

## **THE DESIGN AND EVALUATION OF A JOINT HEALTH AND SAFETY COMMITTEE EDUCATION PROGRAMME IN THE HEALTHCARE SECTOR IN WESTERN CANADA**

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### **INTRODUCTION**

Research on the Canadian workforce has consistently indicated that healthcare workers have a greater risk of workplace injuries and more mental health problems than any other occupational group<sup>1</sup>. Studies also indicate that healthcare workers face substantial occupational risks related to infectious diseases, violence from patients/residents with dementia, allergic reactions from chemical agents, and ergonomic issues associated with patient handling<sup>2-11</sup>, among other occupational hazards.

“Accident committees” were established by legislation, for some industries in 1920 in British Columbia, much earlier than in the rest of Canada (WHSA, 1994). Mandatory Joint Health and Safety Committees (JCs) for workplaces with 20 or more employees were legislated in BC in 1977<sup>12</sup>. Nonetheless, despite the long-term existence of JCs, in the BC healthcare sector in 1998 the injury rate was 54% higher than the average rate for all workers in BC<sup>13</sup>. And, from 1997 to 1999, direct claims costs were \$180 million in BC healthcare<sup>13</sup>.

The purpose of this paper is to describe the development, delivery, and evaluation of a JC education program designed specifically for healthcare institutions in BC. The JC education program was designed by the Occupational Health and Safety Agency for Healthcare in BC (OHSAH), an agency jointly governed by the healthcare unions and employers in BC. The program was developed with extensive input from labour and management as well as expert advice from human resources consultants.

### **BACKGROUND**

In the 1970s, most Canadian provinces passed legislation enabling the establishment of Joint Health and Safety Committees<sup>12</sup>. The UK and USA established similar legislation in the 1970s<sup>14,15</sup>. While these committees have been

in existence in most medium and large sized workplaces for over a quarter of a century few studies have attempted to measure their effectiveness. In the United States, Cook and Gautschi used data from 113 manufacturing companies in Maine over a six-year period<sup>16</sup>. After controlling for the number of employees in the plants and the impacts of business cycles, they found that the presence of a JC in the plant was associated with a small decrease in time loss claims due to injury.

In contrast, in a study of 127 large manufacturing firms in Massachusetts, Boden determined that the presence of a JC did not reduce the number of health and safety complaints<sup>17</sup>. However, interviews with managers and labour members of JCs in 13 of these firms that JCs rated as effective by respondents showed fewer health and safety inspections. This study appears to indicate that the presence of a JC may not be enough and that the key to success with these committees may be ensuring their effectiveness.

In the UK, Reilly used a sample from the Workplace Industrial Relations Survey of manufacturing plants and found that workplaces with joint committees had, on average, 5.7 few injuries per 1000 employees compared with workplaces without JCs<sup>18</sup>.

In Canada, Bryce and Manga examined data from an Alberta and a Saskatchewan study undertaken in the 1970s, soon after passage of legislation establishing JCs<sup>19</sup>. In the Alberta study 36 JCs were randomly selected. Committee members were asked whether they thought the JCs had improved health and safety in their workplaces. Both labour and management representatives agreed that JCs had been successful<sup>20</sup>. A similar study (with similar results) was conducted in Saskatchewan in 1972 by reviewing standardized records from 276 committees<sup>19</sup>.

Several more recent empirical studies have been undertaken in Canada on the role of JCs. In 1994 a mail-out survey of labour and management representatives at 1500 workplaces was conducted in Ontario and showed that improvement in health and safety were predicted by good communications, high employee job satisfaction, worker participation in decision making, and emphasis on teamwork in the company<sup>21</sup>. The major outstanding need noted in this study was for improvement in training of JCs, particularly in small institutions.

Shannon, in a survey of Ontario manufacturing and retail facilities, showed that companies with senior management commitment to health and safety, higher worker participation, and better communication and labour relations had lower lost time accident rates<sup>22</sup>.

Finally, Tuohy and Simard found, in a study of Quebec and Ontario workplaces, that JCs with equal numbers of union and management representatives had both lower injury rates and demonstrated enhanced problem solving expertise compared to workplaces without these committees<sup>23</sup>. They

showed that the capacity of JCs to function effectively was correlated with the amount of training and information available to JC members.

In a review of these studies, O'Grady concluded that JCs may have a role in improving workplace health and safety but that the presence of JCs in workplaces do not necessarily lead to improvements in injury rates<sup>24</sup>. He determined that the critical issue was the effectiveness of JC member training<sup>24</sup>.

## METHODS

Approximately a dozen JC trainers were hired and trained by OHSAH. The trainers began training workshops at healthcare facilities throughout BC. The program was presented by a pair of trainers in a one-day workshop and was always presented to management and labour members together from the same committee.

Between June and December 2000, 1,206 JC members, from 262 different healthcare facilities, were trained. An evaluation survey, designed as a retrospective before and after study, to evaluate whether the JC training sessions had produced changes in committee functioning was conducted from 7 to 15 months after the training (during the period July 2001 to September 2001) by two trained telephone interviewers.

JC education trainees were contacted by telephone and asked to evaluate their JC functioning in the six month period prior to committee training and in the six month period post-training. Evaluation items were developed based on the literature. The survey consisted of 19 paired (before and after) questions, two open ended questions, and a single question asking the respondent to "rate the quality of training you received" on a scale from 1 to 10. Interviews took approximately 10 minutes.

After pilot testing at 20 randomly selected facilities, evaluators attempted to interview all JC members who had taken training between July and December 2000 *and who were still active JC members*. After contacting participants and obtaining their consent to participate in the survey, interviewers asked a series of paired questions about their committee prior to and after the training.

Although training was conducted with 1,206 individuals on 262 different committees, at the time of interviewing many of these individuals had left the JC (often because of normal JC committee member turnover, or because they had left employment at the facility and so were ineligible for the evaluation survey). Because our evaluation survey target group was individuals who had taken the training and were still active members of their JC (in some cases up to a year later), we expected to interview an unknown proportion of the 1,206 trained individuals on an unknown proportion of the 262 committees that received training. As well, because some committees, particularly those from very large facilities, tended to have large JCs (and thus sent more of their

members to the OHSAH training sessions) we limited the evaluation survey to a maximum of 4 members from each trained committee for interview. Where many more than 4 members from a given committee took the training, we randomly selected 2 manager members and 2 worker members from each committee. When there were 4 or less members who had taken JC training all were contacted for the evaluation.

## **RESULTS**

Of the 1206 trainees who took OHSAH's training in the period July to December 2000, and who were contacted by telephone between July and September 2001, 661 individuals were active JC members and completed the telephone interview. Of these 661 we obtained complete identifying information (union affiliation, region, facility) from 617 individuals. The following report is based on these 617 individuals. The average score for the 617 respondents for quality of training received, on a scale of one to ten, was 7.7.

### **A) Who participated in the evaluation of OHSAH's JC training?**

The 617 individuals interviewed belonged to 236 JC committees. Approximately 60% of the committees were in the long-term and acute-care sectors. The remainders were in home support, mental health, community health, and other sectors. Approximately two thirds of respondents were union members and one third were managers. The proportion of union member respondents ranged from 58.3% in home support and mental health, to 68.6% at acute care facilities.

### **B) How did the group of JC trainees as a whole perform on the survey?**

Joint committees met on an average of 10 times per year prior to the training session. After the training this meeting frequency remained unchanged. On average, each JC meeting was attended by 4 to 5 workers and 2 to 3 managers. The rate of attendance at JC meetings by both workers and managers did not change following JC training (Table 1).

**Table 1: Number of respondents answering yes to each statement before and after JC training**

<b>Statement</b>	<b>Before training</b>	<b>After training</b>
Your JC made recommendations to address hazards	476 (90.3)	502 (89.5)
Manager members participated in inspections	452 (85.3)	518 (87.1)
Your facility has a chemical hazards program	479 (86.8)	537 (90.4)
A system in place recording injuries and accidents	529 (95.3)	603 (98.7)
Your facility has a biohazards program	390 (79.4)	457 (83.9)
Your facility has an ergonomics program	362 (67.0)	435 (73.0)
Your facility has a violence prevention program	359 (65.9)	433 (72.2)
Worker members participate in inspections	450 (82.9)	540 (89.3)
Did you know the injury rate at your facility	348 (62.6)	427 (69.5)
Your facility has an RTW program	389 (75.7)	470 (84.7)
Your JC has terms of reference	382 (76.1)	521 (91.2)

Table 1 indicates that the level of functioning, as measured by these yes/no statements, was fairly high prior to JC training. Although committees were, in terms of these dimensions, functioning quite well before JC training, increases in functioning after training were observed in 10 of the 11 statements.

Besides these yes/no questions, respondents were asked to score (on a scale from 1 to 10) several statements assessing the level of functioning of their joint committee both before and after JC training in order to determine whether or not this training had improved committee functioning along 5 dimensions. For all of the statements, answers of 8, 9, or 10 (on the 1 to 10 scale) were defined as a "high" score. Table 2 shows the number and proportion of respondents reporting "high" scores before and after JC training and the change in this proportion.

**Table 2: Number of respondents with “high” score before and after JC training**

<b>Statement</b>	<b>Before training</b>	<b>After training</b>	<b>Chi Square</b>
Extent of cooperation	326 (59.5)	476 (78.2)	116.4*
Specificity of recommendations	252 (53.5)	391 (74.5)	86.1*
Completeness and precision of minutes	334 (61.3)	504 (82.9)	72.9*
Ability to identify hazards	178 (32.4)	441 (71.9)	68.9*
Comprehension of committee role	124 (22.7)	444 (72.7)	27.7*

\* p value for Chi Square = 0.00 indicating that differences before and after training were highly statistically significant.

Table 2 indicates that many of the important dimensions of JCs were already present prior to training. For example, almost 60 percent of respondents felt that the extent of cooperation on their JC was high prior to training. Table 2 also indicates that, for both those dimensions that were already present prior to JC training and those that were not (such as comprehension of the JC committee role) training produced statistically significant improvements across all these health and safety outcomes. For example, following JC training the number of committee members reporting better cooperation on their JC increased from 326 (59.5%) to 476 (78.2%).

**C) Did union and manager respondents feel differently about the JC training?**

Table 3 shows the number and proportion of union and manager respondents reporting “high” scores after JC training. Union and manager “after” responses were compared using Chi square statistics.

**Table 3. Number of union and manager respondents with “high” score following JC training**

Statement	Union	Manager	Chi square (p-value)
Ability to identify hazards	281 (71.3)	160 (73.1)	0.21 (0.65)
Specificity of recommendations	249 (74.6)	142 (74.3)	0.003 (0.96)
Completeness and precision of minutes	321 (82.1)	183 (84.3)	0.49 (0.48)
Comprehension of committee role	287 (72.8)	157 (72.4)	0.02 (0.90)
Extent of cooperation	291 (74.4)	185 (84.9)	8.9 (0.003)

For four of these five dimensions differences between union and manager JC trainees were small and not statistically significant. In all cases, where differences were observed, the proportion of managers rating statements positively was greater than the proportion of union members.

## CONCLUSIONS

The average score for the quality of training received, on a scale of one to ten, was 7.7 indicating very high evaluations of the JC program. The level of functioning of JCs, measured in terms of the existence of specific programs and the existence of important OH&S behaviours demonstrated by the committee’s was already quite high prior to JC training.

After training, respondents indicated a small increase in the establishment of new programs and an increase in positive OH&S behaviours. These increases ranged from 1.8 to 15.1 percent. (One behaviour, “your JC made recommendations to address hazards” showed a slight decline after training.) The most noteworthy increase, in terms of establishing new programs, was the 9 percent increase in respondents reporting establishment of an Return to Work program after the training. The most noteworthy increase in JC functioning was the 15.1% increase in terms of reference for their committee after training.

While the level of functioning of JCs, before training, was high when assessed in terms of the existence of OH&S programs and JC behaviours, pre-training quality of JC functioning was much lower. For example, before training only 22.7% of respondents felt that they had a “high” comprehending their role on the JC. After training, statistically significant improvements in JC functioning were noted by respondents. For example, after JC training, a 39.5% increase in the proportion of respondents reporting “high” marks for JC ability to identify hazards.

Managers responded more positively to almost all the survey questions than union trainees but differences were statistically non-significant except in the case of the estimation of the extent of cooperation on the committees.

Open-ended comments in this survey indicated that violence, ergonomics, and training in risk assessment and MSI programs should be the issues of priority follow-up education.

There are several limitations to this study. First, the evaluation is based on retrospective recall of JC functioning during two six month periods before and after a single days' training session. Respondents were asked to recall situations which had occurred from a minimum of 7 months to a maximum of 15 months in the past.

Second, the evaluation is based on workers and management JC members who were still members of the JC at the time of the evaluation survey. JC members who received training but who had left the committee by the time the evaluation survey was conducted were not contacted for interview. It is quite possible, that those who leave the JC committees are the least satisfied members so that there is the potential for a selection bias resulting in selection of more positive respondents. However, even if this was case, it should not explain the differences observed in the before/after responses obtained.

While this retrospective evaluation of a joint committee training program is quite limited, the experience of a collaborative evidence-based approach adopted by OHSAH was overall highly effective - and contributed to substantial reductions in injuries, time loss and costs<sup>25, 26</sup>. It can be concluded that even in a tense labour-management environment, adopting a bipartite approach to health and safety is warranted.

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**NOTES**


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