none"> Interviewed four faculty members to gauge their satisfaction with SIP training courses and elicit ideas for improvement 	What levels of satisfaction exist in the SIP education faculty?

KEY TASKS	EVALUATION METHODS	CORE QUESTIONS
Study 6: Examine program outcomes	<p>We:</p> <ul style="list-style-type: none"> • Reviewed documentation about the SACs and RCAs undertaken and recommendations and actions arising from these • Interviewed DOH staff about the process and outcomes SIP • Interviewed a selection of Patient Safety and Clinical Governance Unit staff about the SIP process and outcomes • Assess the impact and outcomes of courses for participants, through quantitative data analysis of selected items in questionnaire distributed to SIP training participants • Reviewed and analysed 18 of 24 DOH SIP training evaluations • Attended SIP Steering Committee Meetings and analysed contents of minutes • Interviewed SIP faculty 	What are the demonstrable outcomes of SIP?
Study 7(a): Assess lessons learned from RCAs through in-depth study	<p>We:</p> <ul style="list-style-type: none"> • Observed two RCAs in detail • Conducted in-depth interviews of a Clinical Practice Improvement Unit 	From RCA teams' points of view, what types and range of lessons learned have been accumulated through participation in RCAs?
Study 7(b): Assess lessons learned from RCAs through focus groups	<p>We:</p> <ul style="list-style-type: none"> • Conducted focus groups of nurses, allied health and doctors 	From the point of view of professional groups, what types and range of lessons learned have been accumulated through participation in RCAs?
Study 8: Judge the value of SIP - ROI	<p>We:</p> <ul style="list-style-type: none"> • Extracted questions from the questionnaire in Study 3 • Interviewed Patient Safety Managers 	What is the overall value of SIP and what can be said about the overall worth of doing it?
Study 9: Assess the effectiveness of the Reportable Incidents Review Committee	<p>We:</p> <ul style="list-style-type: none"> • Observed two meetings (in December 2004 and February 2005) to assess how this Committee functions in practice • Content analysed the agenda, terms of reference and minutes of the Committee 	How well are SIP data handled at the peak level and how is SIP co-ordinated from a policy perspective?
Study 10: Review the Reportable Incident Brief management processes	<p>We:</p> <ul style="list-style-type: none"> • Conducted an observational analysis of the RIB processes (January, 2005) • Interviewed a selection of Patient Safety Managers about the RIB management processes (January, 2005) • Interviewed DOH staff about the RIB management process 	How is RIB information handled within the DOH?

KEY TASKS	EVALUATION METHODS	CORE QUESTIONS
Study 11: Examine reporting processes	We: <ul style="list-style-type: none"> • Reviewed documentation about the management of RIBS, including the computerised data sets on-screen • Followed through, and mapped the RIB reporting process against DOH circular 2003-88 • Interviewed a selection of Patient Safety and Clinical Governance Unit staff about the reporting process • Interviewed and observed Quality and Safety Branch staff 	What is the flow of reporting processes within the DOH?
Study 12: Assess Branch functions and actions	We: <ul style="list-style-type: none"> • Mapped the functions and actions of the Quality and Safety Branch, utilising an ethnographic approach • Interviewed and observed Quality and Safety Branch staff about the functions of the Branch 	How well do Branch functions perform and what opportunities are there for improvement?

In summary, by conducting a range of triangulated studies of various stakeholders, processes and attitudes toward SIP, we aimed to create a composite map of SIP, its weaknesses, strengths, value and limitations. We turn to the results of our assessment under these studies.

6 FINDINGS

In this section we present our overall findings. Each study will be dealt with in turn. Further information about each study is available from the separate reports made available to the NSW Department of Health and the Clinical Excellence Commission.

6.1 Study one: perform a literature review

SIP-style programs have radiated around the developed world. The main purpose is to address safety concerns in a systematic, health sector-wide manner. While there is variation on this main theme, SIPs consist of four main strategies. These are: first, improving incident reporting after assessing severity and classifying incidents; second, examining the causal analysis of incidents or near misses, usually using root cause analysis (RCA) techniques; third, educating a cohort of clinicians and managers in safety improvement; and fourth, providing feedback about specific safety issues and data across the system to clinicians, managers and policymakers.

No comprehensive evaluation of any country's SIP program has been conducted until now. Research and evaluation of SIP initiatives have to date been piecemeal. Structurally, educationally and organisationally, the NSW SIP seems to compare favourably with other international SIPs as described in the literature. However, this present evaluation provides a multi-method, triangulated, assessment to try to address the gap in knowledge about SIP and its value.

6.2 Study two (a): conduct participant observation of two SIP training programs

The participant observation of the SIP courses conducted in September and December 2004, observed by five members of the evaluation team, showed how the education is highly effective generally. Courses were predicated on adult learning principles and concentrated on how to do RCAs from both a practical and theoretical standpoint. Less time was spent during the training on human factors and communication skills enhancement. Table 3 summarises the main findings of this study.

TABLE 3: Discussion of Findings

EVALUATION QUESTIONS	DISCUSSION OF FINDINGS
<ul style="list-style-type: none"> ▪ Why was the course introduced? 	<ul style="list-style-type: none"> ▪ The overall aim of the course, as stated at the beginning of the training session, was "... to educate a cohort of professionals about patient safety." The structure of the training meant that less time was spent on the part of the aim which referred to developing a "... broader understanding of the human factors of health care." Relatively more time was spent on issues such as working in teams and applying a systems approach to investigating incidents

EVALUATION QUESTIONS	DISCUSSION OF FINDINGS
<ul style="list-style-type: none"> ▪ What are its intended outcomes? 	<ul style="list-style-type: none"> ▪ The course also met its objectives. The last objective of 'closing the loop' through implementation and evaluation of actions and recommendations was restricted to practice in writing recommendations, and a comparatively uncritical representation of the way in which recommendations are being implemented in the field
<ul style="list-style-type: none"> ▪ How was the course implemented? 	<ul style="list-style-type: none"> ▪ The course was implemented in an appropriate educational style, one which met standards set in adult education theories of learning and teaching ▪ Some minor areas of tension existed in coverage of information, the need for greater depth in some topics, the relevance of examples used, the management of small groups, and the representation of the outcomes of, and systemic responses to, RCAs ▪ The length of the course, 2 days, is at slight variance with the standard 3 day course for both the NCPS in the US, and the NPSA in the UK. The UK, like the NSW DOH, offers a range of shorter courses. The UK also offers specialised courses (i.e. for mental health practitioners). Its 3 day course is run one day a month for three months, so that individuals can practice their skills in between courses
<ul style="list-style-type: none"> ▪ How do participants feel about the course? 	<ul style="list-style-type: none"> ▪ Feedback from participants was, on the whole, extremely positive about the course ▪ Study 2(b) provides more detailed information on participants' responses to the course
<ul style="list-style-type: none"> ▪ Who are the key stakeholders? 	<ul style="list-style-type: none"> ▪ Key stakeholders are DOH, CEC, the faculty, the AHS and the participants. Information from each of these groups is presented in the other studies in this evaluation
<ul style="list-style-type: none"> ▪ What are the social costs and benefits of the course? 	<ul style="list-style-type: none"> ▪ The key social benefits of the course are the interactions between participants across facilities, AHS and rural and metropolitan areas, and between discipline groups, and broad culture change across the health system ▪ The main social cost may be where individuals have dominated small group proceedings
<ul style="list-style-type: none"> ▪ What constraints are operating? 	<ul style="list-style-type: none"> ▪ As with any training, the length of the course ▪ The number of participants able to attend any one course ▪ Participants have to physically attend a course (there are no computer or web based versions of the course)

6.3 Study two (b): perform a secondary analysis of course participants' evaluations of SIP

As they conducted SIP training across the NSW health system, the SIP faculty administered an evaluation questionnaire tool to secure feedback from participants about the training they had received. In this study we conducted a secondary analysis of these questionnaires. A total of 18 groups who had answered all questionnaire items were included (n=1,295).

The analysis of these questionnaires revealed that participants rated both the course and the presentations very highly. Whilst overall ratings were very high there was a significant difference in the rural and metropolitan samples; rural participants consistently rated the education and its constituent elements higher than their metropolitan counterparts.

Table 4 shows the numbers and percentages of participants making very positive and negative evaluations of the course components[^]. It also provides a ranking of the ratings.

TABLE 4: Numbers and percentages of participants making very positive or negative evaluations of course components (N=1293)*

COMPONENT	NUMBER AND PERCENTAGE OF RATINGS				RANKS OF RATINGS	
	Very positive		Negative		Very positive	Negative
Course presenters						
Knowledge of subject	1000	(77.2%)	1	(0.01%)	1	14
Conveyed information	858	(66.2%)	7	(0.5%)	3	11.5
Responsive	774	(59.8%)	27	(2.1%)	5	3
Course content						
Breakout sessions	552	(42.6%)	47	(3.6%)	12	1
Meeting 1	677	(52.3%)	7	(0.5%)	6	11.5
Meeting 2.1	666	(51.4%)	13	(1.0%)	8	5.5
Meeting 2.2	623	(48.1%)	13	(1.0%)	11	5.5
Meeting 3	632	(48.8%)	12	(0.9%)	10	7.5
Lecture: Gathering information	644	(49.7%)	25	(1.9%)	9	4
Lecture: Human factors	676	(52.2%)	10	(0.8%)	7	9.5
Visual aids	882	(68.1%)	12	(0.9%)	2	7.5
Evaluation and skills						
Comfortable to SAC incidents	459	(35.4%)	40	(3.1%)	13	2
Ability to participate in RCAs	227	(17.5%)	10	(0.8%)	14	9.5
Overall evaluation of course	817	(63.1%)	5	(0.4%)	4	13

[^] The categories were identified as “very positive” and “negative” because the Likert scale in the questionnaires had a mid-point of “positive” rather than the more common “neutral” or “neither positive or negative”

* Participants with very positive ratings checked scale option 1, those with negative ratings checked options 4 or 5

Table 4 shows that while there is some variation in responses, participants overall were highly supportive of the main elements of the education they received, including course presenters, course content, and evaluation and skills. A question arises from this analysis about participants' confidence to go back to the workplace following participation in the course, and then lead or participate in an RCA. Another question arises from the dataset about using the Severity Assessment Code (SAC) matrix to categorise incidents in practice, which some participants found difficult to apply, or with which they did not agree.

6.4 Study three: evaluate various aspects of SIP via a comprehensive questionnaire

To complement the previous participants' evaluation tool administered by the course faculty, the Centre designed a questionnaire seeking responses from everyone in New South Wales who had participated in SIP training. The questionnaire focused on four domains: satisfaction with the course content and presentation; safety skills acquired from the course and their transfer to the workplace; the perceived benefits of the SIP; and respondents' experiences in conducting RCAs.

More than 2,500 staff have been trained so far. Participants were drawn from 24 SIP training courses which had been conducted by the end of December 2004. Some were lost to follow-up, resulting in 1,953 identifiable participants of whom 1,325 had a current email address. Of these, 463 responded to the questionnaire, yielding a 35% response rate.

Participants reported that they had experienced an excellent educational program. Broadly, they liked it, they felt that it gave them an opportunity to develop skills, and they judged it to be highly beneficial. Table 5 provides an overview of participants' satisfaction and dissatisfaction with various components.

TABLE 5: Numbers and percentages of participants satisfied or dissatisfied with course components

COMPONENT	NO. AND PERCENTAGES GIVING RESPONSES					
	Very satisfied		Satisfied		Dissatisfied/ Very dissatisfied	
Q2.Course materials (n=462)	240	(51.9%)	221	(47.8%)	1	(0.02%)
Q3.Topics covered (n=461)	214	(46.4%)	234	(50.8%)	13	(2.8%)
Q4.Meeting sessions (n=447)	148	(33.1%)	266	(59.5%)	33	(7.4%)
Q5.Evidence base of topics (n=454)	170	(37.4%)	258	(56.8%)	26	(5.7%)
Q6.Teaching methods (n=453)	217	(47.9%)	209	(46.1%)	27	(6.0%)
Q7.Overall organisation (n=455)	243	(53.4%)	195	(42.9%)	17	(3.7%)
Q8.Length of program (n=460)	113	(24.6%)	291	(62.9%)	56	(12.2%)
Average	42.1%		52.5%		5.4%	

While participants obviously had an enjoyable educational experience, a core issue is what sustainable skills were acquired during the training. Table 6 provides a summary of sustainable skills participants believe they acquired.

TABLE 6: Safety skills acquired from SIP program

QUESTIONNAIRE ITEM	NUMBER AND PERCENTAGE OF PARTICIPANTS GIVING RESPONSES				
	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
Q9.Better trained to address patient safety (n=461)	102 (22.1%)	306 (66.4%)	37 (8.0%)	15 (3.3%)	1 (0.2%)
Q10.Better able to improve work processes (n=459)	65 (14.2%)	305 (66.4%)	62 (13.5%)	26 (5.7%)	1 (0.2%)
	Definitely	Partly	Unsure	Slightly /Not At all	Not at all
Q17.Able to apply SIP training (n=460)	229 (49.8%)	176 (38.3%)	8 (1.7%)	23 (5.0%)	24 (5.2%)
Q18.Safety reporting practices changed since SIP (n=458)	155 (33.8%)	186 (40.6%)	27 (5.9%)	39 (8.5%)	51 (11.1%)
Q19.Know how to conduct RCA after SIP (n=459)	273 (59.5%)	159 (34.6%)	5 (1.1%)	20 (4.4%)	2 (0.4%)
Q33.SIP gave skills to be involved in/lead an RCA (n=274)	132 (48.2%)	119 (43.4%)	4 (1.5%)	14 (5.1%)	5 (1.8%)

Another core issue is whether in the judgement of participants their skills had led to changes in work practices since their participation in the SIP course. Some 2 in every 5 (40.4%) of participants offered one or more comments in response to this question (Table 7).

TABLE 7: Comments on Q18 (Changes to work practices since SIP course) (n=187)

COMMENT	NUMBER	PERCENTAGE
Greater understanding of safety issues	38	20.3
My work practices already OK (no need to change)	32	17.1
Increased awareness of safety issues	24	12.8
Better reporting of incidents	23	12.3
No (have not changed)	22	11.8
Organisational resistance to change	16	8.6
Have adopted 'No blame' approach	10	5.3
Other	22	11.8

We asked various additional questions. Respondents wanted a follow up session (83.3%) and most (78.9%) wanted this to be a face to face encounter. More than a quarter (28.7%) of participants had conducted an RCA since attending the course.

Barriers always or sometimes encountered whilst doing RCAs include unwilling colleagues (43.9%), lack of time (74.5%) and difficulty with teams (34.1%). Almost two thirds of respondents (65.9%) indicated they never encountered unsupportive management during the conduct of an RCA.

There were significant differences in the response patterns of the professional groups. Although they were positive toward the SIP training, doctors liked the course less and reported they gained fewer skills than did the other professional groups such as nurses, allied health professionals and managers ($p < 0.000$).

6.5 Study four: assess the applicability of the SIP training to participants

In this study we focused on two themes. Firstly, we asked participants, via the questionnaire reported in study 3: did course participants feel that the SIP training course is applicable to their developmental needs? Secondly, we asked via a literature search: are there other similar SIPs and how do they compare to the NSW SIP training course?

We found that SIP was clearly applicable, and met the needs of most participants. The literature search identified a range of SIP-like courses worldwide including in Canada, the United States of America, the United Kingdom and Europe. Despite superficial similarities, there was no directly comparable course to SIP. Nevertheless, most other programs of this type cover similar issues, eg human factors, a “no blame” culture, and RCA training.

From a participant’s perspective SIP is applicable not only generally, but it also met their learning needs. Participants agreed that following SIP training they were better trained to do their job, that there were achievements and benefits of conducting RCAs and that they had changed some aspect of their work practices to try to make them safer. Participants were of the view that RCAs have made contributions to health system performance including improving work processes, patient care, communication and outcomes. Respondents to the questionnaire report that SIP was still changing their work practices months, and in some cases years, after completing the SIP training.

6.6 Study five: interview faculty members

Four faculty members responsible for designing and delivering the SIP training course were interviewed in order to gauge their satisfaction with the content and delivery of SIP education and to ascertain what developments in the program had occurred over time and were envisaged in the future. Overall, faculty was very satisfied with the course although faculty members noted the conflation between SIP on the one hand and RCAs on the other. By agreement these should not be conflated; SIP is much broader and involves incident reporting, severity assessment, and local initiatives to improve safety, not just causal analysis.

Some concerns were expressed about the attendance profile of participants. Faculty wanted to see a greater proportion of practicing clinicians and particularly doctors at SIP courses in future. Some healthy professional tensions were exhibited amongst faculty about future changes to the SIP education curriculum. Over time, it was understood that SIP training would be delivered in more decentralised ways at Area Health Service level.

6.7 Study six: document program outcomes

Because of the difficulties in accurately measuring long term outcomes in system-wide changes of this kind, and the longitudinal nature of cultural change which is envisaged with SIP, the evaluation team measured short and medium term outcomes in a broad way. We looked at SIP documentation, data from both questionnaires as reported in studies 2(b) and 3, and conducted interviews and field observations with DOH, CEC and AHS staff.

We found that SIP had had a significant impact on the NSW health system at each level. These include: the establishment and operation of an incident reporting mechanism at state and AHS level; the reporting of 452 SAC 1 events state-wide in 2003-2004; the conduct of subsequent root cause analyses to deal with these events; the piloting and implementation of the Incident Information Management System (IIMS); the effective training of health services staff on SIP and RCAs across the state; and the analysis and reporting of safety issues and alerts at a state-wide and AHS level. Because this is a formative evaluation longer term outcomes have not been measured.

6.8 Study seven (a): assess lessons learned from conducting RCAs

In conducting this study, the evaluation team observed RCA working group parties and discussed issues arising with the Quality Co-ordinator in one hospital. The detailed analysis of this study revealed that while RCAs offered great potential for learning, various challenges emerged. These include: selecting the right clinicians for RCA groups, tensions in investigating colleagues' errors, piecing together the jigsaw of what happened, formulating politically acceptable recommendations, the constraints of document management, line managers having to support recommendations and the implementation of recommendations.

6.9 Study seven (b): conduct RCA focus groups

In this study the evaluation team conducted focus groups of nurses, doctors and allied health staff who had experience conducting RCAs. Focus group participants recognised various benefits of RCAs including the opportunity to professionally inter-relate with other clinical professionals and to solve problems with colleagues. They also recognised various issues including worries and concerns about exploring clinical error, the uncertain legal position of RCAs, lack of satisfaction with recommendations and their implementation, and the continual existence of persistent safety problems that are outside the scope of RCAs.

6.10 Study eight: judge the value of SIP: return on investment

This study weighed the value of SIP. How worthwhile has been the effort to institute a large system-wide program like this? Rather than do a health economic evaluation, which inevitably for a complex program of this nature would involve estimates rather than detailed costs, we undertook to assess SIP on the basis of its overall value to NSW Health. This is a broader concept than economic return on investment (ROI).

To do so we drew on specific questions from the survey in study 3. To complement this information we interviewed patient safety managers. As the linch-pins between practising clinicians and managers and also Area Health Service administrations and the Health Department, they are in a good position to judge the value of SIP.

We found strong support that SIP as a whole was worth the investment placed in it. A majority of questionnaire respondents from study 3 reported that RCAs improve work practices (89.4%) and that RCAs improve communication about patient care (81.3%). Some three quarters of respondents (73.5%) felt that RCAs were a good use of time and resources; only 7.2% disagreed. Around a quarter of all positive respondents (27.7%) mentioned the benefits of SIP were culture change or other forms of change which were leading to improvements in safety. Other respondents noted that while SIP was a good start, these were early days and there were further gains that could be made over time.

A range of factors were seen by questionnaire participants and patient safety managers to be affecting the implementation of SIP. These included differential implementation of SIP across different AHSs, the future implementation of IIMS, and the need for persistence over time with SIP initiatives in order for benefits to be realised.

6.11 Study nine: assess the effectiveness of the Reportable Incident Review Committee

In this study we observed two meetings to assess how the Reportable Incident Review Committee, the peak co-ordinating body for SIP, functions in practice. We also reviewed and content analysed the agenda, terms of reference, and minutes of the Committee. We found that the Committee is structured appropriately, is multi-disciplinary in approach, and in principle encourages open discussion of relevant SIP issues and allows people to share experiences.

However, one major challenge is the composition of the Committee and the consistency in attendance at meetings because of pressure of time. For example, over the past year, 37 different people attended the 11 scheduled meetings and only 5 people attended more than 5 meetings. This calls to attention the question of the consistency of effort that is needed for a successful Committee of this nature.

6.12 Studies ten to twelve: assessment of DOH information handling and management of SIP processes

These final three studies involved observation of Departmental processes and interviews with key staff in the Department by which to gauge how well SIP processes were co-ordinated and managed at the peak level. We found that the current processes seemed to be working well although we note that the information handling system will likely be much more streamlined when the IIMS system is implemented.

Two major challenges were identified. The TRIM database seems to be insufficiently flexible for the purpose; however, once IIMS becomes institutionalised this problem should be remedied. Secondly, resources in Quality and Safety Branch and elsewhere in the Department to address the various issues from increased reporting of incidents may have reached their limits. Over time roles and functions of staff within Quality and Safety Branch and the Clinical Excellence Commission will need to be examined, and responsibilities for quality and safety initiatives re-assigned.

7 DISCUSSION

In conducting this work the evaluation team has been able to examine the SIP from a range of perspectives. This is the strength of a multi-method, triangulated design. On the other hand, this is a formative rather than summative evaluation, and definitive costs and benefits associated with the SIP initiatives, and long term program outcomes, are not yet derivable.

We can say with some confidence that SIP training has met the needs of a cohort of more than 2,500 policymakers, clinicians and managers across the NSW health system. This group has been exposed to principles, practices, skills and tools designed to improve patient safety. Recommendations 8 - 9 suggest how further education and training needs in SIP related areas might be met. A convincing case for more effective reporting of incidents has been put, and progress made in instituting IIMS, a more comprehensive system enabling the management of incidents. Root cause analyses to address specific incidents are now institutionalised. Taken together, these initiatives represent a considerable step forward in creating systems change and improving cultural perspectives on safety. It is important that SIP is monitored and supported over time; recommendations 1 - 4 deal with this.

Case study, interview, focus group and attitudinal data from our studies show how the educational component of SIP is effective, rated highly and well-regarded, and is contributing to the safety efforts of policymakers, clinicians and managers. The evidence we have assembled also indicates that a platform for further improvement has been laid, especially as people learn from each other and come to appreciate the gains that can be made from managing incidents more effectively than in the past.

There is scope for further development under this and future programs designed to improve patient care and make it safer in NSW. Safety is a journey rather than a destination. Recommendations 5 - 7 deal with maintaining and extending the gains made by SIP. The evaluation suggests the focus of future activity should be on understanding and addressing some of the challenges with conducting root cause analysis, including who does them, how they are done and their consequences, as well as how RCA recommendations are formulated and what happens to them. We make three recommendations (10 - 12) about research, evidence and communication of SIP results including RCA recommendations. The initiatives with instituting IIMS are commendable, but reporting levels to date have been variable, and further efforts will be needed to improve the reporting rate.

8 CONCLUSION

SIP is a major initiative. Many health care systems around the world are learning from each other in addressing safety concerns. The structure, education and organisation of SIP, benchmarked against international experience, rate well.

The tasks now are to work hard to maximise the benefits, secure further gains from this program and create synergies between the SIP and other strategies, programs and initiatives of NSW Health and the Clinical Excellence Commission. A range of recommendations flow from this evaluation. These are dealt with in the next section.

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10 APPENDICES

10.1 APPENDIX 1: CENTRE PERSONNEL ALLOCATED TO THE EVALUATION PROCESS

Staff members of CCGR have undertaken numerous studies into the organisational structures and processes of hospitals and the features of the underlying cultures and sub-cultures pertinent to clinical practice improvement. They are also experienced adult educators. Staff members have in addition undertaken a range of research and evaluation studies into health systems reforms, clinicians as managers and the leadership behaviour of clinicians. The Centre is a leading facility nationally and internationally in social science research and evaluation of health service reform initiatives.

The team deployed to conduct the evaluation includes medical clinicians, organisational behaviour specialists, psychologists and sociologists, an anthropologist, several social scientists as well as statistical and methodological experts. Thus we drew on the disciplines needed to do a thorough evaluation. The team is headed by A/Professor Jeffrey Braithwaite and includes Ms Jo Travaglia, Ms Nadine A. Mallock, Dr Rick Iedema, Conjoint A/Professor Mary T. Westbrook, Ms Debbi Long, Mr Peter Nugus, Ms Rowena Forsyth, Dr Christine Jorm, and Dr Marjorie Pawsey.

Associate Professor Jeffrey Braithwaite

BA, DipLabRels and the Law, MIR (Hons I), MBA, PhD, FAIM, FCHSE

Director, Centre for Clinical Governance Research

Professor Jeffrey Braithwaite is Director of the University of New South Wales' Centre for Clinical Governance Research and an Associate Professor in the School of Public Health and Community Medicine. He joined the Centre as a Commonwealth Casemix Research Fellow in 1994. Prior to this time Professor Braithwaite held a number of executive positions in the health sector over a twenty five-year period. He has managed, consulted, taught and researched in Australia and a number of countries including the People's Republic of China, Papua New Guinea, Japan, Singapore, Hong Kong, the United States of America and the United Kingdom. His research interests include clinicians as managers, organisational theory, the future of the hospital, organisational design of hospitals, change management in health care and health policy development and implementation. Professor Braithwaite has an international reputation in health services management, and has published extensively in national and international journals in these fields including the *BMJ*, *The Lancet*, *Social Science & Medicine*, *Organizational Studies and Health Services Management Research*. Professor Braithwaite is the CCGR project sponsor, led studies 8, 10, 11, and 12 and participated in studies 1, 4, 6, 9.

Ms Rowena Forsyth

BA (Hons)

PhD Candidate, Centre for Clinical Governance Research

Rowena Forsyth joined the Centre in April 2003 to undertake research for a PhD. Ms Forsyth's background is in social science with academic qualifications of a Bachelor of Arts in Sociology and Social Policy. Her PhD is located within a collaborative project between the Centre for Clinical Governance Research in Health and the Centre for Health Informatics at UNSW. The project, entitled 'Evaluating the Impact of Information and Communication Technologies (ICT) on Organisational Processes and Outcomes', is interested in utilising a multi-disciplinary, multi-method approach to assess the ways in which work practices of individual clinicians change as a result of the implementation of computerized test ordering and drug prescribing within an Area Health Services. Within this design, Ms Forsyth's research focuses on using video ethnography as well as focus groups/ interviews to understand how the ritual practices of clinicians are altered as a result of the new technology. Ms Forsyth participated in study 7(a).

Dr Rick Iedema

BA, MA, PhD (Syd)

Senior Researcher, Centre for Clinical Governance Research and Senior Lecturer, School of Public Health and Community Medicine, UNSW

Dr Iedema's research into hospital communication and interaction is of international renown. His publications have appeared in the *BMJ*, *Social Science & Medicine*, *Organization Studies* and *Health Services Management Research*, among many others. Dr Iedema's book (2003) provides an in-depth description of how the organisation of health care work is changing. Dr Iedema is also in the process of organising and editing a volume of papers in this area produced by a team of prominent local and international researchers. His contribution to the study of clinical practice and its organisation is also demonstrated in his role as Co-Chief Investigator on three ARC-SPIRT/Linkage funded projects and as Principal Chief Investigator on two ARC Discovery grants. These projects have enabled Dr Iedema to describe the overarching facets of clinicians' work that produce good clinical as well as organisational outcomes. Dr Iedema led studies 7(a) and 7(b) and participated in study 2(a).

Dr Christine Jorm

MBBS, MD, FANZCA

Conjoint Senior Lecturer, Centre for Clinical Governance Research, St George Clinical School and School of Public Health and Community Medicine

Dr Christine Jorm is an Anaesthetist with wide expertise in the organisational and clinical dimensions of safety and quality. She has experience in convening RCA teams and being an RCA team member and leader.

Dr Jorm brings extensive clinical experience to adverse event analysis and the negotiation and dissemination of analytical findings. Her research involves studying the interaction of medical specialty culture with patient safety and quality issues. Qualitative inquiry and research design form the major part of this study. Themes that illuminate behaviour include: personal motivations for work, the understanding of professionalism, the strength of alliances with other doctors, and the influence of current public and political perceptions of healthcare in NSW. A number of psychological constructs are also of potential relevance. These include organizational citizenship behaviour, risk taking behaviour and bystander apathy. Dr Jorm participated in studies 7(a) and 7(b).

Ms Debbi Long

MA (University of Nijmegen, The Netherlands)

Research Fellow, Centre for Clinical Governance Research

Ms Debbi Long is a Research Fellow at the Centre for Clinical Governance Research. Ms Long researches and teaches in the areas of medical anthropology and qualitative health research. She has undertaken ethnographic research in Turkey, the Netherlands, and a variety of health related environments in Australia. She has taught in the Anthropology departments of the Universities of Nijmegen and Adelaide and in the medical schools of the Universities of Melbourne, Adelaide and NSW. She is currently involved in an ARC-funded research project, which looks at how organizational reform affects work practices and discourses in two teaching hospitals. Ms Long led study 5 and participated in study 2(a).

Ms Nadine A. Mallock

BHI, MHI (Health Informatics)

Research Officer, Centre for Clinical Governance Research

Ms Nadine Mallock is a Research Officer at the Centre. She has a background in Health Informatics and is currently completing an economics degree. Ms Mallock has extensive experience in administering and analysing questionnaires, searching databases and the Internet, managing projects, writing reports and liaising with health care key stakeholders. She is/or has been working on a wide range of projects including the evaluation of Point of Clinical Care Systems, knowledge management, the development of a health sector impact evaluation tool, diversity management and defining the public health workforce. In 2002, Ms Mallock was part of the Clinical Practice Improvement Training Program evaluation team. Ms Mallock led studies 4 and 9 and was involved in studies 2(a), 3, 6, 8, 10, 11 and 12.

Mr Peter Nugus

BA (Hons), GradDipAdEd, MA (Hons)

PhD Candidate, Centre for Clinical Governance Research

Mr Peter Nugus holds a BA (Hons) in Politics, an MA (Hons) in Sociology (University of New England) and a Graduate Diploma in Adult Education (University of Technology Sydney). He is a doctoral candidate in the Centre for Clinical Governance Research UNSW, using interviews, focus groups and observation to examine the talk and situated practices of emergency clinicians around issues of clinical safety. Mr Nugus led study 1 and participated in studies 2(a) and 7(a).

Dr Marjorie Pawsey

MB BS, DPH, FAFPHM

***Principal Research Consultant, Australian Council on Healthcare Standards (ACHS);
Visiting Fellow, Centre for Clinical Governance Research***

Dr Marjorie Pawsey is Principal Research Consultant at the Australian Council on Healthcare Standards (ACHS). This position uses the wealth of ACHS data to inform discussion on safety and quality and for research into quality improvement and accreditation. Dr Pawsey is also a Visiting Fellow at the Centre where she contributes her practical experience to co-supervision of PhD students and research and evaluation projects. Dr Pawsey's early working experience was in health services research and she has 25 years' experience in health care quality as a quality manager in a Sydney teaching hospital and as an executive manager with responsibility for the development of ACHS standards and clinical indicators and the delivery of the accreditation services. Dr Pawsey wrote *A Practical Approach to Quality Assurance* published in 1990 and in 2003 was awarded life membership of the Australasian Association for Quality in Health Care for her contribution to quality and accreditation. Dr Pawsey participated in studies 6, 10, 11 and 12.

Ms Jo Travaglia

BSocStuds (Hons), Grad Dip AdEd, Cert TEASOL, MEd

Research Fellow, Centre for Clinical Governance Research

Ms Jo Travaglia has been involved in health services education and research for over 20 years, actively inquiring into and promoting and developing the concept of diversity and cultural competence in health. She has led research/evaluation projects on range of topics relating to diversity, ethnicity, cultural competence, and disability and health services.

Ms Travaglia has taught in the Bachelor of Education, Postgraduate Diploma in Education and Masters of Education Programs at the University of Sydney and the Australian Catholic University. At the University of NSW she had taught undergraduate and postgraduate medical and Masters of Public Health students. She is currently working in the Centre for Clinical Governance Research on an evaluation of the impact of the Clinical Excellence Commission programmes in NSW. Ms Travaglia was project coordinator for this evaluation project, led studies 2(a) and 6 and participated in studies 1, 8, 10, 11, 12.

Conjoint Associate Professor Mary Westbrook

BA (Hons) (Syd), MA (Hons), PhD (Macq), FAPS, AM

Conjoint Associate Professor, Centre for Clinical Governance Research

Before joining the CCGR Associate Professor Westbrook was Associate Professor in the Department of Behavioural Sciences, Faculty of Health Sciences, The University of Sydney. During her teaching career she was primarily involved in the education of students in ten health professions. Associate Professor Westbrook has published over 100 research articles in peer reviewed journals. Her main areas of research are illness, disability, ageing, health care, health consumers, ethnicity, gender, organisational behaviour and vocational development of health professionals. Associate Professor Westbrook is a Fellow of the Australian Psychological Society. In 1998 she was awarded an AM for 'services to people with disabilities and to education in the field of health sciences research'. She is a director of the Northcott Society, one of the largest Australian NGOs providing services for people with disabilities and is a member of the Medical Advisory Board of Post-Polio International, USA. She was a founding member of Post-Polio Network (NSW) and through its website provides a global email information enquiry service for polio survivors and health care providers. Associate Professor Westbrook led studies 2(b) and 3 and participated in studies 4, 6, and 8.

10.2 APPENDIX 2: THE CLINICAL EXCELLENCE COMMISSION'S AND DEPARTMENT'S BRIEF TO THE CENTRE

Introduction

Clinicians are working hard, skilfully and diligently to care for their patients. Despite this, there are areas, not readily visible, that require improvement. Strong evidence has been published that there are major problems in the safety and quality of health care in Australia and overseas. Medical indemnity payments are skyrocketing and the number of complaints to the Health Care Complaints Commission continues to rise.

The answer to this puzzle is becoming more apparent. The Institute of Medicine published "To Err is Human" which comprehensively reports on the issue of providing safe and quality health care.

A series of new concepts have emerged which have helped understand the dilemma. They include the following:

1. The increasing understanding of the nature of human and system error.
2. A change in culture from that of individuals working on their craft to teams of professionals working together.
3. The importance of clinical practice that is based on sound evidence (Evidence Based Medicine).
4. The active participation of consumers.
5. The understanding of the need to constantly improve systems of care.

The need for improvement and ensuring first class safety and quality of care at the local level, underpin the direction of the newly established Clinical Excellence Commission. The principles are encapsulated in the *Framework for Managing the Quality of Health Services in New South Wales* adopted by NSW Health in 1999 and the *Clinician's Toolkit* for improving patient care published in 2001. These principles have been further captured in the *Safety Improvement Program*.

Overview of the Safety Improvement Program (SIP)

SIP is a comprehensive safety program introduced to the NSW health system in 2002. It aims at to improve patient safety by focussing on health care incident management.

Objectives

- To make health care safer through constantly correcting system vulnerabilities by understanding why errors occur.
- To develop a culture where health care incidents are identified, reported, investigated, analysed and acted upon in a supported environment.

- To implement an information system that assists health care workers to achieve the first component.

Faculty

Maureen Robinson, Paul Douglas, Sarah Michael, Tim Cartmill, Tom Hugh, John Overton, Jan Stow.

Key components of the program

A comprehensive incident management program has many components. The NSW system has the following:

1. Incident identification

- Relies on the awareness/consciousness of healthcare providers that an incident/near miss has occurred
- Relies on systems/processes to capture incidents other than individual reporting. Data capturing mechanisms include:
 - Incident/near miss reporting
 - Complaints
 - Mortality/Morbidity reviews
 - Peer review meetings
 - Death audits
 - Retrospective chart review
- Requires the environment (culture) to support the identification/reporting of incidents

2. Prioritisation

- Stratification of **all** incidents/near misses using the Severity Assessment Code matrix to ensure appropriate review and investigation
- Scores allocated for the **actual** and **potential** risk for all incidents
- Reportable Incident Brief (RIB) Circular 2003/88 outlines the associated management process (who needs to know about it and what needs to be done)

3. Notification

- Incident notified in the Incident Information Management System (IIMS) (from November 2004)
- Each AHS will have a self defined workflow/management process defined
- All SAC 1's (serious adverse events) are reported to the DOH as a RIB

4. Investigation

- Varied dependent on the severity of the incident
- Tools include:
 - Simple investigation
 - Root Cause Analysis (RCA)
 - Peer Review
 - Clinical Practice Improvement (CPI)
 - Failure Mode Effect Analysis (FMEA)

5. Analysis and Action

- Undertaken at various levels with varied data
 - Ward/ Unit
 - Facility /service
 - AHS
 - State

6. Feedback (Knowledge Management)

- Provides various levels with varied data and through various medium
 - Individual
 - Ward/Unit
 - Facility/Service
 - AHS
 - State
 - Public

7. Open Disclosure

Open disclosure is the process of open discussion of adverse events that result in unintended harm to a patient while receiving health care and the associated investigation and recommendations for improvement.

Strategic mechanisms

The DOH and CEC (previously ICE), have established the following six structure and strategies to give effect to the seven essential elements of good incident management.

1. Reportable Incident Brief (RIB) process

Circular 2003/88 was released in 2003 to compliment the SIP in ensuring a standardised coordinated mechanism for the management of serious adverse events both in an Area and at a state level.

2. SIP steering committee

The Safety Improvement Program Steering Committee is a high level committee established in the DOH to oversee the management of health care incidents reported to the Department and to provide strategic direction and advice on policy development that focuses on health care system improvement.

3. Quality and Safety Branch action

Daily, weekly, monthly and quarterly review and analysis of information received in the branch is undertaken. This ensures that immediate and longer term action is taken. Short term action involves the identification of issues requiring system alerts or advisories, with longer term action around policy development and implementation of actions and recommendations.

4. SIP training program

The SIP training program is a 2-day training program provide to health system employees and which has 4 key objectives:

- To provide an overview of the SIP in NSW
- To demonstrate the need for a different approach to error and health care incidents and to introduce the concepts of human factors
- To use and understand the Root Cause Analysis (RCA) method in the use of the RCA tools
- To outline the critical steps for success in effective incident management at the Area and State levels

The SIP program is supported by the SIP management committee and the SIP education working party to develop ongoing training programs e.g. RCA train the trainer program and other initiatives arising from the RCA process. These committees will become committees of the CEC.

5. Reporting

- Reporting of results internally through functional committee structures.
- Reporting more broadly through the knowledge management program and development of state reporting mechanisms

Terms of reference of the SIP evaluation

1. Purpose

To review the five strategies that have been established to achieve the seven key components of the effective incident management system with the view of guiding its further development.

The review will involve an examination of both short term and long term achievements.

2. Key Tasks

The evaluation will involve a review of the following:

- Retrospective review of education and training provided in 2003/2004
- The extent to which the courses conducted met their stated aim and objectives and met the interests of all key stakeholders
- The ongoing applicability of training to participants The satisfaction of faculty members with course organisation, resources and achievements
- The immediate and longer term program outcomes in terms of the number of RCA's undertaken, recommendations and implementation of actions at the local, area and state levels
- The lessons learned
- The return on investment
- The extent to which the SIP Steering Committee is effective
- RIB management
- Branch functions and action

Process

It is expected that the process undertaken to complete the consultancy will include:

- Review of relevant literature, both national and international
- Consultation with key stakeholders involved in the Safety Improvement Program including:
 - i. SIP steering committee
 - ii. SIP management committee
 - iii. Branch Directors and other department staff
 - iv. Clinical Excellence Commission representatives
 - v. NSW Health representatives
 - vi. Faculty members

- vii. Course participants
- viii. AHS CEO's and other representatives.
 - Report of progress to the Knowledge management steering committee
 - Preparation of interim report
 - Preparation of final report

4. Project supervision, management and collaboration

The SIP Steering committee will oversee the contract.

The supervisor is Maureen Robinson, Director, Quality and Safety Branch.