



THE UNIVERSITY OF
NEW SOUTH WALES



CENTRE FOR CLINICAL GOVERNANCE RESEARCH

EVALUATION OF THE SAFETY IMPROVEMENT PROGRAM IN NEW SOUTH WALES: STUDY NO 2(b)



REPORT ON NSW HEALTH QUESTIONNAIRE
EVALUATION OF THE SIP COURSE

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
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

This report presents the results of the second part of study 2 in the evaluation of the Safety Improvement Program (SIP) in New South Wales. This study provides an analysis of participants' responses to the NSW Health evaluation questionnaire completed at the end of SIP courses. We conducted this component of the evaluation in between November and December 2004. We found that the course was viewed very favourably by the vast majority of participants. Particularly positive assessments were made of course presenters, the quizzes and visual aids. The least positively rated course components concerned the acquisition of skills. There was no relationship between perceived skill acquisition and positive evaluation of the course. Participants from regional and rural health services made more positive appraisals of the course than did their Sydney counterparts.

3 INTRODUCTION

3.1 Overview

The NSW Department of Health (DOH) and the Clinical Excellence Commission (CEC) have commissioned the Centre for Clinical Governance Research (CCGR) at 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 overall evaluation of SIP takes the form of 12 inter-related studies (Table 1). This report documents the outcomes of study 2b. It presents the results of an analysis of the evaluation of participants' appraisals of the SIP training course. This component of the evaluation was conducted by Conjoint A/Professor Mary T. Westbrook.

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 education and training program	<ul style="list-style-type: none"> • 2 a) Triangulated review of educational value of RCA program • 2b) Meta-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	<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 SIP Committee	<ul style="list-style-type: none"> • Observation of Steering 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, Jo Travaglia, Nadine Mallock, Marjorie Pawsey
Study #11	Reporting processes	<ul style="list-style-type: none"> • Focus group • DOH data • Interviews with key stakeholders 	Jeffrey Braithwaite, Jo Travaglia, Nadine Mallock, Marjorie Pawsey
Study #12	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

3.2 About this report

Between November 2002 and December 2004 NSW Health conducted the Safety Improvement Program (SIP) course 24 times. Eighteen of these courses were presented in specific Health Areas, two were to particular services (Ambulance and Correctional Services) and the final four were to groups made up of health practitioners from all health service areas. At the end of each course participants were asked to complete a questionnaire that NSW Health had developed in order to evaluate the program. Over the years that the course was conducted the questionnaire expanded in length, from incorporating 10 to 18 five-point scale items. There were also four open-ended questions in the questionnaire. The SIP course itself also changed slightly over this period in content and presentation as reflected to some extent by the items that appeared in, or disappeared from, the questionnaire.

The aim of the present study was to evaluate participants' appraisals of the SIP course. The specific issues investigated were 1) How successful was the SIP in terms of participants' overall evaluation of the course? 2) Which components of the course were judged by participants to be of most and least value? 3) Were some presentations of the course more successful than others in terms of participants' evaluations and/or their perception of the safety skills they acquired? For example, did positive ratings of the course increase over time as presenters became more experienced and the course content was refined? 4) Which components of the course were associated with overall positive evaluations of the SIP course by participants? 5) What additional information about the program was provided by participants' answers to the open-ended questions, particularly the final question which asked for general comments?

4 METHODS

4.1 Sample

As the number and content of the items in the evaluation questionnaires completed by the 24 groups who undertook the SIP course varied, we selected 18 groups who had all answered a set of the same 18 items. This sample included all groups that had undertaken the SIP since April, 2003 and excluded the groups who attended courses between November 2002 and March, 2003. Overall 1295 health practitioners completed evaluation questionnaires at the end of these 18 courses.

4.2 Questionnaire

The 18 questionnaire items selected for this evaluation are shown in Appendix 2, where they are arranged in the order in which they appeared in the questionnaire. Of the 14 five-point scale questions, three items concerned the *course presenters and facilitators*; their knowledge, their ability to convey information and their responsiveness to participants. Eight items covered the *content of the course*. There was an overall question on the effectiveness of the breakout sessions in which participants worked in small group meetings and four questions asked for ratings of each meeting viz meetings 1, 2 part 1, 2 part 2, and 3. In the evaluation questionnaire distributed after the last two courses in 2004, participants were asked to rate parts 1 and 2 of meeting 3 separately. For the purpose of the present study these participants' two ratings of meeting 3 were averaged. Two items concerned lectures given on the Root Cause Analysis (RCA) process: gathering information and human factors involved. There were several other lectures in the course. These were either presented in different formats over the two years or were not included or assessed in all courses, so they were not included in this study. The eighth component of the course content investigated was the visual aids used. Three items asked respondents about the *overall value of the course and participants' safety improvement skills* viz "Do you feel comfortable to 'SAC' (severity assessment code) incidents back in your facility/service" and "Following the workshop I would be able to" (differing degrees of RCA participation were listed as optional answers) The *four open-ended questions* asked for respondents' comments on three aspects of the course (the content and layout of the folders, the flow of the two days, the quiz and games used) and for general comments.

4.3 Procedure

The questionnaires were completed by each group at the end of the final day of the SIP course. Putting one's name on the questionnaire was optional. Participants' answers to the five-point scale items were added, converted to percentages and ranked to show the trends in the data. Percentages were calculated in terms of the number of participants in a group who answered a questionnaire. For items where one, or a few, respondents failed to answer a particular question (perhaps because they were unsure of the answer) the percentages were calculated in terms of the number of questionnaires submitted by the group. Non-responders were included in groups giving the less favourable responses in the chi square analyses.

Examination of participants' answers on the five-point scales showed that the vast majority endorsed one of the three most positive options for all items (and particularly the two most positive) and very few checked the two most negative options the scales provided. While this indicated widespread approval of the SIP program, it made identification of different patterns of response more difficult. In order to best differentiate the patterns of answers in the tables and analyses it was decided to focus analyses primarily on participants who endorsed the most positive optional answers versus others and/or those who checked either of the two negative options. So few respondents endorsed the negative options that it was pointless to differentiate between these.

Chi square (χ^2) analyses were used to compare the proportions of respondents in the 18 courses 1) giving very positive versus other overall evaluations of the course, 2) reporting being more or less comfortable to 'SAC' incidents and 3) reporting greater or less ability to participate in RCAs. Spearman rank order correlation coefficients were calculated to determine whether there were associations between respondents' ratings of the various components of the course and their overall evaluation of the program. Significance level was set at 0.05.

Content analysis of responses to the four open-ended questions was performed on a sample of 180 questionnaires. This sample consisted of 18 sets of 10 questionnaires randomly selected from each of the groups. Responses to each of the four questions were classified into four categories viz positive comments, negative comments, mixed or neutral comments and no comments. The mixed category consisted of comments that were either a combination of positive and negative statements or neutral, non-evaluative statements. There were very few of the latter so placing them in a separate category was not justified. Examples of statements for each of these categories for the four open-ended questions are shown in Appendix 1, figures 4-7. A chi square analysis was used to compare the responses of Sydney and regional/rural Health Service Areas to the final open ended question which asked for general comments on the program. It was not possible to compare these groups' responses to the other open-ended questions as the expected frequencies were too low in too many cells.

5 FINDINGS AND DISCUSSION

5.1 How did participants evaluate the SIP course presentations overall?

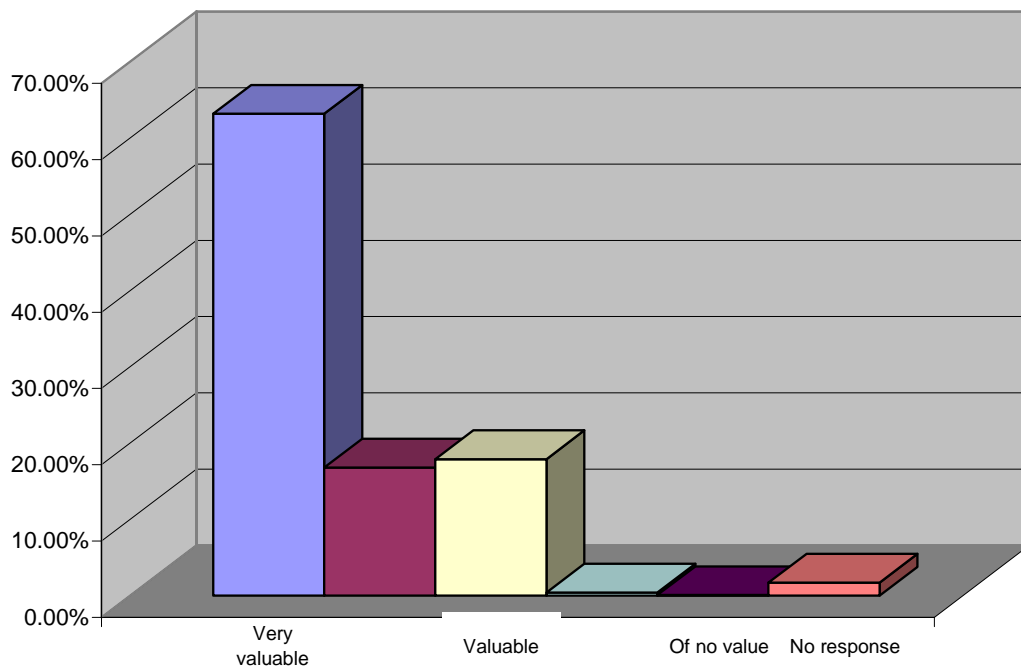
TABLE 2: Percentages of participants at 18 courses giving very positive or negative ratings of value of program*

Area/course	VERY POSITIVE RATINGS		NEGATIVE RATINGS	
	%	Rank	%	Rank
ASNSW	85.3	1	0	11.5
CHS	58.2	15	0	11.5
FWAHS	63.0	10.5	0	11.5
HAHS	71.1	6	1.2	3.5
IAHS	75.4	3	0	11.5
MNCAHS	63.9	8	0	11.5
NEAHS	80.6	2	0	11.5
NRAHS	63.0	10.5	0	11.5
NSAHS	26.7	18	2.3	1
SAHS	63.5	9	0	11.5
SESAHS	46.4	17	0	11.5
SWSAHS	59.3	14	1.2	3.5
WAHS	62.2	12	0	11.5
WSAHS	67.3	7	0	11.5
SIP1	54.3	16	1.4	2
SIP2	61.8	13	0	11.5
SIP3	74.7	4	0	11.5
SIP4	71.4	5	0	11.5
Average	63.1		0.4	

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

Table 2 shows the proportions of participants in the 18 groups who, when asked the overall value of the SIP program, checked the option “very valuable”. On average 63.1% of health practitioners in each group responded in this way. This ranged from 85.3% in the course for the Ambulance Service to 26.7% in the course from the Northern Sydney Area Health Service. The table also indicates the percentages of participants who choose the two most negative responses. Only 0.4% of participants gave an overall negative evaluation of the program. These people attended one of four courses, three of which gave relatively lower numbers of very positive responses viz Northern Sydney Area Health Service, SIP1 and South Western Area Health Service. The highest percentage of members of a group giving negative overall evaluations of the program was 2.3% (Northern Sydney). Overall these figures reveal that most participants rated the SIP program as a “very valuable” (they checked the first option on the five-point scale) or “valuable” experience (they checked options 2 or 3 on the scale) (See figure 1).

FIGURE 1: Histogram of participants’ ratings of overall value of SIP course



5.2 How were the various components of the course evaluated by participants?

TABLE 3: 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
Total	10780	229		

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

Table 3 shows the numbers and percentages of the very positive (checked the first optional answer on the scale) and the negative answers (checked either of the last two optional answers to the item) that the 1295 participants gave on their evaluation questionnaires. Regarding participants' evaluation of the course, presenters' knowledge received the highest percentage of very positive ratings (77.2%). Presenters were seen as very good at conveying information (66.2%, rank 3) and as very responsive (59.8%, rank 5). However presenters' responsiveness was also ranked 3 for negative ratings received (2.1%).

The component of the course content receiving the most very positive ratings was visual aids (68.1%, rank 2 of all course components). The lectures on gathering information (49.7%) and human factors (52.2%) were ranked 9 and 7 respectively. Overall the breakout sessions were very positively evaluated by 42.6% of participants (rank 12) but received more negative ratings than any other course component (3.6%, rank 1). The meetings that occurred in the breakout sessions were given "very informative" ratings by between 52.3% and 48.1% of participants.

The overall evaluation of the SIP course as "very valuable" was 63.1% (rank 4) and negative ratings for the course overall were very few (0.4%, rank 13). However the two skills related items were given the fewest very positive appraisals in the questionnaire; 35.4% (rank 13) of participants said they were very comfortable to 'SAC' incidents at their facility/service and 3.1% gave negative responses (rank 2). The item on perceived ability to participate in RCAs elicited 17.5% (rank 14) of the most positive response possible, "Teach others to do an RCA", and only 0.8% (rank 9.5) gave negative responses. Interpreting answers to this item is problematic as the three descriptors placed above the first, third and fifth sections of the scale (viz "Teach others to do an RCA", "Participate in an RCA", "Unable to contribute") contain the two distinct notions of teaching and participation. As the course was not primarily concerned with instructing participants in how to teach others about RCAs, it is perhaps not surprising that this item received a relatively low number of responses to the first option.

The histograms in figures 2 and 3 present the details of responses to all optional answers to the two skill items. In responding to the question on RCA abilities (figure 3), 58.9% of participants checked the middle option "ability to participate in an RCA". When this is combined with the percentages checking the first two options, which presumably implied ability to participate as well as to teach RCAs (first option) or to teach RCAs to some extent (second option), then 96.3% of health practitioners who attended the program felt able to participate in RCAs. It is unfortunate that the notions of teaching and participating in RCAs were not presented as separate items in the questionnaire.

FIGURE 2: Histogram of responses to 'SAC' skill question

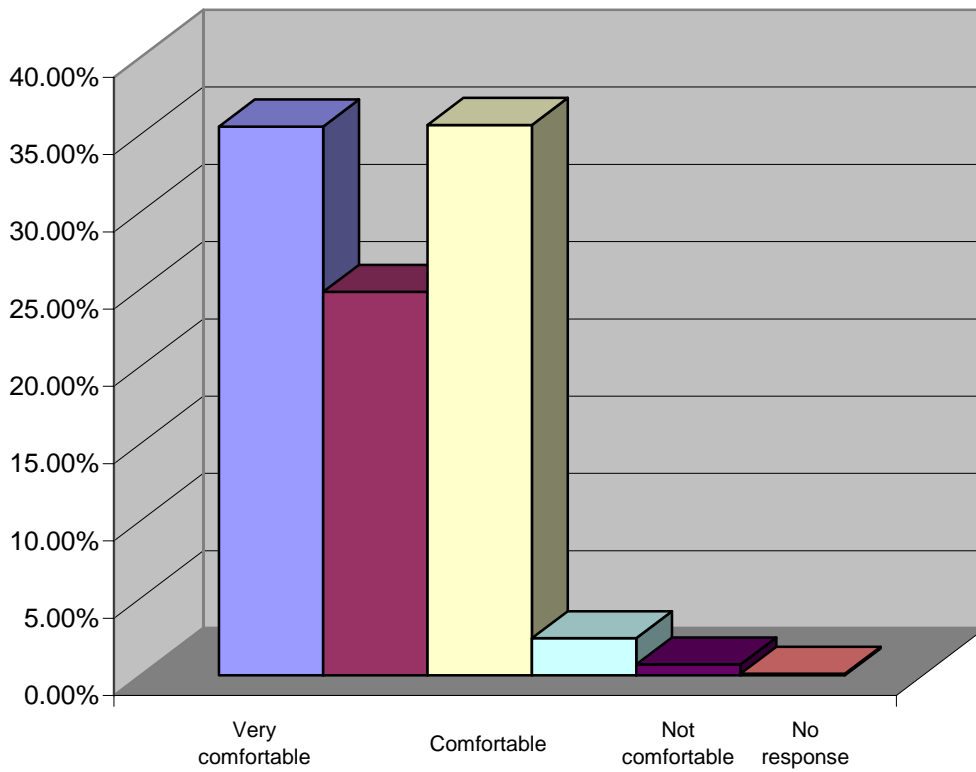
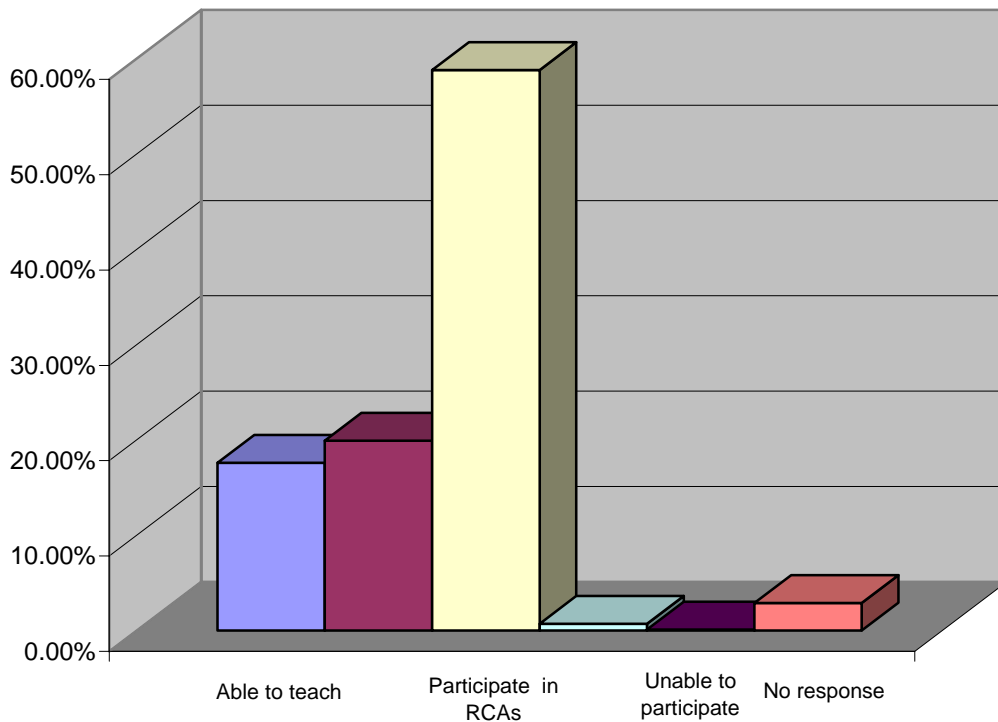


FIGURE 3: Histogram of responses to RCA skill question



5.3 Were some course presentations of the SIP course evaluated more highly than others?

TABLE 4: Chi square analysis comparing the proportions of participants in 18 course groups giving very positive and less positive overall evaluations of course *

OVERALL RATINGS OF PROGRAM						
Group presentations Arranged by date	Very positive			Less positive		Total
	N	%	RANK	N	%	
SWSAHS 4/03	48	(59.3)	14	33	(40.7)	81
WAHS 5/03	51	(62.2)	12	31	(37.8)	82
NEAHS 6/03	54	(80.6)	2	13	(19.4)	67
HAHS 6/03	59	(71.1)	6	24	(28.9)	83
NRAHS 7/03	46	(63.0)	10.5	27	(36.9)	73
NSAHS 7/03	23	(26.7)	18	63	(73.3)	86
SAHS 8/03	40	(63.5)	9	23	(36.5)	63
MNCAHS 8/03	39	(63.9)	8	22	(36.1)	61
WSAHS 9/03	37	(67.3)	7	18	(32.7)	55
SESAHS 9/03	39	(46.4)	17	45	(53.6)	84
IAHS 9/03	52	(75.4)	3	17	(24.6)	69
ASNSW 10/03	58	(85.3)	1	10	(14.7)	68
CHS 10/03	39	(58.2)	15	28	(41.8)	67
FWAHS 11/03	46	(63.0)	10.5	27	(37.0)	73
SIP1 3/04	38	(54.3)	16	32	(45.7)	70
SIP2 6/04	42	(61.8)	13	26	(38.2)	68
SIP3 9/04	56	(74.7)	4	19	(25.3)	75
SIP4 12/04	50	(71.4)	5	20	(28.6)	70
Total	817	(63.1)		478	(36.9)	1295
$\chi^2 = 99.20$ (df 17) $p < 0.001$						

* Participants with very positive ratings checked scale option 1, those with less positive ratings checked options 2 -5 or gave no response

To investigate whether the 18 presentations of the program attracted similar overall evaluations from participants a chi square analysis was performed. Differences related to the date of presentation might have been expected because as time passed presenters' skills should have improved. Also changes to the course were made over time with the purpose of improving outcomes. The analysis yielded a chi square value of 99.20 ($p < 0.001$) indicating highly significant differences in participants' evaluations of the various presentations. However examination of table 4 indicates that the differences found were not related to time of presentation.

Of the nine most highly evaluated courses five occurred in the first half of the time period and four in the second half. Of the four final SIP courses the first two received relatively poor ratings (16, 13) and the last two were given good ratings (4, 5). The group giving the most favourable overall evaluation of the program was the Ambulance Service. Of the seven regional/rural health services in the study, five gave ratings in the top half of the range (New England 2, Illawarra 3, Hunter 6, Mid North Coast 8, Southern 9) and two gave ratings in the lower half (Far West 10.5, Northern Rivers 10.5). The average ranking of regional/rural health areas was 7. However of the five Sydney Area Health Services all, with the exception of Western Sydney (7), gave ratings in the lower half of the range (Northern Sydney 18, South Eastern Sydney 17, South Western Sydney 14, and Wentworth 12). The average ranking of Sydney areas was 13.6. These findings suggest that regional/rural health areas were more appreciative of the program possibly because they are less often exposed to such initiatives.

The chi square analysis comparing the proportions of participants in the 18 groups who said they were very comfortable or less than very comfortable to 'SAC' incidents when back in their facility yielded a non-significant result ($\chi^2 = 25.38$, $df = 17$, $p > 0.05$). This indicated that the overall proportion of participants who were very comfortable about their ability to 'SAC' (35.4%) did not differ significantly across the 18 course presentations.

When performing the chi square analysis of participants' responses to the question about RCAs, the participants who checked either of the first two scale options (which stated or implied an ability to teach others to do an RCA) were compared with those checking the last three options. The result was not significant ($\chi^2 = 20.27$, $df = 17$, $p > 0.05$). The overall proportions of participants who thought they had some ability to teach others about RCAs (37.4%) did not differ significantly across the 18 groups.

5.4 Which components of the SIP course were associated with a positive overall evaluation of the course?

TABLE 5: Rank order correlations between ratings of course components and overall evaluation of the program (n=18)

COMPONENT	R	P
Course presenters		
Knowledge of subject	0.82	<0.001

COMPONENT	R	P
Conveyed information	0.73	<0.001
Responsive	0.66	<0.01
Course content		
Breakout sessions	0.75	<0.001
Meeting 1	0.79	<0.001
Meeting 2.1	0.77	<0.001
Meeting 2.2	0.72	<0.001
Meeting 3	0.77	<0.001
Lecture: Gathering information	0.81	<0.001
Lecture: Human factors	0.83	<0.001
Visual aids	0.31	>0.05
Skills		
Comfortable to SAC incidents	0.36	>0.05
Ability to teach others to RCA	0.27	>0.05

To determine whether participants' ratings of particular components of the program were associated with their overall evaluation of the course, rank order correlations were calculated comparing the 18 groups' overall evaluations of the program with each of the other 13 components examined by the five-point scale items. As table 5 shows, participants who rated presenters' knowledge highly, as well as their ability to convey information and their responsiveness were highly likely to give a very positive overall rating of the course (and vice versa). This was particularly so if the presenter was judged as knowledgeable about the subject (R=0.82).

The course content having the highest correlation with the rated overall value of the program was the informativeness of the lectures; the lecture on human factors (R=0.83) and the lecture on gathering information (R=0.81). Ratings of the informativeness of the breakout sessions/meetings were also significantly correlated with the rated overall value of the program (R=0.75). This was particularly true of Meetings 1 (R=0.79), 2.1 and 3 (R=0.77 for both). The visual aids used in the course received the second highest positive rating of the course components (see table 3) however participants' ratings of the visual aids were not significantly related to their overall valuations of the course (R=0.31, p>0.05).

There was also no relationship between participants' ratings of their skills and their overall evaluations of the course. Thus participants who said they would feel very comfortable to 'SAC' when back in their facility were no more likely to give the course a high valuation than were those who felt less comfortable ($R=0.36$, $p>0.05$). Participants who felt confident enough to be able to teach RCAs as a result of doing the workshop were no more likely than their less confident peers to rate the overall course highly ($R=0.27$, $p>0.05$). Thus, apart from attitudes towards the visual aids used, the only two components that did not predict highly positive overall evaluations of the program were the participants' perceptions of the safety skills they had acquired.

5.5 Information provided by participants' responses to the open-ended questions

TABLE 6: Number and percentages of respondents giving various responses to open-ended questions

RESPONSE	OPEN ENDED QUESTION TOPIC				TOTAL
	Folders	Flow	Quiz	General	
Positive	108 (60.0%)	117 (65.0%)	133 (73.0%)	72 (40.0%)	430 (59.7%)
Negative	19 (10.5%)	16 (8.9%)	7 (3.9%)	39 (21.7%)	81 (11.2%)
Mixed/Neutral	14 (7.8%)	12 (6.7%)	4 (2.2%)	19 (10.5%)	49 (6.8%)
None	39 (21.7%)	35 (19.4%)	36 (20.0%)	50 (27.8%)	160 (22.2%)

Table 6 shows that most participants chose to respond to the open-ended questions and a positive statement was the most common answer (59.7%). The question on the quiz and games elicited the most positive responses (73%) and the general comments question the least (40%). The second most common reaction to these questions was to make no response. Lack of response was around 20% for all items except the general comments question which was not answered by 27.8% of participants. Overall an average of 11.2% of comments was negative. Few negative comments were made about the quiz question (3.9%) and most in the general comments (21.7%). An average of 6.8% of answers was mixed or neutral. They ranged from 2.2% for the quiz question to 10.5% for general comments. Appendix 1 (Figures 4-7) lists examples of the three different categories of response for each of the four open-ended questions.

Overall table 6 shows that participants were very favourably disposed toward the quiz, the flow of the course and the folders. When asked to make general comments almost twice as many were entirely positive in their comments as were entirely negative. Respondents gave the most negative and mixed replies when responding to the general comments item. As figure 7 shows, a wide range of issues were raised. The item allowed participants to “let off steam” about personal reactions to, and concerns about, the program that no other item in the questionnaire explored eg comfort of venue, quality of food, having to attend a night meeting, opportunities to network, what will happen after the course is over. Results of a chi square analysis comparing the general comments of participants from courses given to Sydney and regional/rural Health Service Area groups is shown in table 7. Regional and rural participants were almost twice as likely to make favourable general comments. Those from Sydney were almost four times more likely to give negative feedback and they were more likely not to answer the question. Regional and rural health practitioners were also more likely to give mixed or neutral evaluations.

TABLE 7: Chi square comparing general comments of Sydney and regional/rural participants

RESPONSE	SYDNEY (N=50)	REGIONAL/RURAL (N=70)	TOTAL (N=120)
Positive	13 (26.0%)	36 (51.4%)	49 (40.8%)
Negative	17 (34.0%)	6 (8.6%)	23 (19.2%)
Mixed/Neutral	4 (8.0%)	9 (12.9%)	13 (10.8%)
None	16 (32.0%)	19 (27.1%)	35 (29.2%)
$\chi^2=15.33$, df 3, $p<0.01$			

6 CONCLUSION

This analysis of the evaluation questionnaires completed at the conclusion of the SIP courses shows that the vast majority of participants rated the course and its presentation and components very highly indeed. Participants were particularly positive in their assessment of the course presenters and the visual aids, quizzes and games. However participants were less confident whether they themselves had the two safety related abilities (SAC and RCA) investigated in the questionnaire. This is somewhat troubling as a major aim of the program is to provide participants with the skills to apply the knowledge provided in the course. However the poor construction of the skill question concerning RCAs, as discussed in this report, would have contributed to its low very positive ratings score. Having confidence in these two abilities were the only responses to the questionnaire (apart from appreciation of the visual aids) that were not significantly associated with giving a positive overall evaluation of the course. Again it would be expected that experiencing the course and its components as very valuable would be associated with comfort to 'SAC'. To what extent participants' perceptions of their skills at the end of the course translated into performance in their workplaces will be addressed in the follow-up survey of SIP participants which we report in the next study in the evaluation, study 3. It will also be of interest to observe the extent to which the very high evaluations of the SIP program given at the end of the course will carry over to the Centre's follow-up questionnaire which was administered years or months after attendance at the course. The experience of two days away from everyday work listening to excellent presentations was probably very pleasant and may have generalised to participants giving the course very good assessments; a possible 'halo' effect that may be found to have dimmed in retrospect.

There was no evidence that participants in later courses gave more positive overall evaluations of the course nor that they were more confident of their skills than were participants in earlier courses. Thus changes made to the course did not affect participants' perceptions of these outcomes as measured by the evaluation questions. However there was evidence that health practitioners in regional/rural Health Areas valued the SIP course more highly than did those in Sydney Health Areas. Regional and rural health professionals' general comments on the course were more often positive and less often negative than were comments by their Sydney counterparts. A similar phenomenon was identified by the Centre for Clinical Governance Research in Health (2004) in its evaluation report commissioned by the Institute for Clinical Excellence on the "NSW Patient Flow and Safety Collaborative". That analysis showed that regional/rural, as opposed to Sydney, Collaborative Health Teams were significantly more likely to endorse the program positively. For example, regional/rural participants were more likely to say that participation in the Collaborative had increased their work satisfaction, had improved their professional communication, had received more support from senior management, and had made them want to be involved in other collaborative projects. Again it will be interesting to examine in the follow-up survey of the SIP program course whether the long term evaluations of the course and reported safety skills of Sydney and regional/rural participants differ.

7 REFERENCES

Centre for Clinical Governance Research in Health (2004). *Protocol: Evaluation of the Safety Improvement Program*. Kensington: Centre for Clinical Governance Research, University of NSW.

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8 APPENDICES

8.1 Appendix 1: Examples of participants' responses to open-ended questions

FIGURE 4: Examples of respondents' comments on content and layout of folders

COMMENTS ON FOLDERS
<p>Positive</p> <ul style="list-style-type: none">▪ Excellent▪ Well organised material, well presented▪ Great folders▪ Excellent tool for review▪ Easy to use with information easy to follow.
<p>Negative</p> <ul style="list-style-type: none">▪ Need better numbering▪ Confusing with so many loose sections▪ Folder a little confusing due to inclusion of extra/new material in an ad hoc way▪ Please cut down on paper used. Photocopy both sides▪ Did not match slides presented. Sheets not behind tabs.
<p>Mixed/neutral</p> <ul style="list-style-type: none">▪ Very useful resource. Would have been improved by following more closely the workshop sessions▪ Might be worthwhile having a feedback session for attendees in 3-6 months▪ The updates need to be integrated but otherwise OK▪ Very clear. Print could be larger in some icons.

FIGURE 5: Examples of respondents' comments on flow of the two days

FLOW OF DAYS
<p>Positive</p> <ul style="list-style-type: none">▪ Runs like a well oiled machine▪ Flows well; subject matter reinforced before moving on▪ Very comfortable with flow. Each subject built on last to give compulsive knowledge.▪ Flowed well▪ Time and use of variety of presenters was excellent mix of styles.
<p>Negative</p> <ul style="list-style-type: none">▪ A bit long between breaks▪ Not enough time to take all the information in▪ Could be condensed▪ Don't rush through the second day; take the allocated time▪ Lunch on second day allocated only half an hour; queue for service was long and felt one had to eat quickly.
<p>Mixed/neutral</p> <ul style="list-style-type: none">▪ Information overload but it was beneficial▪ Flowed well. Breaks too long▪ A lot of information. May need more time to develop skills in meetings, particularly 2 and 3▪ Reasonable; compacted without warning on day 2▪ Good but some ideas/concepts need to be talked over with more time/explanation.

FIGURE 6: Examples of respondents' comments on quiz and games

QUIZ AND GAMES
<p>Positive</p> <ul style="list-style-type: none">▪ Great release▪ These were excellent for relaxation. Engendered humour which made me feel more comfortable▪ Entertaining and good attention and refocus strategy maintaining group participation and energy levels▪ Excellent▪ Absolutely necessary.
<p>Negative</p> <ul style="list-style-type: none">▪ No! No! No!▪ Games became a bit tedious. OK for people who like this sort of thing▪ Of no interest▪ Of little value or interest▪ More variety please.
<p>Mixed/neutral</p> <ul style="list-style-type: none">▪ Too many of one type of quiz. Less altogether would be better. 'Cards' incentive good▪ Good, although it's not pre-school. Getting rid of the time spent doing quiz could shorten the period of sitting and listening▪ Good break however question the relevance.

FIGURE 7: Examples of respondents' general comments

GENERAL COMMENTS
<p>Positive</p> <ul style="list-style-type: none"> ▪ A very well run program. Thankyou ▪ A normally dry topic made interesting, inspirational in some respects ▪ Very well put together. The team were a good mix and added value to the course ▪ Found networking very valuable. Little opportunity exists to network with fellow managers in my AHS. All presenters very approachable and helpful ▪ Most valuable workshop I have ever attended ▪ I was glad I experienced this prior to doing a real one ▪ Excellent presentation on a difficult topic. Shift in focus of investigation to systems not individual is good ▪ Thankyou for one of the most relevant and meaningful courses ever offered ▪ Good to know there is support out there in NRAH and your organisation ▪ Great video clips. Could not believe how good some of them were. <p>Negative</p> <ul style="list-style-type: none"> ▪ The venue was only just adequate. Could have been warmer, more variation in food ▪ Found groups were too big ▪ Examples were hospital based. A discharge planning mishap could capture non-hospital based health services ▪ I felt explaining the rules of causation session was rushed and hard to attend to the task we had to do in our folder ▪ Geared toward those with little experience. Should be shorter for those with experience ▪ Seating uncomfortable; constantly turning around to view visual tables. Too crowded ▪ A little rushed, process not entirely clear; don't feel confident, smaller groups would be better ▪ Did not appreciate one facilitator belittling our group and me when we were trying our hardest he made us feel helpless/stupid ▪ Breakout group too big, some people too dominant, not enough time, purpose not always clear. <p>Mixed/neutral</p> <ul style="list-style-type: none"> ▪ Would be good if all speakers could identify handouts for each session. Good venue ▪ Can see value. Can't wait to try it. Still a bit sceptical about underlying motives for introducing this process i.e. managers being responsible for all incidents that occur ▪ This will be an area of great challenge. It will be prudent to ensure that my involvement is fully supported relative to what my position's demands are already. ▪ Will need to work through the folder to become more comfortable with teaching ▪ Will be useless unless supported by area executive—must have resources to carry out recommendations ▪ Most worthwhile 2 days. Recommend dividing up into interdisciplinary and NOT nurse manager oriented groups. Separate causation and recommendations.

8.2 Appendix 2: Questionnaire items

Items common to the evaluation from evaluation questionnaires completed by the 18 groups of SIP participants (In order presented in the questionnaire)

Overall				
• The course was				
Very valuable		Valuable		Of no value
• Facilitator subject knowledge				
Very knowledgeable		Knowledgeable		Poor
• Presenters ability to convey information				
Very effective		Effective		Not effective
• Presenters responsiveness to participants				
Very helpful		Helpful		Not helpful
• Quality of visual aids				
Excellent		Good		Poor
• Effectiveness of the breakout sessions				
Very useful		Useful		Not useful

Day 1

• Do you feel comfortable to "SAC" incidents back at your facility / service				
Very comfortable		Comfortable		Not comfortable
• Overview of Meeting 1				
Informative		Partially informative		Of no value

<ul style="list-style-type: none"> Overview of Meeting 2 Part 1: 				
Informative		Partially informative		Of no value
<ul style="list-style-type: none"> Gathering information 				
Informative		Partially informative		Of no value
Day 2				
<ul style="list-style-type: none"> Overview of Meeting 2 Part 2: 				
Informative		Partially informative		Of no value
<ul style="list-style-type: none"> Human Factors: 				
Very helpful		Helpful		Of no value
<ul style="list-style-type: none"> Meeting 3: 				
Informative		Partially informative		Of no value
<p>Following the workshop I would be able to:</p>				
Teach others to do an RCA		Participate in an RCA		Unable to contribute
Comments on the content / layout of folders				
Comments on the flow of the 2 days				
Comments on the value of the interactive quiz's and human factors games etc				
General comments:				