Workplace Violence and Prevention in New Jersey Hospital Emergency Departments

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Summary Report on 50 New Jersey Hospitals Participating in the Evaluation of California Initiatives to Reduce Violence Against Healthcare Workers Study

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I. INTRODUCTION

Scope of the Problem

Health care workers, especially those providing emergency and psychiatric care, have long been recognized as having a high risk of work-related assault. The National Crime Victimization Survey reports that between 1992 and 1996 more than 600,000 violent victimizations occurred to workers in the healthcare industry (Warchol, 1997). Nurses are at particularly high risk, with an annual average of 69,500 reported violent victimizations. This corresponds to an annual rate of 24.8 victimizations per 1,000 nurses, which is the highest rate among occupations in the healthcare industry. The rate of assault injuries to psychiatric nurses has been estimated at 16 per 100 employees per year, which exceeds the annual rate of all injuries found in many high risk occupations (Carmel and Hunter, 1989).

A survey of over 1,000 emergency department (ED) nurses in Pennsylvania indicates that during their careers, 97% experienced verbal abuse, 94% received physical threats, and 66% had been physically assaulted (Mahoney, 1991). The percentage of psychiatric health care workers reporting assaults at least once in their careers range from 43% to 100% (Poster and Ryan, 1989). Surveys indicate that annually, over half of the nurses responding report being physically assaulted (Erickson and Williams-Evans, 2000; Fernandes, *et al*., 1999) and more than a quarter of psychiatric nurses believe that violence is to be expected in their line of work (Poster, 1996).
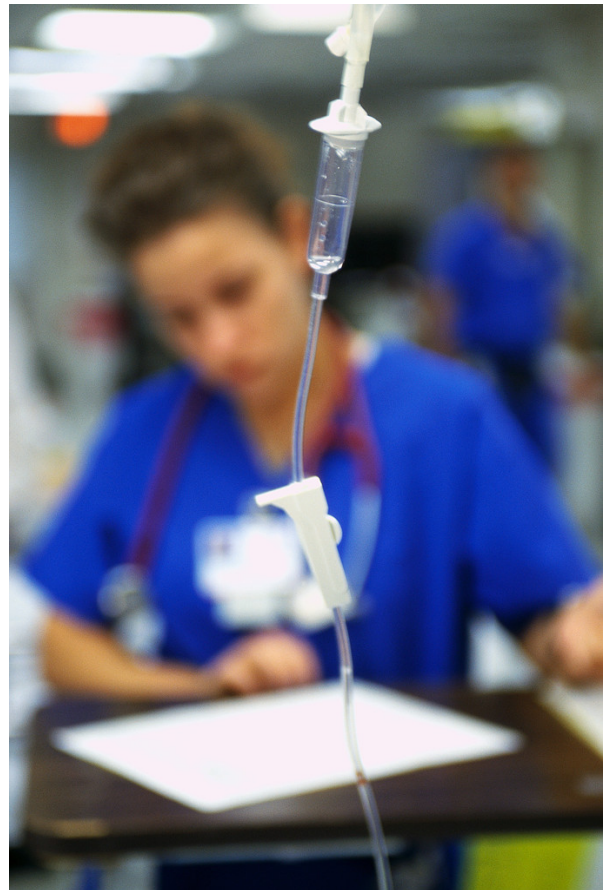
Risk Factors for Violence to Health Care Workers

Violence at work can be categorized into four types based on the relationship of the perpetrator to the business: criminal intent, customer-client, worker-on-worker and personal relationship (Peek-Asa *et al.*, 1998; Howard, 1996). Health care workers are at risk primarily from assaults committed by patients, although criminal intent assaults, such as rapes, also occur.

The general types of control measures for violence at work fall into the categories of administrative/policy-based practices, employee training, environmental control, and security equipment and personnel. The health care industry, especially hospital EDs and psychiatric facilities, possess many of the commonly cited risk factors, including dealing with the public on demand, working in a public and accessible workplace, and providing services to potentially hostile clientele (NIOSH, 1996; Kraus 1996). Risk factors found within the health care setting include the carrying of weapons, early release of psychiatric patients, long waiting periods for clients, the right of psychiatric patients to refuse treatment, and the use of hospitalization in lieu of incarceration (California Department of Industrial Relations, 1993). Staffing patterns, including decreases in the number and experience level of staff, have also been identified as an important risk factor (Simonowitz, 1996; Fineberg, *et al.*, 1988).

Prevention

A thorough review of administrative approaches to reducing violence at work was conducted by Runyan, *et al.* (2000). Nine evaluations were identified, all of which pertained to health care settings and addressed violence against workers by patients. Five of the evaluations found that employee training programs to manage assaultive behavior led to decreases in the frequency of assaults. Decreases were also noted in programs that took administrative approaches such as flagging charts and introducing a violence management program. Although each study reviewed had methodologic flaws, the evidence supports the ability to reduce assaults through organized approaches.

Surveys of health care workers lend insight into potential prevention approaches. Respondents in a survey of ED staff indicated that 95% of staff were in favor of 24-hour security coverage and 68% of workers endorsed training (Fernandes, *et al.*, 1999). Other suggestions included maintaining visibility and communication between staff, monitoring entrances and exits, use of alarms, and reporting of events through a central source (Keep, *et al.*, 1995).

California Initiatives

In 1993, California's Department of Industrial Relations, Division of Occupational Safety and Health released "Guidelines for Security and Safety of Health Care and Community Service Workers," which was the first statewide effort to control violence in the health care setting. These guidelines are supported by the California requirement that all businesses have an Injury and Illness Prevention Program (IIPP) (Title 8 Section 3203). The IIPP requires all businesses to conduct assessments to identify their workplace

hazards and take steps to reduce these risks. The Guidelines officially recognize violence as one of the risk factors for injury in health care settings that must be part of the IIPP program.

The California Occupational Safety and Health Administration (Cal/OSHA) is the regulatory agency that oversees this requirement. An analysis of Cal/OSHA inspections related to violence in the workplace from 1993 through 1997 found that 42 of the 237 inspections (17.2%) were conducted in health care facilities. Of these, over 90% were in response to employee complaints. Two of these inspections were in response to a fatal event and approximately 40% were in response to a physical assault. The remaining inspections were in response to threats or reported unsafe conditions. Health care facilities were generally found to have implemented IIPP programs, but few of these were comprehensive or included all required elements.

In response to a growing concern for violence in EDs, the California Emergency Nurses Association Government Affairs Committee conducted a survey of California EDs in 1990. The objectives of this survey were to determine the extent of violence against emergency nurses, practices to deal with violent behavior, and security practices (Keep, *et al.*, 1992).

This survey was instrumental to the passage of the California Hospital Security Act (AB508-Speier), implemented in 1993. AB508 introduced new language into the California Health and Safety Code (Section 1257.7) which required all hospitals to conduct a security assessment and respond to identified risks by July 1, 1995. This act required acute care facilities to regularly train employees on security and safety measures, to conduct a security and safety assessment and develop a security plan, and to report to local law enforcement within 72 hours all acts of assault and battery against on-duty hospital personnel that result in injury or involve the use of a firearm or other dangerous weapon.

The survey conducted in 1990 also provided a baseline measure of violent acts and security measures prior to the passage of AB508. In collaboration with the California Emergency Nurses Association, Dr. Peek-Asa of the University of Iowa has re-surveyed California EDs with the objectives of measuring changes in the reported level of violent events and security procedures. These data indicate that security measures in California EDs have increased since the original survey but that substantial deficits still exist (Peek-Asa, *et al.*, 2002). The regulatory agency that enforces Section 1257.7 is the California Department of Health Services (DHS).

Compliance Activity: Currently, neither initiative has a process for ensuring or evaluating compliance with IIPP on a regular basis. Both Cal/OSHA and DHS investigate hospital facilities in response to a serious event, multiple events in one facility, or employee complaints. Assessments of security programs are conducted during these investigations. Cal/OSHA may also conduct planned inspections of hospitals and other employers. With the greatest number of Cal/OSHA inspections being conducted in response to employee complaints, many hospitals have not been inspected for security issues. Of those inspected, Cal/OSHA has issued numerous citations in response to violations of IIPP security requirements in hospitals (Peek-Asa and Howard, 1998). The only routine security review is conducted by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), which reviews hospital security programs for routine hospital licensure purposes. This review is conducted in conjunction with many other activities, and is a paper-only review. Since routine investigations are not conducted, many hospitals may have inadequate security programs.

Evaluation of California Initiatives to Reduce Violence Against Healthcare Workers Research Project

In 2002, the University of Iowa's Injury Prevention Research Center was awarded a NIOSH grant to evaluate the California initiatives described above. This study intended to determine the level of compliance with these initiatives in the absence of routine inspections, and to compare security programs in California with those in a control state. New Jersey agreed to be the control state because it is under the jurisdiction of the federal Occupational Safety and Health Administration, and thus has no specific workplace violence state legislation or state OSHA guidelines that pertain to hospitals.

New Jersey Initiatives

In New Jersey, the federal Occupational Safety and Health Administration is responsible for the enforcement of workplace safety and health laws for private industry, which includes most hospitals and health care facilities in the state. While federal OSHA does not have a specific standard on workplace violence, in 1996 the agency issued "Guidelines for Preventing Workplace Violence for Health Care & Social Service Workers" (OSHA, 1996). This document provides information on workplace violence and prevention in order to help employers establish effective violence prevention programs.

JCAHO provides accreditation and certification services for the health care industry in all states as described previously. New Jersey hospitals that are accredited by JCAHO must have a written security plan and a safety committee.
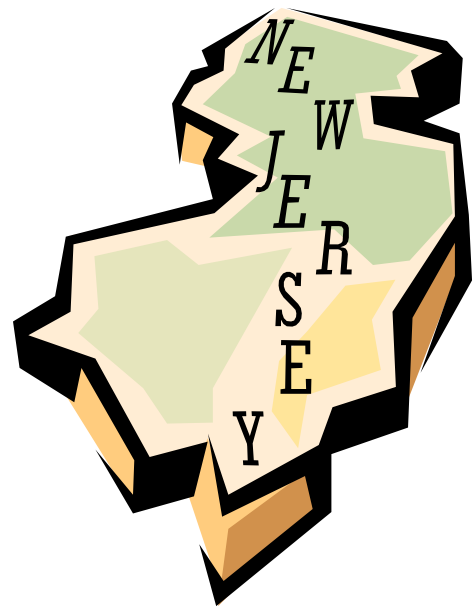
Compliance Activity: There is no specific federal OSHA standard that addresses workplace violence in New Jersey health care facilities. The federal OSHA general duty clause obligates an employer to protect workers from serious and recognized workplace hazards even when there is no standard. The general duty clause is utilized by federal OSHA when responding to a workplace violence event at a hospital facility.

II. OVERVIEW OF OBJECTIVES, BACKGROUND, AND APPROACH

The overall goal of this research project was to evaluate hospital compliance with the California initiatives in the absence of routine inspections, and to compare security programs in California hospitals with those in a control state (New Jersey). The evaluation included process and outcome components of individual security programs. The process evaluation identified safety protocols and procedures, equipment, training, and environmental and work practice modifications made to reduce workplace violence. These measures can be tied directly to provisions in AB508 and the Cal/OSHA Guidelines. While New Jersey hospitals would have no reason to implement

components of these initiatives, they may have had other motivations to implement similar safety measures. The process evaluation also gauged each participating hospital's efforts to identify and respond to their individual risks through risk assessments and surveillance activities. Hospital site visits and data collection were carried out in New Jersey by staff from the New Jersey Department of Health and Senior Services. The project was approved by the University of Medicine and Dentistry of New Jersey's Office of the Institutional Review Board (IRB) for the protection of human research subjects. In California, this work was carried out by the California Department of Health Services. This report provides information on the workplace violence prevention programs in 50 participating New Jersey hospital EDs collected by NJDHSS researchers. Identical assessment surveys were conducted in both California and New Jersey hospital EDs to describe the status of security programs within the representative sample of hospitals. This report does not attempt to explain differences between California and New Jersey hospitals. This project also evaluated 31 Psychiatric units located within licensed acute care hospitals or as stand-alone facilities. Results from the evaluation of these Psychiatric units will be presented in a separate report from NJDHSS.

III. RESEARCH METHODS

Hospital Sample

The sample includes 50 randomly selected licensed acute care hospitals in New Jersey. Table 1 presents the distribution of statewide hospitals, participating hospitals, and participation rates by hospital type. Hospitals were identified from a 2002 list of all licensed New Jersey acute care hospitals maintained by the NJDHSS Office of Health Care Quality and Oversight.

TABLE 1 – Statewide Distribution of Licensed Hospitals, Participating Hospitals, and Participation Rate, by Hospital Type			
	Emergency Departments		
Hospital Type and Size	Statewide Licensed Hospitals[1] N (%)	Participating Hospitals N (%)	Participation Rate among Sampled Hospitals[2]
Total	85	50	70%
Trauma I and II	11	10	91%
Acute Care >300 beds	18	10	67%
Acute Care <300 beds	56	30	67%

[1] There were 85 licensed acute care hospitals in New Jersey in 2002.

[2] Participation Rate = (# of hospitals that agreed to participate)/(# of hospitals (71) that were invited to participate) x 100

Hospital Recruitment

Selected hospitals were notified of the project with a letter from the NJDHSS. A follow-up phone call was made to identify the hospital's willingness to participate and to identify the appropriate contacts within the hospital. Hospitals were informed that the security assessments were confidential and part of a research project on workplace violence and not part of a compliance or regulatory action by federal or state government agencies.

Security Program Assessment Protocol

Information about hospital security programs was obtained from interview questionnaires with several key informants, an on-site walkthrough and printed documents provided by the hospital. Key informants included, for each unit, the unit nurse manager, the hospital's Risk Assessment Director or Security Director, and one or two staff members in the unit. Documents requested from each hospital included training materials for medical and security staff, written policies, and forms for reporting violent events.

Violent Event Data

Information about violent events was collected from several sources for the years 1992 through 2001. The research team found that surveillance activities that described violent events rarely collected complete data, and that hospitals generally had several overlapping systems. Outside sources, such as law enforcement records were difficult to obtain due to government laws limiting public access. In addition, these agencies rarely maintained records of assaultive events occurring on hospital grounds due to lack of data surveillance systems maintained by the hospitals. The sources used and the problems associated with them are described below:

1. *Employers' reports of workplace illness and injury* – Employers' reports of workplace illness and injury were kept by all hospitals. However, when a form is filled out, it is generally placed in the individual file of the employee and not recorded in a stand alone database. In order to collect information about all events, the individual files of each hospital employee would need to be reviewed to identify if an Employer's Report was written, and if this report described a violent event. Access to all individual employee files was not feasible for this study and not allowed under our IRB approval. However, for potential assault events identified from OSHA Logs where confirmation of an intentional act was needed, employee files were requested from Employee Health staff. For most hospitals, access to these files was granted and data were abstracted from the Employers' Report, if completed.

2. *OSHA logs* – OSHA 200 logs (now called OSHA 300 logs) were maintained by each hospital. This was the primary source for event information. However, hospitals are only required to keep these reports for three years, and thus much of the data prior to 1996 (i.e., the pre-initiative period) were not available. Approximately 40% of hospitals had historic data prior to 1996. Furthermore, the OSHA logs often lacked information about the type of event, location, injury, or victim. If an assaultive event could not be verified from the OSHA logs alone, the employee's file was requested.

3. *Security and internal hospital surveillance reports* – As part of the security assessment, data from security logs and reports were requested and collected from several hospitals. In general, these systems were kept independently from other hospital reporting systems and only included events reported by security guards. These logs and reports were event-specific with little, if any, information about the circumstances surrounding the violent event and whether the guard or a hospital employee was injured. The security logs functioned primarily as a tool for documenting any incident that security supervisors wanted the next shift to know about. These logs contained brief narratives of the event and rarely included reports on assaults. The security reports functioned primarily as a tool for documenting

the time, location and reasons why a security guard was dispatched. The reasons were generally described in terms of security functions, such as to monitor a patient or subdue a patient, without a description of the violent event that resulted in the initial security call. Since many hospitals did not have computerized security reports or hard-copy reports filed in a centralized area, this source of information was not consistently available across hospitals. In addition, some hospitals would not permit access to security files.

Other internal hospital reporting systems included employee incident reports, risk management reports, occupational injury tracking forms, violence logs and security department incident reports. These reporting systems were rarely maintained electronically and most hard-copy reports were either stored in individual employee files or in department-specific locations. Research staff attempted to identify and describe each reporting system. In most cases, reports were not accessible to research staff. Because hospitals have different internal reporting mechanisms with no defined standard across facilities, they were not used as a primary source of identifying violent events.

IV. NEW JERSEY HOSPITAL SECURITY PROGRAM ASSESSMENTS

1. Profile of Participating Emergency Departments

The participating hospitals treated an average of 115 patients per weekend day and 114 per weekday. The range of treated patients differed markedly, indicating wide variation in the level of patient workload. Waiting time also showed a wide distribution. While 40% of hospitals reported an average wait of an hour or less for non-critical patients during peak hours, 34% reported an average wait of longer than two hours (Table 2).

TABLE 2 – New Jersey Emergency Department Profiles	
Characteristic	**Mean (Range)**
Number of patients seen during each 24-hour weekend day	115.23 (40 – 250)
Number of patients seen during each 24-hour week day	113.68 (40 – 250)
Average wait time for non-critical patients during peak[1] hours	
≤ 1 Hour	20 (40%)
>1 - ≤ 2 Hours	12 (24%)
> 2 Hours	17 (34%)
Unknown	1 (2%)
Did not respond	0
Average wait time for non-critical patients during non-peak[1] hours	
≤ 1 Hour	36 (72%)
>1 - ≤ 2 Hours	10 (20%)
> 2 Hours	3 (6%)
Unknown	1 (2%)
Did not respond	0

[1] Peak hours self-defined by survey responder

2. Workplace Violence Training Programs

The majority of New Jersey hospitals (82%) had violence prevention training programs in the ED (Table 3). However, only a small percentage of the training programs included all ED employees. Physicians, volunteers, clerical staff and contract employees were the groups most likely to be excluded from required training. Physicians, who are the primary resource for which patients come to EDs, often have little time with individual patients, and their limited availability is one reason for long waiting periods.

Many hospitals used the same program for new personnel and recurring training. In hospitals that conducted recurring training only once a year, this could leave significant gaps of up to one year between beginning work in the ED and the training. Initial training programs ranged in length from 30 minutes to 16 hours, with the majority lasting one hour or less. Recurring training was usually of shorter duration, and more likely to include only reading updates or one lecture. Recurring training could be a good opportunity for more skills-based learning, which would require role-playing and interactive training. Large hospitals often hired a contractor to conduct workplace violence training. Training programs conducted by hospital staff were most often conducted by Nurse Managers, Nurse Educators, or Security personnel.

Table 3 – Workplace Violence Prevention Training, Emergency Departments		
Characteristic	Response	Distribution
Training	Yes	41 (82%)
	No	8 (16%)
	Unknown	1 (2%)
Training required for all employees	Yes	4 (10%)
	No	37 (90%)
Employees who are not included in workplace violence training	Nurses	0
	Physicians	29 (71%)
	Unlicensed support staff	4 (10%)
	Managers	6 (15%)
	Clerical staff	18 (44%)
	Security	5 (12%)
	Volunteers	24 (60%)
	Contract employees	17 (42%)
	Per diem employees	2 (5%)
	Temporary staff	9 (23%)
Length of training	<= 1 hour	16 (40%)
	>1 - <= 4 hours	8 (20%)
	>4 - <= 8 hours	11 (28%)
	> 8 hours	1 (3%)
	Unknown	4 (10%)
	Not responded	1 (1%)
Format used for training	Lecture	37 (90%)
	Reading prepared material	26 (67%)
	Didactic/interactive discussions	33 (83%)
	Role playing	26 (67%)

Hospitals included most major topics in their training programs as shown in Table 4. The majority of training programs were based on existing programs which can be purchased, and these provide a good basis for training. Most training programs included verbal methods to diffuse aggressive behavior (89%), obtaining a history from a patient with a violent behavior (86%) and self-defense if preventive action does not work (86%). Only 69% of training programs discussed how to report a violent event and 61% of training programs covered appropriate use of medications to subdue aggressive behavior.

Table 4 – Components of Workplace Violence Training Programs, Emergency Departments	
Training includes the following topics:	
Hospital safety policies and procedures	27 (75%)
Aggression and violence predicting factors	29 (81%)
Characteristics of aggressive and violent patients and victims	30 (83%)
Verbal methods to diffuse aggressive behavior	32 (89%)
Physical methods to diffuse or avoid aggressive behavior	28 (78%)
How to report a violent event	25 (69%)
Self-defense if preventive action does not work	31 (86%)
Obtaining a history from a patient with violent behavior	31 (86%)
Techniques for restraining violent patients	22 (61%)
Appropriate use of medications to subdue aggressive patients	22 (61%)
Resources available for victims of workplace violence	27 (75%)

A lower proportion of ED staff representatives reported receiving training (74%) than the proportion of hospitals reporting training (82%), while the reported length of training was similar for both staff and manager. Table 5 shows that almost half of the staff representatives reported that their workplace violence training was excellent (10.8%) or very good (35.1%), but 20% reported that the training was "not very good."

TABLE 5 – Emergency Department Staff Rating of Workplace Violence Training		
Question	**Response**	**Distribution**
Did you receive training about violence-based safety in your workplace	Yes	74 (74%)
	No	25 (25%)
	Unknown	1 (1%)
How long was the training on workplace violence?	≤ 1 Hour	32 (45.1%)
	> 1 - ≤ 4 Hours	15 (21.1%)
	> 4 - ≤ 8 Hours	19 (26.8%)
	> 8 Hours	3 (4.2%)
	Unknown	2 (2.8%)
	Did not respond	3 (4.1%)
How good would you say your overall workplace violence training program is?	Excellent	8 (10.8%)
	Very Good	26 (35.1%)
	Adequate	25 (33.8%)
	Not Very good	15 (20.3%)

3. Workplace Violence Policies and Procedures

The majority of hospitals (68%) had written policies and procedures on workplace violence, which are required for JCAHO accreditation (Table 6). Although EDs have a much higher risk for workplace violence than the general hospital, only 12% reported specific written policies and procedures for that department. In California, AB508 requires that policies address multiple types of violence, including violence against employees, against patients, between employees, and by other parties. Without this requirement in New Jersey, a surprisingly large percentage of New Jersey hospitals with written policies included protocols for employee-on-employee violence (64%), patient or visitor violence against employees (73%), and violence against patients (58%). Zero tolerance policies were the most common type of specific policy found in hospital policies and procedures.

TABLE 6 - Workplace Violence Policies in New Jersey Emergency Departments		
Question	**Response**	**Distribution**
Does your hospital have written policies regarding violence in the workplace?	Yes	34 (68%)
	No	6 (12%)
	Unknown	10 (20%)
Does your unit have a separate written policy than the rest of the hospital regarding violence in the workplace?	Yes	6 (12%)
	No	38 (76%)
	Unknown	5 (10%)
	Did not respond	1 (2%)
Does the policy include employee-on-employee violence?	Yes	29 (58%)
	No	11 (22%)
	Unknown	5 (10%)
	Did not respond	5 (5%)
Does the policy include violence against employees by patients or visitors?	Yes	33 (66%)
	No	8 (16%)
	Unknown	4 (8%)
	Did not respond	5 (10%)
Does the policy include violence against patients or visitors?	Yes	26 (52%)
	No	12 (24%)
	Unknown	7 (14%)
	Did not respond	5 (10%)
Does your hospital have a "zero-tolerance" policy?	Yes	35 (70%)
	No	8 (16%)
	Unknown	7 (14%)

4. Workplace Violence Services and Activities

The most common services and activities to reduce or respond to workplace violence are listed in Table 7. The majority of hospitals (87.8%) provide services to victims through Employee Health and/or Employee Assistance Programs. These programs provide services for individual staff who have reported victimization in a violent event. Fewer hospitals (64.6%) provide unit-specific critical incident debriefing in which employees familiar with the unit review each event and discuss methods to reduce similar risks and future events.

TABLE 7 - Workplace Violence Services and Activities in New Jersey Emergency Departments		
Question	**Response**	**Distribution**
Does your unit do anything specific to monitor or reduce tension in waiting areas?	Yes	42 (89.4%)
	No	4 (8.5%)
	Unknown	1 (2.1%)
	Did not respond	3
Does your unit do anything specific to monitor or reduce tension between staff?	Yes	38 (80.9%)
	No	9 (19.1%)
	Did not respond	3
Does your unit provide critical incident debriefing after an event?	Yes	31 (64.6%)
	No	17 (35.4%)
	Did not respond	2
Does your hospital provide services to victims through employee health programs?	Yes	37 (77.1%)
	No	11 (22.9%)
	Did not respond	2
Does your hospital provide services to victims through employee assistance programs?	Yes	43 (87.8%)
	No	6 (12.2%)
	Did not respond	1

5. Security Features

In general, environmental components of security programs were less common than behavioral or administrative approaches. Table 8 shows that nearly half the hospitals do not have a check-in procedure for visitors and over one-third did not have isolated areas to keep aggressive patients. Only a few hospitals had furniture bolted to the floor. A majority of hospitals (70%) had stationary panic alarms, but few used portable alarms or other noise-making devices for security purposes.

TABLE 8 - Security Features of New Jersey Emergency Departments		
Question	**Response**	**Distribution**
Are visitors required to check in?	Yes	28 (56%)
	No	22 (44%)
Does your unit have stationary panic alarms?	Yes	35 (70%)
	No	14 (28%)
	Unknown	1 (1%)
Do staff carry portable panic alarms?	Yes	2 (4%)
	No	48 (96%)
Do staff carry noise-making devices, such as whistles, to alert other staff of problems?	Yes	0
	No	50 (100%)
Are there areas (e.g., seclusion rooms) in which patients who have become aggressive can be placed to calm down?	Yes	32 (64%)
	No	18 (36%)
Is furniture bolted to the floor to avoid its use as a weapon or entrapment?	Yes	5 (10%)
	No	35 (70%)
	Unknown	1 (2%)
	Did not respond	9 (18%)

Most hospitals use security cameras to monitor the ED, and over half use mirrors to increase visibility (Table 9). Few hospitals have areas with inadequate lighting, which was defined as not bright enough to read a newspaper. Nearly half of the hospitals had unrestricted and unmonitored public access through means other than the main entrance. Most EDs reported having areas where employees could be overcome and isolated by potential perpetrators.

TABLE 9 - Security Equipment in New Jersey Emergency Departments		
Question	Response	Distribution
Does the Emergency Department have security cameras?	Yes	37 (74%)
	No	11 (22%)
	Unknown	2 (4%)
Are there any areas that do NOT have adequate lighting?	Yes	8 (8.5%)
Other than the main entrance, are there any areas where the public can enter unrestricted (unlocked and unmonitored)?	Yes	33 (66%)
	No	17 (34%)
Are mirrors used to enhance visibility?	Yes	21 (42%)
	No	26 (52%)
	Unknown	3 (6%)
Are there areas within the ED in which employees can become isolated and are unable to communicate?	Yes	34 (68%)
	No	9 (18%)
	Unknown	7 (14%)

6. Emergency Department Staff Reports of Experience with Violence

Researchers interviewed two ED staff nurses for each of the 50 hospitals visited. Verbal abuse at least once per year was reported by 90% of the respondents, with 27% reporting verbal abuse over 96 times per year (Table 10). Only 6% reported no verbal abuse. Threats were reported by 61% of employees, with the majority threatened between 1 and 12 times per year. Almost one-third of staff respondents reported being assaulted and 12% reported three or more assaults per year. However, 72% of those who were assaulted verbally or physically did not report the event.

TABLE 10 - Staff Experience with Violent Events in New Jersey, Emergency Departments		
Question	**Response**	**Distribution**
In the last year while you have been at work, how frequently were you verbally abused?	None	6 (6.3%)
	1 – 12 times per year	37 (38.5%)
	13 – 48 times per year	10 (10.4%)
	49 – 96 times per year	17 (17.7%)
	> 96 times per year	26 (27.1%)
	Did not respond	4
In the last year while you have been at work, how frequently were you threatened?	None	38 (39.2%)
	1 – 12 times per year	43 (44.3%)
	13 – 24 times per year	6 (6.2%)
	25 – 72 times per year	6 (6.2%)
	> 72 times per year	4 (4.1%)
	Did not respond	3
In the last year while you have been at work, how frequently were you assaulted?	None	69 (69.7%)
	1 – 2 times per year	18 (18.2%)
	3 – 12 times per year	10 (10.1%)
	> 12 times per year	2 (2%)
	Did not respond	1
Did you miss at least one day of work because of any of these events?	Yes	1 (1%)
	No	93 (98.9%)
	Did not respond	6
If you were a victim of either verbal or physical violence, did you fill out a form to report the event?	Yes	25 (26.9%)
	No	67 (72%)
	Unknown	1 (1.1%)
	Did not respond	7

V. SURVEILLANCE OF VIOLENT EVENTS

Data for tracking violent events in New Jersey hospitals were abstracted from OSHA Logs and Employers' Reports of Occupational Injury and Illness, as well as security incident reports, supervisors' reports, and employee incident reports for the years 1992 to 2001, inclusive. Since the OSHA Logs and Employers' Reports were the only reporting sources consistently used across all participating hospitals, they were selected as the primary sources for preparing surveillance statistics for this final report.

Table 11 provides a breakdown of the number of participating hospitals in New Jersey reporting a violent event. Only nine hospitals (18%) did not report an OSHA or Employers' Report recordable violent event (hereafter referred to as "recordable") over the study time period. This does not imply, however, that ED employees in these nine hospitals were not victims of violent events. There is considerable under-reporting of such events, and when they are reported they may not be severe enough to be classified as recordable. These non-recordable events are captured in other hospital reporting systems, such as employee incident reports, which have not been analyzed for purposes of this report.

TABLE 11 - Status of Violent Events Recorded in OSHA Log or Employers' Report Data Systems for all Participating Hospitals, 1992 – 2001		
Hospital Type and Size	Hospitals with Reported Violent Events in ED Number (%)	Hospital without Reported Violent Events in ED Number (%)
Trauma I and II	10 (100%)	0
Acute Care >= 300 Beds	8 (80%)	2 (20%)
Acute Care < 300 Beds	23 (77%)	7 (23%)
TOTAL	41	9

The majority of hospitals without a recordable violent event over the 10-year period between 1992 and 2001 were smaller facilities, specifically general acute care hospitals with fewer than 300 beds.

1. Location of Violent Events

The specific location within the ED where the violent event occurred could not be identified from 45% of the records (Table 12). Of those records where the specific location was documented, the majority of events (42.1%) occurred in patient and treatment rooms. A much smaller percentage of events occurred in corridors and stairwells (4.3%), admitting and triage areas (2.9%) and at the entrances and exits of the ED (3.6%).

TABLE 12 - Location within the Emergency Department where the Violent Event Occurred		
Location	**Number[1]**	**Percentage[2]**
Admitting / Triage Areas	4	2.9
Corridor / Hallway / Stairwell / Elevator	6	4.3
Bathroom	2	1.4
Entrance / Exit / Restricted Entry	5	3.6
Lobby / Waiting Room	4	2.9
Nurses Station / Pod Area / Office	2	1.4
Patient Room / Treatment Room	59	42.1
Seclusion / Time Out Room	4	2.9
Outdoor Area	1	0.7
Unknown	63	45

[1]Total number of events may exceed 140 due to double counting of an event.
[2] Denominator for percentages is the total number of violent events (n = 140). Total percentage will exceed 100% because a violent event may have more than one location associated with the event.
Reporting Sources: OSHA Log and Employers' Reports

2. Time of Violent Events

Table 13 shows the time of occurrence for recorded violent events. The time was not documented in over 38% of the violent events recorded in the available reporting sources. Among those events where the time was known, the percentage distribution was variable across time categories, with reported events occurring most frequently between 10:00 PM and 5:59 AM (27.1%) and 2:00 PM to 9:59 PM (22.9%).

TABLE 13 - Time of Violent Events, Emergency Departments		
Time Category (in military time)	**Number**	**Percentage**
2200 – 0559	38	27.1
0600 – 1359	16	11.4
1400 – 2159	32	22.9
Unknown	54	38.6
TOTAL	**140**	**100.0**

Reporting Sources: OSHA Log and Employers' Reports

3. Activity at the Time of the Event

Nonspecific classifications of the activity leading up to the violent event were documented in 31.1% of the events (Table 14). These classifications included perpetrators described as "combative," "defiant," or "unruly" without further specification. Almost half of the events occurred while the employee was restraining or subduing a violent perpetrator, and 30% of the events occurred while the employee was performing routine job functions. The activity leading up to the violent event could not be identified in 14.3% of the events.

TABLE 14 - Activity at the Time of the Violent Event, Emergency Departments		
Activity	Number[1]	Percentage[2]
Escorting	8	5.7
Restraining / Subduing	61	43.6
Approaching / Redirecting / Calming / De-escalating	3	2.1
Assisting Co-worker	8	5.7
Medical Care / Nursing Duties / Job Functions	42	30
Responding to Code / Intervening / (Physically) Confronting / Taking down / Secluding	13	9.3
Combative / Defiant / Unruly (further unspecified)	44	31.1
Elopement	8	5.7
Unprovoked / Came up from behind	8	5.7
Monitoring / Observing	6	4.3
Talking to Co-worker, Patient/Visitor Interviewing, Speaking with Patient	2	1.4
Other[3]	4	2.9
Unknown	20	14.3

[1]Total number of events may exceed 140 due to double counting of an event

[2]Denominator for percentages is the total number of violent events (n = 140). Total percentage will exceed 100% because a violent event may have more than one activity associated with it.

[3]*Other* includes: difference of opinion (argument), running after patient, walking away from discussion.
Reporting Sources: OSHA Log and Employers' Reports

4. Perpetrator of Violent Events

Table 15 shows that the majority of recordable violent events were perpetrated by the patient (85%). Two events were criminal (e.g., mugging) and one event was committed by a current or former employee. No events were domestic in nature. The small number of reports for non-patient perpetrators likely indicates an under-reporting of these types of events.

TABLE 15 - Perpetrator of Violent Events, Emergency Departments		
Type of Workplace Violence	Number	Percentage
Type I: Criminal	2	1.4
Type II: Patient	119	85.0
Type III: Employee	1	0.7
Type IV: Domestic	0	0
Visitor	5	3.6
Unknown	13	9.3
TOTAL	140	100.0

Reporting Sources: OSHA Log and Employers' Reports

5. Type of Weapon

The most common weapons used by perpetrators to commit the violent acts as shown in Table 16 involved parts of the body, such as the hands (37.1%), feet (15.7%), teeth (18.6%), and head (0.7%) and body fluids such as saliva and urine (22.9%). Over 8% of the violent events involved an unspecified part of the perpetrator's body. Other weapons included furniture in a patient room or waiting area (1.4%) and medical instruments used by the employee (e.g., stethoscope) (3.6%). The weapon could not be identified in 20% of the violent events.

TABLE 16 - Type of Weapon used to Commit the Violent Act, Emergency Departments		
Weapon Type	Number[1]	Percentage[2]
Fists / Hands / Nails	52	37.1
Feet	22	15.7
Gun / Knife / Club, Stick	0	0
Teeth / Mouth	26	18.6
Floor / Door / Wall / Window	4	2.9
Body (nonspecific or other body part not captured in an existing code)	12	8.6
Furniture	2	1.4
Medical Supply, Instrument / Office Supply	5	3.6
Food / Utensils / Meal Tray	0	0
Words / Verbal Threat	0	0
Head	1	0.7
Body Fluids	32	22.9
Other[3]	4	2.9
Unknown	28	20

[1]Total number of events may exceed 140 due to double counting of an event
[2]Denominator for percentages is the total number of violent events (n = 140). Total percentage will exceed 100% because a violent event may have more than one type of weapon associated with it.
[3]*Other* includes: items of clothing, box, and matchbook.
Reporting Sources: OSHA Log and Employers' Reports

6. Type of Injury

The most common injury sustained by the ED employee as a result of the violent event was a sprain, strain or spasm (74.3%), followed by a bruise or contusion (65.7%), abrasion or scratch (37.1%) and exposure to bodily fluids (35.7%) (Table 17). Another 22.1% of the events resulted in a bite and 8.6% in a laceration or cut to the employee. There were 32 events where the employee injury could not be identified from existing records.

TABLE 17 - Type of Injury Sustained by Employees in the Emergency Department as a Result of a Violent Event		
Injry Type	Number[1]	Percentage[2]
Abrasion / Scratch	52	37.1
Bite	31	22.1
Laceration / Cut	12	8.6
Bruise / Contusion / Blunt Trauma	92	65.7
Sprain / Strain / Spasm	104	74.3
Dislocation / Fracture	7	5
Exposure to Bodily Fluids	50	35.7
No Physical Injury	5	3.6
Puncture Wound	5	3.6
Psychological	4	2.9
Multiple Injuries (non-specified)	2	1.4
Burn	0	0
Concussion	0	0
Other[3]	7	5
Unknown	32	22.9

[1]Total number of events may exceed 140 due to double counting of an event
[2]Denominator for percentages is the total number of violent events (n = 140). Total percentage will exceed 100% because a violent event may have more than one type of injury associated with it.
[3]*Other* includes: head trauma, ruptured bicep.
Reporting Sources: OSHA Log and Employers' Reports

7. Part of the Body Injured

Injuries to the upper extremities (53.6%), head, face, and neck areas (30%) and torso (27.9%) accounted for the majority of injury locations on the body (Table 18). Only one of the reported events resulted in a psychological outcome (0.7%).

TABLE 18 - Part of Employee's Body Injured as a Result of a Violent Event, Emergency Departments		
Part of Body Injured	**Number**	**Percentage[1,2]**
Head / Face / Neck	42	30
Arms / Hands (Upper Extremities)	75	53.6
Abdomen / Chest / Back / Shoulder (Torso)	39	27.9
Legs / Hip / Feet (Lower Extremities)	13	9.3
Groin / Buttocks	1	0.7
Multiple Body Parts (not further specified)	1	0.7
Psychological	1	0.7
Unknown	12	8.6

[1]Total number of events may exceed 140 due to double counting of an event.
[2]Denominator for percentages is the total number of violent events (n = 140). Total percentage will exceed 100% because an employee may have sustained an injury to more than one body part as a result of the violent event.
Reporting Sources: OSHA Log and Employers' Reports

8. Employee Demographics

Table 19 shows that over half of the victimized employees were males (54.3%), over one-third were female (37.1%), and 8.6% were of unknown gender. The mean age of ED employees reporting a recordable violent event was 39 years with a range between 20 and 65 years. Employee age could not be abstracted from reporting source records for nearly 35% of the events.

TABLE 19 - Demographics of Employees Injured as a Result of a Violent Event, Emergency Departments		
Demographic	**Number**	**Percentage**
Gender		
Male	76	54.3
Female	52	37.1
Unknown	12	8.6
Age (in years)		
Mean	39	
Median	39	
Range	20 – 65	
Unknown	n = 48 (34.3%)	

Reporting Sources: OSHA Log and Employers' Reports

9. Employee Occupation

Registered nurses were the most frequently assaulted employees in the ED (43.6%), followed by security officers/guards (26.4%) (Table 20). Employees with specialized training who provide direct patient care, but are not licensed, (e.g., ED technician, emergency medical technician) were victims in 17.1% of the violent events.

TABLE 20 - Occupation of Employee Injured as a Result of a Violent Event, Emergency Departments		
Occupation	**Number**	**Percentage**
Nurse's Aide / Assistant, Medical Assistant, Patient Care Assistant, Orderly, Critical Care Technician, Health Aide, Sitter / Attendant, Hospital Assistant	10	7.1
Licensed Practical Nurse, Licensed Vocational Nurse, Licensed Psychiatric Technician	0	0
Psychiatric Technician / Aide, Behavior Technician, Mental Health Associate / Worker, Mental Health Counselor, ED Technician, Case Manager, Emergency Medical Technician	24	17.1
MD / Physician, Physician Assistant, Nurse Practitioner, Intern / Resident, Pharmacist	1	0.7
Registered Nurse	61	43.6
Police Officer	1	0.7
Security Officer / Guard, Public Service Officer	37	26.4
Maintenance, Housekeeping, Custodial, Food Service, Environmental Services Technician	0	0
Social Worker, Mental Health Therapist, Family Therapist, Speech Pathologist, Counselor	0	0
Art Therapist, Physical Therapist, Occupational Therapist, Recreational Therapist, Respiratory Therapist	0	0
Administration, Coordinator, Manager, Supervisor, Director, Team Leader	1	0.7
Clerk, Secretary, Administrative Support	0	0
Lab Technician, Radiology Technician, Lab Assistant	0	0
Other	0	0
Unknown	5	3.6
TOTAL	**140**	**100**

Reporting Sources: OSHA Log and Employers' Reports

10. Time Away from Work

Missed work time or restricted duty due to injury is required to be recorded on OSHA Logs and Employers' Reports. This information was missing on 4.3% and 15.7% of the reported events for days missed and restricted duty, respectively (Tables 21 and 22). The number of days missed was unknown in 10.9% of the events in which at least one day was missed. Among the known events, 32.8% of the employees missed at least one full day of work as a result of the violent event. The median number of days missed was four, with a range between 1 and 133 days. A little over 12% of the assaulted employees had restricted work duty following the event. The median number of restricted work days was 12, with a range between 2 and 180 days.

TABLE 21 - Days Away from Work as a Result of a Violent Event, Emergency Departments		
Employee Missed at Least One Full Day of Work	**Number**	**Percentage**
Yes	46	32.9
No	88	62.8
Unknown	6	4.3
Number of Days Missed		
Mean: 15.4		
Median: 4		
Range: 1 – 133		
Unknown: n = 5 (10.9%)		

Reporting Sources: OSHA Log and Employers' Reports

TABLE 22 - Restricted Work Duty as a Result of a Violent Event, Emergency Departments		
Employee Had Restricted Work Duty	**Number**	**Percentage**
Yes	17	12.1
No	101	72.2
Unknown	22	15.7
Number of Restricted Work Days		
Mean: 25.4		
Median: 12		
Range: 2 – 180		
Unknown: n = 0		

Reporting Sources: OSHA Log and Employers' Reports

VI. Conclusions and Recommendations

Hospitals in New Jersey have implemented a broad range of security and safety programs to reduce violence in their facilities. Effective workplace violence prevention requires an organized and integrated program of administrative and policy-based practices, employee training, environmental control, and security equipment and personnel. Not all hospitals had each of these components or had successfully integrated each component into the overall program. The majority of hospitals had ongoing workplace violence training programs although none were comprehensive enough to address all workplace violence issues. All hospitals had implemented some type of environmental controls for prevention, which was usually in the form of security equipment. The environmental approach, however, was often the least developed aspect of the security program.

The majority of New Jersey hospitals are to be commended for the steps they have taken to protect their employees. However, certain consistent deficiencies were found which suggest the potential for improved protection and/or improved efficiency.

- Surveillance of workplace violence events is uncoordinated and inefficient. Many hospitals have various reporting sources, most of which are flawed by under-reporting. Most hospitals had multiple avenues for reporting events, but lacked coordination of these reporting sources. For example, it was common to find separate reporting systems maintained by both the Security and Employee Health Departments with no integration of the two sources. The two sources usually collected different information, with Security focused on the characteristics of the event and Employee Health focused on the employee. Most hospitals did not have an electronic database to collect these data and thus information on violent events was not readily accessible for use in examining trends, characteristics of events and ongoing intervention planning. When these databases were present, they were most often maintained by Security or Risk Management Departments. It is recommended that a hospital conduct an assessment of their violent event reporting gaps and needs and subsequently develop a standardized protocol to document and collect information on assaults on employees. Because Security personnel do not respond to all events and Employee Health will only see employees who have injuries, these assault forms should be completed by the assaulted employee. In addition, each form should include an indicator of whether the employee was seen in Employee Health for treatment of injuries and whether Security personnel responded (and completed a report) of the event.

- Nursing staff within the ED were sometimes not satisfied with their interactions with security personnel. The findings of this study provide two important recommendations for hospital security personnel. First, hospitals need to have a clearly defined role for security guards, and medical personnel need to understand this role. Second, medical and security personnel would benefit from working more closely together, such as through shared training and committee experiences. Training for security guards often did not include discussion on de-escalation techniques that are crucial for preventing or reducing violent events.

- Overall, training programs included the major topics appropriate for preventing workplace violence. However, the hospital training programs were very diverse. For medical personnel training, this diversity was evident in many ways:
  - ▶ the materials were developed from many different sources;
  - ▶ formats varied from reading material to lecture to hands-on training;
  - ▶ the time allotted for orientation and re-training varied from less than an hour to more than one day;
  - ▶ the training was delivered by different individuals, including nurses, security guards, and contract educators.

  It is recommended that hospitals implement a workplace violence prevention training program that uses consistent and effective methods including training content, length, modality and accuracy.

- Although all hospitals trained the majority of personnel in their ED, no hospitals trained all employees spending time in the unit. The most common personnel omitted from training were physicians, volunteers, clerical staff and contract employees of all job categories. It is recommended that all employees be trained in workplace violence prevention. Although physicians often spend less time with individual patients than nurses, they could play an important role in recognizing and de-escalating patients who are in a state of increasing agitation and aggression. Volunteers, especially those that interact with patients and/or visitors, should also be included in training if they regularly work in the ED. Clerical staff are also likely to come into contact with the public and should receive violence prevention training.

- Workplace violence training often occurred on a periodic schedule, and sometimes only once per year. Employees hired just after one of the scheduled training sessions may work in the unit for a long time before receiving any training. It is recommended that newly hired employees receive workplace violence training on a timely basis.

- Training programs rarely included a review of hospital violence trends or the hospital hazard assessment. Training programs were most often based on standard formats. While standard violence training formats are effective, they do not provide information about the specific hospital environment. The majority of training programs used lectures and/or prepared materials, but fewer used interactive sessions or role playing, which are more suitable to teach specific skills such as physical maneuvers to diffuse or avoid aggressive behavior. It is recommended that training programs be tailored to address unique situations and characteristics of the individual hospital and include both interactive and role playing techniques.

- All hospitals had installed security equipment and made attempts to control the physical environment. While some of these efforts were highly sophisticated, some were insufficient to protect the employees. It is recommended that security equipment be installed in response to specific hazard assessments conducted by trained security personnel, and that product evaluations be conducted to identify the most effective equipment within different hospital settings. Security equipment should be viewed as a supplement to the presence of trained security personnel, not as a sole alternative.

- Few hospitals had effective systems to communicate the presence of violent patients. The most common system used was a tag in the patient's medical chart, which is not accessible to non-medical personnel, including security personnel. It is recommended that a more effective system be developed to communicate the presence of potentially violent patients.

- Assaults on ED employees were tracked using OSHA Logs and Employers' Reports of Occupational Injury and Illness. These sources were used because they are the only standardized reporting systems used across all hospitals. However, these systems only capture the more severe outcomes, specifically those that result in at least one full day away from work or restricted work duty. Less severe outcomes of violent events will likely go unrecorded. This, in combination with employee under-reporting of violent events, suggests that the rates of assault are underestimated and the number of assaults is much greater. It is recommended that hospitals implement a standardized reporting and recording system that captures all assaults regardless of the severity.

- OSHA Logs and Employers' Reports do not provide detailed information about the circumstances of the violent event, which limits prevention efforts. For example, the specific location of the event was unknown in 45% of ED events and the activity at the time of the event was unspecific in 14% of the ED events. Since hospitals are required to maintain OSHA Logs and keep them on the premises for at least three years, they can provide a mechanism for tracking events over time. This could especially be accomplished now that electronic OSHA Log documentation is becoming increasingly mainstream. However, too much critical information is missing from current reports. To adequately inform prevention efforts and examine change over time, it is recommended that more detail about the circumstances of the event be collected and done so in a systematic way with quality control to ensure completeness and validity of data.

- Many of the facilities were not aware of the federal OSHA Guidelines for Preventing Workplace Violence. Security and Risk Assessment personnel were more likely to be aware of and use the OSHA Guidelines (www.osha.gov/Publications/OSHA3148/osha3148.html). Reference to these Guidelines were not present in the printed materials provided for policies or training.

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