Violence Prevention in the Mental Health Setting: The New York State Experience

Jane Lipscomb, Kathleen McPhaul, Jonathan Rosen, Jeanne Geiger Brown, Mona Choi, Karen Soeken, Victor Vignola, Deborah Wagoner, Janet Foley, and Peggy Porter

In 1996 the New York State Office of Mental Health issued a policy requiring all State-operated psychiatric facilities to develop and implement a proactive violence-prevention program based on guidelines issued by the US Occupational Safety and Health Administration. This presented an opportunity to evaluate the impact of the guidelines on worker health and safety. The authors report the findings of a mixed-method study to evaluate the feasibility and impact of a participatory intervention to prevent workplace violence. They describe the implementation of the intervention in 3 in-patient facilities, including an extensive worksite analysis, staff focus groups, and a baseline and post-intervention survey of changes in staff perception of the quality of the program's elements and physical assault following implementation of the program. The authors provide evidence for the feasibility and positive impact of a comprehensive violence-prevention program in the in-patient mental health workplace. Staff perception of the quality of management commitment and employee involvement in violence-prevention was significantly improved in all worksites post-implementation.

Keywords: Violence prevention, occupational health, worksite analysis, staff assaults, workplace violence, psychiatric hospitals

Introduction

In 1996 the US Occupational Safety and Health Administration published *Guidelines for Preventing Workplace Violence for Healthcare and Social Service Workers* (US Department of Labor & OSHA, 1996). These federal guidelines include the basic elements of any proactive health and safety program: Management Commitment and Employee Involvement; Worksite Analysis; Hazard Prevention and Control; and Training and Education. The OSHA guidelines provide an outline for developing a violence-prevention program, but they are "performance-based," so the challenge of developing a specific, effective process for implementation is left to each individual workplace. It should be noted that a number of international professional and governmental agencies have issued policies

and guidance on violence prevention in the health-care setting (American Association of Colleges of Nursing, 2004; American Nurses Association, 1994; Canadian Federation of Nurses Unions, 1994; Canadian Nurses Association, 2002; International Council of Nurses, 2000; International Labour Organization, 1998; World Health Organization, 2005). For example, the Canadian Federation of Nurses Unions and the Canadian Nurses Association have issued strongly worded position statements recognizing the prevalence of workplace violence in health care and advocating for its prevention. The authors of these statements believe that recognition of workplace violence in the form of prevention policy must be part of a comprehensive program such as the one described in this paper.

This paper describes a participatory intervention to prevent workplace violence, based on the OSHA guidelines, that was implemented in three New York State in-patient mental health facilities between 2000 and 2004. The purpose of the study was to evaluate the feasibility of the participatory intervention process as well as to evaluate the impact of the program on threats of assault and staff perception of the quality of their facility's violence-prevention program. Finally, the paper describes best practices as identified by joint labour-management advisory groups that were responsible for developing and implementing the violence-prevention programs at the study facilities.

Literature Review

Workplace violence is recognized as a significant occupational hazard in the health and social service sectors, particularly in mental health facilities (Bensley, Nelson, Kaufman, Silverstein, & Kalat, 1993; Bensley et al., 1997; CDC/NIOSH, 2001; Duhart, 2001; Duncan et al., 2001; Flannery, Hanson, & Penk, 1994; Gerberich et al., 2004; Hesketh et al., 2003; Lipscomb & Love, 1992; Love & Hunter, 1996; McPhaul & Lipscomb, 2004; Rippon, 2000; Toscano & Weber, 1995; UIIPRC, 2001). According to the Department of Justice National Crime Victim Survey (Duhart), an average of 1.7 million assaults occur at work annually in the United States. The assault rate for mental health professionals and custodial workers is 68.2 per 1,000, compared to 12.6 per 1,000 workers across all occupations. The rate for nurses across all settings is 21.9% (Duhart). Six percent of the workplace crimes result in injury requiring medical treatment, yet only about half (46%) of all incidents are reported to the police. The health sector leads all industries in non-fatal assaults, with 45% of all non-fatal assaults against workers in the United States resulting in lost workdays (Bureau of Labor Statistics, 2006). The rate of nonfatal assaults to workers in "nursing and personal care facilities" is 31.1 per 10,000, versus only 2.8 per 10,000 in the private sector as a whole

(Bureau of Labor Statistics). In a Washington State psychiatric facility, 73% of staff surveyed reported at least a minor injury related to an assault by a patient during the previous year; only 43% of those reporting moderate, severe, or disabling injuries related to such assaults had filed for workers' compensation. The survey found an assault incidence rate of 437 per 100 employees per year, compared to hospital incidence rates of only 35 per 100 (Bensley et al., 1997).

Very few published studies include an evaluation of violence-prevention efforts. Runyan, Zakocs, and Zwerling (2000), in a comprehensive review of the literature on violence-prevention interventions, found five studies evaluating training interventions (Carmel & Hunter, 1990; Goodridge, Johnston, & Thomson, 1997; Infantino & Musingo, 1985; Lehmann, Padilla, Clark, & Loucks, 1983; Parkes, 1996), two examining post-incident psychological debriefing programs (Flannery, Rosen, & Turner, 1998; Matthews, 1998), and three evaluating administrative controls to prevent violence (Drummond, Sparr, & Gordon, 1989; Hunter & Love, 1996). All studies focused on the health-care sector and all involved registered nurses as well as other direct-care staff. Findings from these nine studies were equivocal, with six reporting a positive impact and three reporting no impact or a negative impact. All were quasi-experimental and did not use a formal control group. Runyan et al. criticize the design of violence-prevention interventions published to date because of the lack of systematic rigour in the evaluation.

Since publication of the Runyan et al. (2000) review, Arnetz and Arnetz (2000) have reported on a randomized controlled trial of 47 health-care workplaces that examined an intervention of "continuous registration" of violent events for 1 year with "structured feedback" from supervisors. Hospitals that received the intervention reported significantly more incidents of violence than the control hospitals. The authors attribute this finding to increased awareness and reporting of the violence following the intervention, as well as improved supervisory support at these facilities. None of the aforementioned intervention studies documented the organizational process for implementing a violence-prevention program or for evaluating the impact of a program.

Methods

Setting

The New York State Office of Mental Health (OMH) was selected as the setting for this study, as a result of pilot work that demonstrated both feasibility and strong labour-management cooperation (Rosen, 1997) and monitoring by an active labour-management health and safety committee, the OMH Multi-Union Health and Safety Committee. In

1998, the OMH, working through this committee, instituted a Safe and Therapeutic Environment Program (STEP) policy requiring all 26 inpatient OMH facilities to develop and implement a proactive violence-prevention program based on the OSHA guidelines and pilot projects. The 1998 STEP policy integrated existing agency policies and requirements of the Joint Commission on Accreditation of Healthcare Organizations (JCAHO). The system-wide implementation of STEP, along with the strong support of the Health and Safety Committee and the collaboration of academic researchers, presented a "natural experiment" whereby the feasibility and impact of a participatory workplace violence-prevention intervention could be evaluated.

Sample

Early in this 4-year project, a Request for Applications was sent to all inpatient mental health facilities in New York State inviting them to serve as intervention sites ($n = 26$). Criteria for selection as a study site included management commitment, as measured by willingness to commit the resources necessary to develop and implement a program and labour/management cooperation demonstrated by the presence of an active health and safety committee. Seven applications were received and three psychiatric facilities (two for adults and one for children) were selected to receive the interventions. Later, three facilities similar to the intervention sites in terms of the type of facility (i.e., for adults or for children) and location (i.e., upstate, downstate), as well as having established labour and management cooperation, were selected for comparison. The selected psychiatric facilities ranged in size from 54 beds (children) to 369 beds (adults). The children's facilities serve a larger geographic area than the adult facilities. All intervention and comparison facilities serve a civil population. A large percentage of patients in all OMH facilities have dual diagnoses of mental illness and chemical addiction and, often, a history of criminal activity. Despite these similarities, there are substantial differences between individual facilities, due in part to a high degree of operational autonomy and a high degree of variability in the implementation of the STEP policy amongst the 26 OMH facilities.

Participation by comparison facilities was voluntary and, at baseline, these facilities had lower rates of assaults on staff. Furthermore, staff in comparison facilities perceived the quality of their facilities' violence-prevention program as higher than did staff in intervention facilities. Management and union leaders have ascribed this finding to the high level of cooperation between labour and management at the comparison facilities. In this paper, we refer to the non-intervention sites as "comparison" sites; however, they might more accurately be described as "usual

practice" sites, as they were responsible for implementing the OMH STEP policy but did not benefit from the support of the team resources of the worksite-violence study (i.e., consultation with the team and with the project's New York State–based violence-prevention coordinator). Within each intervention and comparison facility, three wards were selected as the focus of the intervention and evaluation so that the study team could concentrate our efforts and resources on a feasible number of study units.

Description of the Intervention

The OSHA *Guidelines for Preventing Workplace Violence for Healthcare and Social Service Workers* (www.osha.gov) served as a framework for the study. The study used a participatory action research approach, with management, labour, and direct-care staff representatives working closely with researchers in the design and implementation of the project (Israel, Eng, Schulz, Parker, & Satcher, 2005; Robson, Shannon, Goldenhar, & Hale, 2001). A Project Advisory Group (PAG) made up of labour, OMH, and academic partners provided guidance and oversight for the overall project. The intervention had three main components: (1) developing and supporting a facility-level PAG to design and implement a facility-specific program, (2) conducting a comprehensive risk assessment, and (3) designing and implementing feasible recommendations evolving from the risk assessment.

The 4-year project included a number of specific activities as depicted in the study timeline (Figure 1). The timeline was driven in part by the availability of federal funds; however, efforts to sustain the project continue with labour/management cooperation in several OMH facilities.

The OSHA elements of management commitment and employee involvement, worksite analysis, hazard control and prevention, and training were operationalized within the project as described below.

Management Commitment and Employee Involvement: Joint Labour–Management PAGs

The greatest challenge in designing and implementing a comprehensive violence-prevention program is securing strong management and labour (and/or worker) support. The central mechanism for assuring this first and most critical element of the OSHA guidelines was joint hospital-level labour-management PAGs. These local groups of 10 to 15 individuals were responsible for shaping and implementing the violence-prevention program in each intervention workplace. They reviewed draft focus group and survey questions and participated in walk-through environmental surveys. They developed action plans for responding to each specific recommendation in the worksite analysis. This included evaluating recom-

Figure 1 *Workplace Violence Prevention Intervention Study Timeline*
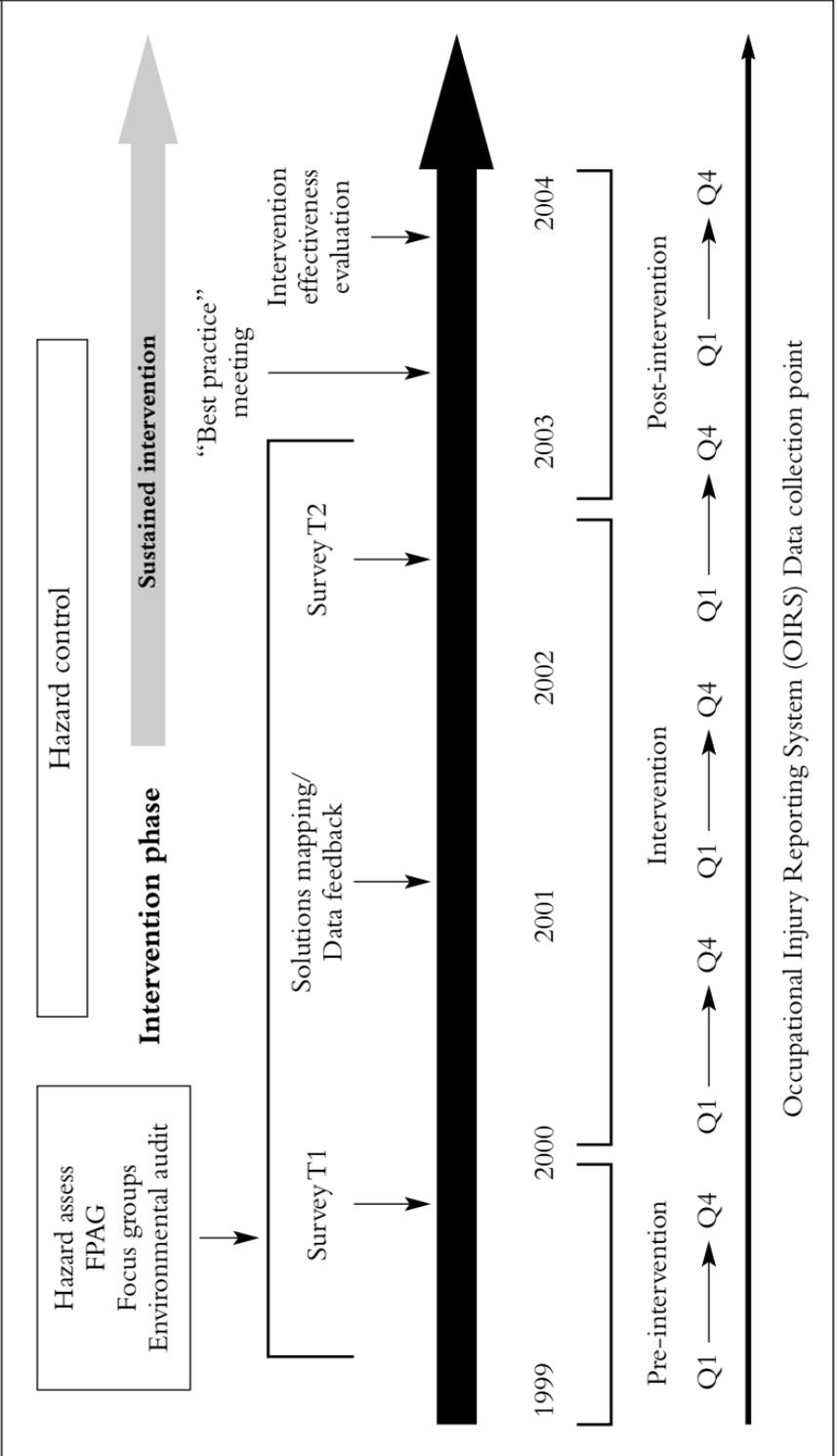
mended changes to clinical and work practices and, where necessary, updating policies and implementing suggested environmental controls. The groups also guided the development of site-specific training and ongoing evaluation of the project.

Worksite Analysis

A primary function of the study team was to conduct a comprehensive worksite analysis based on strong input from the PAG and direct-care providers. The analysis had four components: (1) review of facility injury data, (2) environmental survey of the study wards in each intervention facility, (3) staff focus groups, and (4) staff survey. The first two of these components are described below.

Review of injury data. The collection and evaluation of injury data is critical to the success of any violence-prevention program. The OMH maintains an electronic injury and illness database, the Occupational Injury Reporting System (OIRS), which tracks staff injuries from all causes. Quarterly reports are provided to all the facilities. This system allowed for the analysis of injury trends by job title, time of day, severity, and other factors. The OIRS injury data were tracked over the course of the study (including a retrospective review of data from the preceding 2 years) to evaluate the impact of the intervention on patient-related assaults.

Environmental survey. An architect specializing in the design and renovation of secure state buildings conducted extensive walk-through evaluations of each intervention ward across all work shifts. The survey had six components: (1) review of background data such as floor plans, typical patient characteristics, incident reports, and staffing levels; (2) an initial tour to examine the worksite layout; (3) a discussion with direct-care staff to learn about how the ward operated, typical schedules, and problems or concerns; (4) observation of staff and patient interaction and discussion with staff during both day and evening shifts; (5) follow-up discussion with the PAG to review observations and initial impressions; and (6) preparation of a written report documenting observations, including photographs of the wards, making comparisons with similar environments, and providing short- and long-term recommendations for environmental modification.

Hazard Prevention and Control

The intervention consisted of a number of distinct, ongoing hazard-control activities. Early in the project, the PAGs developed hazard-control action plans to address risks identified in the injury data review, environmental survey, focus groups, and staff survey. The Statewide Project

Advisory Group tracked each facility's progress in implementing these plans.

Environmental controls. Short-term and long-term environmental recommendations were addressed as part of the hazard-control portion of the project. Each intervention facility attempted to implement the feasible short-term recommendations within 6 months of receiving its individual environmental survey report. Long-term recommendations were considered for future capital-improvement projects. In a number of cases, the environmental audit was used to support requests for funding. Examples of specific recommended controls are shown in Figure 2.

Administrative and work–practice controls. A major focus of the intervention was improved communication and teamwork — for example, including direct-care staff in developing and implementing treatment plans and sharing information between shifts regarding individual patient aggressiveness. In one facility a peer "coach" was assigned to help direct-care staff to improve their skills in preventing and managing crisis situations.

Figure 2 *Recommendations from Environmental Survey*	
Design	Replace solid panel doors with lexan (transparent) panels to allow for line of sight in and out of staff offices (ST). Reorganize patient sleeping areas to reduce staff need to monitor at any given time (LT).
Structure	Secure bedroom wardrobes to floor/wall to avoid use as weapon or as door blockade (ST). Replace solid wall in day room with a lexan (transparent) window to allow for line of sight and more light into this highly used space (LT).
Hardware/Mechanical	Replace open hinges with continuous hinges on doors leading in and out of patient-care areas to reduce pinching hazards (ST). Instal a personal alarm system (LT).
Acoustics	Provide carpet and absorptive wall panels in day room to address poor acoustics and to reduce stress and anxiety (ST).
Functional	Modify medication administration policy to avoid long patient lines and the potential for client-on-client altercations (ST). Implement a smoke-free workplace to reduce workplace violence associated with smoking (LT).
Note: ST = short-term recommendation; LT = long-term recommendation.	

Staff Training and Education

Training and education is a distinct element of the OSHA guidelines. The OMH's Preventing and Managing Crisis Situations (PMCS) is a comprehensive, mandatory two-and-a-half-day course given annually at all OMH facilities by staff certified as PMCS trainers. The curriculum covers assessment of potential violence, non-verbal and verbal de-escalation techniques, approved physical defensive intervention techniques, and application of seclusion/restraint procedures.

Rather than provide redundant training, the project's training element was designed to increase management commitment and employee involvement in the violence-prevention process and to identify additional interventions. Staff learned how to use risk-assessment data (e.g., focus group and staff survey results) to develop a specific hazard-control plan, identify barriers, reach consensus, and keep the process moving. This was accomplished in a participatory, multidisciplinary day-long workshop. It also served as a forum for the PAG and researchers to communicate directly with direct-care staff and managers on the progress of the project. Project-related training began with a presentation and discussion of focus group results, environmental surveys, and the staff survey findings. Next, joint management and labour teams facilitated small group discussions of specific problems identified during the risk-assessment process and spent several hours generating concrete, feasible solutions acceptable to staff and management alike. Over the subsequent 6 months, the PAG developed action plans for each proposed solution and communicated its progress to staff during follow-up meetings.

Evaluation of Intervention Effectiveness

Focus Group Methods

Purposive sampling of direct-care workers at each of the three intervention facilities was conducted in such a way that non-supervisory direct-care workers were recruited to participate in focus groups on work time prior to the commencement of the intervention. Two focus groups at each intervention facility were conducted, allowing for participation across shifts and non-supervisory job titles. The pre-intervention focus groups launched the intervention in the sense that, by discussing the issue, the workers became sensitized and engaged in violence-prevention efforts. The post-intervention focus group was conducted with members of the Facility Project Advisory Groups (FPAGs) from each of the three intervention facilities and observed by the PAG members. Instead of being a confidential forum for staff to discuss violence, the post-intervention group represented an opportunity to share best practices and what worked for each facility.

Focus groups were conducted with direct-care staff to inform survey development and to provide qualitative data on staff perceptions of risk factors for violence on their wards and proposed solutions. Sixty staff members participated in one of six focus groups (two per intervention facility) conducted across all shifts at the three sites. Each 90-minute discussion was led by a trained facilitator, external to the OMH, and was centred on four questions: (1) In your opinion, what are the three leading causes of violence on your unit and/or in your facility? (2) If you were the director in charge of a safe and therapeutic environment, what practical steps would you take to reduce violence, provide safety to the direct care staff, and improve therapeutic treatment of patients? (3) In your opinion, what are the greatest barriers to implementing these practical steps? (4) Are you satisfied with the current violence-prevention core curriculum/training in your facility?

Focus Group Findings

Findings related to common themes emerging from the focus group discussions were presented to the FPAGs for discussion and action. They were also presented to direct-care staff during the project-related training sessions that generated additional ideas for intervention. These themes included the changing patient populations, inadequate staffing and deployment of staff, hierarchical management style, and low management commitment to staff safety. Additional, specific risk factors that emerged from the focus group discussions included ineffective patient programming and problems such as long wait times in food lines.

In the final year of the project, representatives of the three intervention PAGs met with the research staff to discuss lessons learned and the project's successes. This discussion was conducted as a focus group, with one member of the project staff serving as facilitator. Individuals representing the three facilities were asked to discuss what worked and did not work throughout the project. The discussion was recorded on flip charts, summarized in a report, and shared with participants for review, validation, and revision. This report was ultimately shared with the directors of all 26 facilities.

Project successes included a violence-prevention training coach at one study site and the adoption of one facility's written violence-prevention program in the facility's overall strategic plan. A summary of the meeting resulted in the following list of violence-prevention best practices addressing each of the five elements of the OSHA guidelines:

Management commitment to the violence-prevention program
- management communication of its intentions to reduce violence on the wards

- regular participation of senior leadership in violence-prevention meetings
- senior staff presence at all PMCS training sessions and a requirement for management to comply with annual PMCS training
- participation of upper-level administrators in ward rounds and morning report
- ongoing data collection, data sharing, and discussion of injury data with staff
- use of the courts for medication over-resistance and pressing assault charges
- management responsiveness to staff solutions for reducing violence
- allocation of resources for staff training and overtime related to violence prevention
- strong program for post-assault response staff

Employee involvement in the violence-prevention program

- regular communication via the committee process: rounds, shift-to-shift communication
- multidisciplinary STEP committee membership
- team approach to identifying needs and solutions and consensus decision-making on implementation of project recommendations

Hazard-assessment activities

- use of staff focus groups and staff surveys
- periodic environmental audit/assessment and mapping of high-risk areas with staff input
- encouragement of accurate and timely reporting of injuries
- data collection and analysis and review of reporting practices

Hazard-control activities

Infrastructural/organizational

- creation of violence-prevention infrastructure (STEP/PAG committee)
- documentation of the hazard controls implemented or a timetable for implementation
- assessment of hazard-control effectiveness via the committee infra-structure using ongoing data collection and review

Environmental

- assessment of ward movement to avoid prolonged standing in line
- installation of locks wherever necessary
- installation of staff personal alarm system and alarms in all nursing stations and medicine and treatment rooms
- removal of wire glass

Administrative
- ongoing assessment of data collection and data use
- ongoing assessment of PMCS training and management of psychiatric emergencies

Behavioural
- improvement of the shift-to-shift reporting process
- senior staff rounds of treatment units
- clinical/treatment rounds across disciplines, including treatment aides

Staff Survey Methods

A representative staff survey was conducted prior to full implementation of the participatory intervention and 1 year post-intervention. In each of the six facilities (three intervention and three comparison), all staff, including supervisors and administrators, were invited to participate in the survey. Staff were provided release time to complete the survey during work hours. The study coordinator visited the facilities and administered the survey on all three shifts.

Identical direct-care staff surveys were conducted in 2001 and 2003. The survey was adapted from a Washington State survey developed for assessing assaults in state mental hospitals (Bensley et al., 1997). It included sections on risk factors for violence, violence-prevention measures, threats and assaults, and staff perceptions of the quality of the OSHA elements on their ward. The self-administered survey took approximately 20 minutes to complete and was completed on work time.

The survey analysis consisted of the change in staff perceptions of the quality of the OSHA elements on their ward, as well as their change in frequency of assault experience over the preceding 12 months. Staff were asked to evaluate the quality of (1) management commitment to violence prevention, (2) employee involvement in violence-prevention efforts, (3) environmental design of ward (environmental controls), and (4) staff teamwork and cooperation (administrative and work practice controls) on their ward over the preceding 12 months (1 = *poor,* 2 = *fair,* 3 = *good,* 4 = *excellent*). Staff were also asked if they had participated in PMCS training during the previous year (yes/no).

The aforementioned staff assaults were assessed by asking the number of times in the preceding 12 months the worker experienced patient aggression while assigned to duties on their current ward. There were six levels of violence: (1) threat but no physical contact, (2) physical assault but no physical injury, (3) physical assault resulting in mild injury, (4) physical assault resulting in moderate injury, (5) physical assaults resulting in major injuries, and (6) physical assault resulting in permanent/partial physical disability.

Frequencies were examined by facility and also by intervention and comparison group. Analysis of variance was used to test the change in scores, using an alpha of .05 to evaluate level of significance. All analyses were conducted using SPSS Version 11.0.

Staff Survey Findings

Between May 2001 and January 2002 the pre–intervention survey was completed by 406 direct–care staff (90% response rate) from three intervention and three comparison facilities. The post–intervention survey was conducted in the spring of 2003 and was completed by 319 direct–care staff (70% response rate). The number of respondents from individual facilities ranged from 43 to 117 for the pre–intervention survey and 36 to 69 for the post–intervention survey. Because surveys were anonymous and no identifiers were used, it was not possible to match data from pre- and post-surveys. Among respondents, approximately 65% were female; > 70% were 40 years of age or older; 60% were non-white; 50% were mental health therapy aides, 24% were registered nurses, and 26% had various clinical job titles.

Table 1 compares staff ratings, for intervention and comparison facilities (mean value on a scale of 1–4), of the quality of the OSHA elements. The item "percentage trained in the past year" was reported as yes/no. Staff in both intervention and comparison facilities reported statistically significant (or borderline) improvements in the first four elements, while the intervention facilities also reported significant improvement in the fifth element.

Table 2 compares the frequency of reported threats and physical assaults among intervention and comparison facility staff pre- and post-intervention. Overall, nearly 90% of staff reported threats of assault in the preceding 12 months (data not shown), with the mean number ranging from 35 to 70 threats for the two time periods and two groups. By comparison, less than 40% of staff reported a physical assault with moderate injury, with the mean number ranging from 0.8 to 1.76 per staff member. When the difference (or change) in reported threats and physical assaults during the preceding 12 months was calculated for the pre- and post-intervention periods, a slight reduction in the mean change in physical assaults with any level of injury among intervention facility staff and among severe and permanent injury among comparison facility staff was noted. An increase was observed in threats of assault among the staff of both intervention and comparison facilities. Possible interpretations for this finding include: a greater tendency to report these less severe events; a shift of some physical assaults to threats of assault (an averted physical assault); or a real increase in threats of assault.

Table 1 Change in OSHA Element Mean Item Scores for Staff Working in Six New York State Inpatient Psychiatric Facilities (Pre-survey in 2001, Post-survey in 2003)

OSHA Elements	Intervention (N=468)				Comparison (N=257)			
		Mean (SD)	F	P Value		Mean (SD)	F	P Value
Management commitment[a]	Pre	2.16 (0.88)	19.56	< .001	Pre	2.38 (1.00)	5.52	0.020
	Post	2.53 (0.84)			Post	2.65 (0.82)		
Employee involvement[a]	Pre	2.41 (0.85)	13.39	< .001	Pre	2.43 (0.90)	15.41	< .001
	Post	2.71 (0.81)			Post	2.84 (0.74)		
Environmental design of ward[a]	Pre	2.01 (0.83)	6.01	.015	Pre	2.18 (0.89)	4.56	0.034
	Post	2.21 (0.81)			Post	2.41 (0.82)		
Staff teamwork and cooperation[a]	Pre	2.79 (0.83)	4.74	.030	Pre	2.69 (0.90)	2.96	0.087
	Post	2.97 (0.87)			Post	2.89 (0.83)		
% Training in past year[b]	Pre	62.4 (48.5)	30.29	< .001	Pre	60.7 (49.0)	0.95	0.201
	Post	85.6 (35.2)			Post	66.7 (47.4)		

[a] Response options: 1 = *poor*, 4 = *excellent*.
[b] Percentage of staff receiving PMCS training in the preceding year.

Table 2 Change in Frequencies of Threats and Assaults for Psychiatric Hospital Staff Working in Six NYS Inpatient Facilities (Pre-survey in 2001, Post-survey in 2003)

Threats/Assaults		Intervention (N=468)				Comparison (N=257)			
		Mean Number of Assaults	(SD)	Mean Change %	P Value	Mean Number of Assaults	(SD)	Mean Change %	P Value
Threat of assault by a patient but no physical injury	Pre	35.30	(70.31)	98.3	< .001	36.24	(72.03)	46.8	0.08
	Post	70.00	(90.32)			53.21	(76.02)		
Physical assault by a patient but no injury	Pre	10.26	(38.85)	21.2	0.59	7.21	(31.78)	18.9	0.75
	Post	12.43	(43.45)			8.57	(34.07)		
Physical assault by a patient – mild injury	Pre	6.53	(29.50)	-2.9	0.95	3.28	(18.02)	51.8	0.54
	Post	6.34	(27.07)			4.98	(24.67)		
Physical assault by a patient – moderate injury	Pre	1.76	(7.29)	-17.6	0.65	0.85	(1.93)	52.9	0.47
	Post	1.45	(6.49)			1.30	(6.81)		
Physical assault by a patient – severe injury	Pre	0.23	(0.95)	-43.5	0.23	0.17	(0.60)	-17.6	0.77
	Post	0.13	(0.54)			0.14	(0.75)		
Physical assault by a patient – permanent injury	Pre	0.09	(0.42)	-11.1	0.69	0.06	(0.27)	-16.5	0.60
	Post	0.08	(0.30)			0.05	(0.28)		

[a] Number of threats/assaults during the preceding 12 months. Unit = Number of times/preceding 12 months.

Trends in facility-level occupational injury data (OIRS) prior to and during the course of this study yielded equivocal results (not shown) and suggest either that facility-level data are not sensitive to the impact of the intervention at the ward level or that the intervention had no detectable impact on incident reports over the study period.

Discussion

This paper has described a process for implementing the OSHA guidelines in the in-patient mental health setting. The process, although examined within the in-patient mental health setting, can serve as a model for all health and social service workplaces regardless of the risk of workplace violence in the setting. The process of worksite analysis, hazard control, education, and evaluation is a traditional approach to workplace safety and, as such, should be incorporated into risk-management activities. In settings with a patient population at lower risk of violence than the mental health setting, such as acute care and outpatient settings, a more limited environmental audit than the one conducted here may be sufficient — for example, a walk-through survey conducted by direct-care and building maintenance staff. It should be pointed out that most health-care workplaces are at risk of workplace violence. The benefit of averting an incident of serious workplace violence far outweighs the cost of a proactive program.

The OSHA guidelines serve as an effective performance-based model for a comprehensive program. Their emphasis on management commitment and employee involvement was critical to the successful implementation of the program at each of the three facilities. The model of ongoing hazard analysis, control, and evaluation has facilitated the continuing growth of each program. The discussion among PAGs from the three intervention facilities in the final year of the project was highly effective for synthesizing and sharing project success stories and will facilitate the dissemination of the project beyond the three study sites. Moreover, future communication will help to sustain and improve programs across all facilities.

Program impact was evaluated through a combination of quantitative and qualitative assessments. Specifically, qualitative (i.e., focus group) data informed quantitative (staff survey) tool development. Both types of data were used by PAGs to define the nature and magnitude of the hazard and to craft control strategies. A comparison of pre- and post-intervention survey data indicates an improvement in staff perception of the quality of the facility's violence-prevention program (i.e., OSHA elements) in both intervention and comparison facilities. Objective data that might validate

staff perception data were not sought since, in general, we were most interested in staff perceptions relative to violence-prevention efforts. Staff in both intervention and comparison facilities reported improvements in management commitment, employee involvement, environmental design of ward, and staff teamwork and cooperation. The intervention facilities also reported improvements in the percentage of staff receiving PMCS training in the preceding year, which may reflect heightened awareness of the importance of training in the context of a comprehensive program.

It should be noted that because this intervention project was conducted within a highly dynamic mental health-care system, the OMH continued to implement a number of statewide initiatives to address workplace violence prior to and during the study. These initiatives included: the Safe and Therapeutic Environment Program (STEP) policy, a statewide Trauma Response policy, a comprehensive employee training initiative, and a related clinical program for trauma and mentally ill substance abusers. It was in this dynamic environment that we measured improvements at both intervention and comparison facilities. Comparison of the change in staff-reported physical assaults did not indicate a statistically significant reduction in staff assaults at the facility level in either intervention or control facilities.

The project has a number of limitations. Many factors, individually and in combination, contribute to physical assaults in the in-patient mental health setting. We did not measure and therefore were unable to control for any of the individual patient or staff characteristics that undoubtedly contribute to the occurrence of assaults. For example, it is recognized that a small percentage of the patient population, less than 10%, is responsible for up to 50% of violence towards staff (Lion, Snyder, & Merrill, 1981). This project did not attempt to develop a specific strategy for preventing the violence perpetrated by this patient subset. We did not control for the movement of these patients throughout the system, which may have contributed to our difficulty in demonstrating a reduction in physical assault over time. The need to address the problem of patients who are frequent assaulters was identified in this project.

The OSHA guidelines focus on controlling workplace violence via environmental modification, review of policy and procedure, and training. Likewise, this project focused on these types of prevention activities. In addition, an intervention designed to promote change at the organizational level is likely to require a longer follow-up period than 1 year between the project-related training and the post-intervention survey. In addition, because of the relative intensity of the intervention, the number of participating facilities was limited (i.e., study units and

staff). Lastly, we were unable to randomly assign facilities to either the intervention or the comparison group, and therefore were unable to control for many unmeasured differences between and among intervention and comparison facilities.

Among the project's many strengths was the participatory research framework, which maximized the expertise and collaborative work of academic researchers, management, labour unions, and direct-care staff. A second important strength was the commitment of the OMH Multi-Union Health and Safety Committee to the transparent and ongoing evaluation of its violence-prevention activities, allowing for the description and evaluation of this unique endeavour. In an effort to communicate the results to other OMH facilities and beyond, the project findings were presented at a meeting of the 26 facility directors upon completion of the funded research project.

In conclusion, this paper provides evidence of the feasibility and positive impact of a comprehensive violence-prevention program, based on the OSHA guidelines, within the in-patient mental health workplace. In addition, the paper has described the challenges entailed in evaluating a program's impact in mental health settings as well as the importance of using both quantitative and qualitative measures to assess impact. Evaluation of the project's sustainability will include conducting future focus groups in the intervention facilities and continuous evaluation of the OIRS data on injuries related to patient behaviour.

References

American Association of Colleges of Nursing. (2004). *AACN position statement for workplace violence.* Retrieved June 9, 2006, from www.aacn.org/AACN/pubpolcy.nsf

American Nurses Association. (1994). *Workplace violence: Can you close the door on it?* Retrieved June 9, 2006, from www.nursingworld.org/dlwa/osh/wp6.htm

Arnetz, J. E., & Arnetz, B. B. (2000). Implementation and evaluation of a practical intervention programme for dealing with violence towards health care workers. *Journal of Advanced Nursing, 31*(3), 668–680.

Bensley, L., Nelson, N., Kaufman, J., Silverstein, B., & Kalat, J. (1993). *Study of assaults on staff in Washington State hospitals: Final report.* Seattle: Department of Labor and Industries, State of Washington.

Bensley, L., Nelson, N., Kaufman, J., Silverstein, B., Kalat, J., & Walter Shields, J. (1997). Injuries due to assaults on psychiatric hospital employees in Washington State. *American Journal of Industrial Medicine, 31,* 92–99.

Canadian Federation of Nurses Unions. (1994). *Violence in the workplace.* Policy statement. Ottawa: Author. Retrieved June 9, 2006, from www.cna-nurses.ca/CNA/documents/pdf/publications/FS22_Violence_Workplace_e.pdf
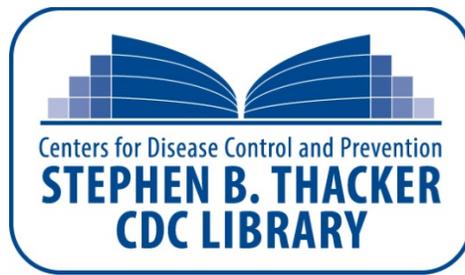
Canadian Nurses Association. (2002). *Violence.* Position statement. Ottawa: Author. Retrieved June 9, 2006, from www.cna–aiic.ca/CNA/documents/pdf/publications/PS57_Violence_March_2002_e.pdf

Carmel, H., & Hunter, M. (1990). Compliance with training in managing assaultive behavior and injuries from inpatient violence. *Hospital and Community Psychiatry, 41*(5), 558–560.

CDC/NIOSH. (2001). *The national occupational research agenda.* Cincinnati: National Institute for Occupational Safety and Health.

Drummond, D., Sparr, L. F., & Gordon, G. H. (1989). Hospital violence reduction among high-risk patients. *Journal of the American Medical Association, 261*(17), 2531–2534.

Duhart, D. T. (2001). *Violence in the workplace, 1993–99.* (December 2001, NCJ 190076.) Washington: US Department of Justice, Office of Justice Programs.

Duncan, S. M., Hyndman, K., Estabrooks, C. A., Hesketh, K., Humphrey, C. K., Wong, J. S., et al. (2001). Nurses' experience of violence in Alberta and British Columbia hospitals. *Canadian Journal of Nursing Research, 34*(4), 57–78.

Flannery, R. B., Hanson, M. A., & Penk, W. E. (1994). Risk factors for psychiatric inpatient assaults on staff. *Journal of Mental Health Administration, 21*(1), 24–31.

Flannery, M., Rosen, H., & Turner, K. (1998). Victims no more: Preventing home care aide abuse. *Caring, 17*(8), 48–50, 52–43.

Gerberich, S. G., Church, T. R., McGovern, P. M., Hansen, H. E., Nachreiner, N. M., Geisser, M. S., et al. (2004). An epidemiological study of the magnitude and consequences of work related violence: The Minnesota Nurses' Study. *Occupational and Environmental Medicine, 61*(6), 495–503.

Goodridge, D., Johnston, P., & Thomson, M. (1997). Impact of a nursing assistant training program on job performance, attitudes, and relationships with residents. *Educational Gerontology, 23,* 37.

Hesketh, K. L., Duncan, S. M., Estabrooks, C. A., Reimer, M. A., Giovannetti, P., Hyndman, K., et al. (2003). Workplace violence in Alberta and British Columbia hospitals. *Health Policy, 63,* 311–321.

Hunter, M. E., & Love, C. C. (1996). Total quality management and the reduction of inpatient violence and costs in a forensic psychiatric hospital. *Psychiatric Services, 47*(7), 751–754.

Infantino, J. A., Jr., & Musingo, S. Y. (1985). Assaults and injuries among staff with and without training in aggression control techniques. *Hospital and Community Psychiatry, 36*(12), 1312–1314.

International Council of Nurses. (2000). *Abuse and violence against nursing personnel.* Position statement. Geneva: Author.

International Labor Organization. (1998). *When working becomes hazardous: World of work.* Retrieved June 9, 2006, from www.ilo.org/public/english/bureau/inf/magazine/26/violence.htm

Israel, B. A., Eng, E., Schulz, A. J., Parker, E. A., & Satcher, D. (2005). *Methods in community-based participatory research for health.* San Francisco. John Wiley.

Lehmann, L., Padilla, M., Clark, S., & Loucks, S. (1983). Training personnel in the prevention and management of violent behavior. *Hospital and Community Psychiatry, 34*(1), 40–43.

Lion, J., Snyder, W., & Merrill, G. (1981). Underreporting of assaults on staff in a state hospital. *Hospital and Community Psychiatry, 32*(7), 497–498.

Lipscomb, J., & Love, C. (1992). Violence toward health care workers: An emerging occupational hazard. *American Association of Occupational Health Nurses, 40*(5), 219–228.

Love, C. C., & Hunter, M. E. (1996). Violence in public sector psychiatric hospitals. Benchmarking nursing staff injury rates. *Journal of Psychosocial Nursing and Mental Health Services, 34*(5), 30–34.

Matthews, L. R. (1998). Effects of staff debriefing on post-traumatic stress symptoms after assaults by community housing residents. *Psychiatric Services, 49*(2), 207–212.

McPhaul, K. M., & Lipscomb, J. A. (2004). Workplace violence in health care: Recognized but not regulated. *Online Journal of Issues in Nursing, 30*(3), 7.

Parkes, J. (1996). Control and restraint training: A study of its effectiveness in a medium secure psychiatric unit. *Journal of Forensic Psychiatry, 7*(3), 525–534.

Rippon, T. J. (2000). Aggression and violence in health care professions. *Journal of Advanced Nursing, 31*(2), 452–460.

Robson, L. S., Shannon, H. S., Goldenhar, L. M., & Hale, A. R. (2001). *Guide to evaluating the effectiveness of strategies for preventing work injuries: How to show whether a safety intervention really works.* DHHS (NIOSH) #2001-119. Cincinnati: Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health.

Runyan, C. W., Zakocs, R. C., & Zwerling, C. (2000). Administrative and behavioral interventions for workplace violence prevention. *American Journal of Preventive Medicine, 18*(4 Suppl), 116–127.

Toscano, G., & Weber, W. (1995). *Violence in the workplace.* Washington: US Department of Labor, Bureau of Labor Statistics.

UIIPRC. (2001). *Workplace violence: A report to the nation.* Iowa City: University of Iowa.

US Department of Labor & OSHA. (1996). *Guidelines for preventing workplace violence for healthcare and social service workers.* OSHA #3148. Washington: US Department of Labor, Occupational Safety and Health Administration.

World Health Organization. (2005). *Framework guidelines for addressing workplace violence in the health sector.* Retrieved June 9, 2006, from www.who.int/violence_injury_prevention/violence/activites/workplace/en

Authors' Note

Jane Lipscomb, RN, PhD, is Professor, School of Nursing, University of Maryland, Baltimore, United States. Kathleen McPhaul, RN, PhD, is Assistant Professor, School of Nursing, University of Maryland. Jonathan Rosen, MS, CIH, is Director, Occupational Safety and Health Department, New York State Public Employees Federation. Jeanne Geiger Brown, RN, PhD, is Assistant Professor, School of Nursing, University of Maryland. Mona Choi, RN, PhD, is Research Assistant, School of Nursing, University of Maryland. Karen Soeken, PhD, is Professor, School of Nursing, University of Maryland. Victor Vignola, BS, is Agency Labor Relations Specialist, New York State Office of Mental Health. Deborah Wagoner is Director, Center for Human Resources Management, New York State Office of Mental Health. Janet Foley, BS, is Director, Civil Service Employees Association. Peggy Porter, RN, BS, COHN-S, is Health and Safety Coordinator, New York State Correctional Officers and Police Benevolent Association.

Interlibrary Loans and Journal Article Requests

Résumé

Prévention de la violence
en soins de santé mentale :
le cas de l'État de New York

**Jane Lipscomb, Kathleen McPhaul, Jonathan Rosen,
Jeanne Geiger Brown, Mona Choi, Karen Soeken,
Victor Vignola, Deborah Wagoner, Janet Foley et Peggy Porter**

En 1996, le New York State Office of Mental Health adoptait une politique obligeant tous les établissements psychiatriques administrés par l'État à se doter d'un programme proactif de prévention de la violence fondé sur les lignes directrices imposées par la *U.S. Occupation Safety and Health Administration*. Cette décision a fourni une occasion d'évaluer l'effet de ce type de lignes directrices sur la santé et la sécurité au travail. Les auteurs rapportent ici les résultats d'une étude à plusieurs volets dont le but était d'évaluer la faisabilité et les répercussions d'une intervention participative destinée à prévenir la violence au travail. Ils décrivent la mise en œuvre d'un programme de prévention dans trois établissements hospitaliers, en se fondant sur : une analyse approfondie du milieu de travail; des groupes de discussion réunissant des employés; des sondages menés avant et après l'instauration du programme dans le but d'évaluer les changements de perception à l'égard des agressions physiques et de la qualité des différents volets du projet. Les résultats attestent de la faisabilité de ce type de programme et de ses répercussions favorables au sein des établissements de santé mentale. On a constaté chez les employés de tous les milieux de travail concernés une amélioration notable des perceptions concernant l'engagement de la direction et la participation du personnel en matière de prévention de la violence.

Mots clés : prévention de la violence, violence au travail, établissements psychiatriques.