

# Violence: Recognition, Management, and Prevention

## WORKPLACE VIOLENCE IN EMERGENCY MEDICINE: CURRENT KNOWLEDGE AND FUTURE DIRECTIONS

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**Abstract—Background:** Workplace violence (WPV) has increasingly become commonplace in the United States (US), and particularly in the health care setting. Assaults are the third leading cause of occupational injury-related deaths for all US workers. Among all health care settings, Emergency Departments (EDs) have been identified specifically as high-risk settings for WPV. **Objective:** This article reviews recent epidemiology and research on ED WPV and prevention; discusses practical actions and resources that ED providers and management can utilize to reduce WPV in their ED; and identifies areas for future research. A list of resources for the prevention of WPV is also provided. **Discussion:** ED staff faces substantially elevated risks of physical assaults compared to other health care settings. As with other forms of violence including elder abuse, child abuse, and domestic violence, WPV in the ED is a preventable public health problem that needs urgent and comprehensive attention. ED clinicians and ED leadership can: 1) obtain hospital commitment to reduce ED WPV; 2) obtain a work-site-specific analysis of their ED; 3) employ site-specific violence prevention interventions at the individual and institutional level; and 4) advocate for policies and programs that reduce risk for ED WPV. **Conclusion:** Violence against ED health care workers is a real problem with significant implications to the victims, patients, and departments/institutions. ED WPV needs to be addressed urgently by

stakeholders through continued research on effective interventions specific to Emergency Medicine. Coordination, cooperation, and active commitment to the development of such interventions are critical. © 2012 Elsevier Inc.

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### INTRODUCTION

More than one-quarter of Emergency Physicians report that they were victims of physical assault in the past year in a study of Michigan Emergency Physicians (1). Nearly the same percentage of emergency nurses experienced physical violence more than 20 times in the past 3 years (2). Rates of workplace assault are higher among health care workers than any other industry (3). Assaults (usually by one of their patients) accounted for 7% of the workplace injuries to nursing, psychiatric, and home health aides during the 1995–2004 period, compared to 1% among all occupations. These same occupations represented nearly 30% of the total number of workplace assaults during the 10-year period. This was the highest proportion of assaults represented by any broad

occupational group (4). Data from the Bureau of Labor and Statistics Census of Fatal Occupational Injuries show that, from 1995 to 2004, 154 nursing, psychiatric, and home health aides were fatally injured in work-related incidents, which was < 1% of all workplace injuries that occurred during that period. The vast majority of these fatalities involved collisions between vehicles, however, the second leading cause of fatal workplace injuries was homicide. The rate of homicide in this group was 36% higher than the average for all occupational groups (5).

In response, several organizations (American College of Emergency Physicians, American Association of Critical-Care Nurses, Emergency Nurses Association, and American Nurses Association, among others) have recently called to improve violence prevention initiatives in health care settings (6–9). The objective of this article is to review the incidence of Emergency Department (ED) workplace violence, identify risk and protective factors, and summarize current interventions designed to prevent workplace violence (WPV) in the nation's EDs.

## METHODS

Authors conducted a literature review using key search terms: workplace violence, emergency department, assaults, workplace injuries, workplace violence prevention, and interventions. Although in much of the literature on WPV, verbal harassment and threats are included, for the purpose of this article, WPV is defined as physical violence (battery) directed toward persons at work or on duty. This physical aggression is defined by Gates et al. as hitting with body part, slapping, kicking, punching, pinching, scratching, biting, pulling hair, hitting with an object, throwing an object, spitting, beating, shooting, stabbing, squeezing, and twisting (10). Therefore, articles not dealing with actual battery were excluded. The review was limited to studies conducted in the United States (US). Although violence extends beyond the ED, as was the case of a surgeon being shot at Johns Hopkins Hospital recently, this review focuses on the ED.

## DISCUSSION

### *Workplace Violence in the Health Care Sector*

Violence is commonplace in many health care settings, and health care workers are at high risk for experiencing violence in the workplace. The education and health care sectors accounted for 17% of all non-fatal workplace injuries due to assault and violent acts in 2008 (11). Although the *homicide* rate against health care workers is lower than other workplace environments, the *assault* rate in 2007 was highest among health care workers (Table 1) (12). The majority of assaults in the health care industry were committed by patients (59%), al-

**Table 1. Workplace Assault Rates Per 10,000 Workers per Year**

Nursing aids	27.3
Health care support occupations	17.1
Physicians and nurses	4.2
General sector	1.8

though visitors account for a substantial number as well (4). The actual number of incidents is much higher due to the gross under-reporting in health care resulting from a lack of institutional reporting policies or the perception that assaults are part of the job (13–16). It is not uncommon for ED health care workers to not report assaults or battery if no injury resulted. In one study, nurses indicated fear of retaliation and lack of support from hospital administration and ED management as barriers to reporting WPV (2).

### *Workplace Violence in the ED Setting*

Among health care settings, EDs are identified as very high-risk settings for WPV (15,17–20). One national survey of Emergency Medicine residents and attendings that practice at EDs with Emergency Medicine residency programs in the United States, found that 78% of physicians reported at least one act of physical or verbal aggression in the previous 12 months, and 21% reported more than one episode (21). A survey of Emergency Medicine residents conducted in 1993 found that before completion of training, more than 50% had been physically hit or pushed by patients, and fear of assault or being shot was their number two concern behind needle stick from a patient with human immunodeficiency virus (22,23). These reports are concerning given that the perception among ED physicians is that the threats of violence are increasing. This is supported by the fact that 44% of Emergency Physicians in the Michigan survey reported feeling less secure now than in the past due to violence in their ED (1).

Evidence indicates that nurses who work in EDs are at greater risk of violence and report higher rates of physical assaults than other nurses (15,18,24). Emergency Physicians and nurses are vulnerable to violent behaviors such as physical assault, and confrontation outside the ED, such as stalking (1,15). Gates et al. (2006) reported that 67% of nurses, 63% of patient care aides, and 51% of physicians had been physically assaulted by patients at least once in the previous 6 months (10). In a study conducted at 50 New Jersey hospital EDs, nearly one-third of nurses noted that they had been physically assaulted (13). In a more recent study, 25% of emergency nurses surveyed reported experiencing physical violence more than 20 times in the past 3 years (2).

### *Consequences of Workplace Violence*

Anecdotally, Emergency Physicians feel that violence and a general uncontrolled atmosphere is “part of the job,” and have some pride in their and their staff’s ability to do great work in this atmosphere; it may take a toll on ED staff in the long term. In addition to the immediate concern of personal safety, WPV may significantly decrease ED staff productivity and job satisfaction, contributing to loss of work days and to early burnout. In a recent survey of Emergency Physicians, 81% reported that they were occasionally fearful of WPV; resulting from this fear, 16% of physicians considered leaving their hospital and 1% did leave their job due to WPV (1). It is the authors’ opinion that experiencing physical aggression and verbal threats to personal safety augments the stress health care workers already experience in their daily exposure to trauma in caring for patients who are victims of injury and violence.

The toll of WPV may be higher for non-physician staff. One survey of 65 US EDs showed that nurses feel the least safe of all ED staff (25). Focus groups of nurses from EDs located at Level I trauma centers underscore the degree to which nurses feel unsafe and unprotected, and believe “something could happen at any time” (26). ED nurses in several studies have reported WPV leading to professional burnout (8,13,15,25). These stresses describe a work environment that for many health professionals may not be sustainable (27,28).

Why are rates of physical aggression elevated in the ED? The first step to understanding WPV in the ED setting is examining the characteristics of the ED environment that increase the risk of WPV relative to other health care settings. First, due to the immediate and unplanned nature of the ED visit and the unpredictability of patient outcomes, patients and family members often experience overwhelming stress levels. Emergency physicians and nurses are vulnerable to not only violent patients but also family members or friends of the patient (1,15,29). We are also potentially vulnerable to people who want to do harm to the patient, specifically perpetrators of domestic or gang violence. Other patient-related factors such as intrinsic mental health issues, anger related to the patient’s situation or condition, frustration with delays or unfilled needs, pain, delirium, intoxication, and anger at staff members related to enforcement of hospital policies are perceived by nurses to be related to violence (15,24,26).

In addition to, or in many instances, compounding, the high level of patient and family stressors, are the elevated rates of substance use and misuse among ED patients compared with other patients, which has been shown to be a major factor in patient-related violent acts (1,15,24,26,29,30). Specifically, in these studies, ED staff note that a range of

27–60% of the violence encountered was with patients who were under the influence of alcohol or drugs. These patient characteristics are unique to the ED setting. Frequently, these patients are brought in by the police for public intoxication and they often do not want to be there. In addition, these patients have relatively long staff exposure times because they remain in the ED until clinically sober. These factors in the context of long wait times frequently encountered due to overcrowding, increase stress and agitation levels and frequently lead to physical aggression (31–33).

Although the mix of patients seen in EDs is not modifiable, these factors, which set the stage for aggression, can be compounded by a lack of security on site. Few studies document the security practices in EDs. One Michigan study found that only about one-quarter of hospitals had security officers permanently assigned to the ED, with another 24% of EDs using general hospital security staff that made occasional rounds in the ED to protect ED staff (1). Although conclusive data on effective security strategies are lacking, factors such as insufficient security personnel that may allow for unauthorized individuals to enter the hospital, a lack of metal detectors/alarms, which facilitates the entry of weapons, and insufficient staffing of trained security officers have all been noted to contribute to violence in the ED (10,26).

### *Overview of Interventions for Workplace Violence in the ED*

These concerning statistics have led to a number of intervention programs focusing on decreasing aggression against ED staff. These interventions approach the problem of WPV from multiple angles: 1) Training of the individual medical staff; 2) modification in the ED physical structure and security; and 3) changes to local (institutional/state) and national policy. The following section aims to provide an overview of violence interventions at these three levels that may be applicable to the ED setting.

*Individual-level interventions.* These interventions focus on medical staff training on recognizing signs of potential violence, early and appropriate responses to patients and visitors who demonstrate escalating aggression, dealing with violence, crisis intervention counseling for WPV victims, and how to report instances of violence (34,35). The goal of this type of intervention is for ED medical staff to recognize rising tension and anger, and in non-violent methods of conflict resolution. Role-playing exercises are often used to aid response to aggressive or abusive individuals with firmness and assertiveness, without being confrontational (36). Such staff training can include a review of the institution’s WPV policies and procedures, as well as an overview of the

security system. ED-specific training may also include de-escalation techniques and proper use of restraints.

Very few studies of such interventions among ED staff have been conducted. A recent systematic review of WPV interventions in other health care settings such as forensic hospitals, state-supported mental hospitals, long-term care facilities, community homes, and Veterans Administration (VA) hospitals, found that few individual-level interventions were evaluated for effectiveness at all, and those that were evaluated did not use a rigorous design (34). One systematic review of WPV in which individual level interventions in health care settings (training and techniques of dealing with combative patients in ED, geriatric or nursing homes, and mental health facilities) were the focus, found that although such programs increase knowledge and confidence to deal with violent episodes, they do not necessarily demonstrate a reduction in assaults (37). Further ED-specific research is needed to identify essential, effective components of training, using assaults as an outcome measure.

*Modification in the physical structure, and security.* These types of interventions include modifying the physical structure of the department, and implementing security personnel or dogs, and equipment. Many security methods for minimizing violent incidents have been identified, and include metal detectors, manual searches of patients arriving by ambulance, and visible security presence in the ED 24 h a day (22,38–40). The use of conducted electrical weapons has recently been introduced at one hospital, with potentially promising results (41).

Metal detectors are a common solution to threats of severe violence. Although clear evidence to support the suggestion that metal detectors alone have an impact on violence in the ED is lacking, several evaluations of metal detector use demonstrate that the public and staff feel safer if metal detectors are used (42,43). Most of these studies, however, are more than 10 years out of date and may not reflect the current modern ED. One study demonstrated that the implementation of metal detectors significantly increased the number of weapons collected in an urban ED, though they did not demonstrate a decrease in incidents of intentional physical assaults against ED staff (44). Metal detectors have several other limitations. Many hospitals have multiple entry points, and it is costly to place these at all entrances. In addition, trained personnel are needed to monitor and disarm individuals. Alternatively, the use of security dogs in the ED has been suggested to show promise as a deterrent to violence in the ED, but more work in this area is needed to be conclusive (43,45).

Other commonly used changes to the ED physical structure include mirrors, alarm systems, panic buttons, good lighting and visibility, hallway monitoring, physical

barriers between workers and the public, and the elimination of isolation areas (43,46). Using surveillance cameras to monitor the entire department, a TV monitor at initial registration to warn the registrant and reassure the worker, and restricted access to the ED have been listed as tools to decrease violence, although no clear statistics to support this are available (39). Additional research is needed on the best practices for ED-specific security measures, as well as the optimal communication between the institutional security system and local law enforcement agencies.

*Policy-level interventions.* This category includes the development of programs, policies, and work practices to promote a safe working environment at the institutional, local, state, and national level (47). Both the Emergency Nurses Association and the American College of Emergency Physicians recognize violence in the ED as a serious issue and encourage clinical care providers and health organizations in general to take steps to prevent and reduce risks of WPV (9,48). This type of continued advocacy by leaders in health care and Emergency Medicine is required to improve the safety of ED staff and patients.

Currently, over 70% of workplaces in the United States do not have a formal program or policy that addresses WPV, yet research in other settings indicates these policies are promising for reductions in violence (37). Although specific research on ED policies is lacking, the Minnesota Nurses' Study found that zero-tolerance policies, and workplace-wide policies stating specific types of prohibited behaviors decreased the odds of having a physical assault at work (49). Other institutional policies reported in health care literature (but not the ED) include instituting zero tolerance policies (policies that prohibit any verbal or physical assaults and require reporting of all events), management endorsement, reporting incidents, and evaluating workplaces to determine where vulnerabilities exist (35,50–53). Others have implemented potentially violent patient “alert systems” that alert staff of patients who are a safety risk or who have exhibited violence in the past, however, no published studies have evaluated the effectiveness of these systems.

#### *Interventions and Approaches to Decrease WPV*

The Occupational Safety and Health Administration (OSHA) guidelines, along with other resources for WPV prevention programs such as Henson's “Situational crime prevention in EDs,” describe multiple components that also can serve as a template for first steps to address WPV in the ED, given the dearth of research available in this setting to date (54–57). OSHA recommends

**Table 2. Specific Actions ED Leadership Can Initiate and Decrease ED Workplace Violence (58)**

Action	Rationale
Educate and train employees, managers, and security	Training should include: <ol style="list-style-type: none"> <li>1) early recognition of patients/visitors with potential to become violent</li> <li>2) techniques for de-escalation</li> <li>3) non-violent crisis intervention</li> <li>4) importance of getting early assistance</li> </ol>
Mandatory reporting of events	Increases accuracy event reporting and demonstrates that management is interested in identifying the extent of the problem while ensuring safety of staff.
Develop zero-tolerance policy	Violence against health care workers in the ED is currently expected, tolerated, and accepted. Many ED staff state that such violence is just “part of the job.” A clear statement from ED leadership that this will not be tolerated starts the process.
Communicate zero-tolerance policy to all patients and visitors, along with consequences of violent behavior	The zero-tolerance policy must not only be written, but communicated to employees, patients, and visitors. Senior management must communicate to its customers (patients/visitors) that violence will not be tolerated and that police will be called and charges will be filed for intentional physical assaults against employees.
Confine aggressive patients to different area	An “audience” may escalate aggression. Patients and visitors may be frightened when witnessing an aggressive patient. The aggressor should be moved to a separate, quiet area with minimal stimulation to help diffuse the situation.
Maintain patient/visitor log to alert staff upon return visit	Prior aggression is a strong indicator of future aggression. Staff knowledge of high-risk patients aids prevention and de-escalation techniques. A log may be kept to monitor such individuals.
Develop and implement security and police plan	Both the hospital security and police must be involved in the planning of the program to obtain valuable input and to keep them apprised of new policies and procedures. The security and police plan may include but is not limited to: <ol style="list-style-type: none"> <li>1) installation of panic buttons</li> <li>2) direct telephone lines to security and police,</li> <li>3) initiation of specific types of badges to identify visitors and patients</li> <li>4) development of surveillance strategies, such as mirrors, closed circuit monitoring devices, and increased security personnel</li> </ol>
Close monitoring of ED access	Easy accessibility to the treatment spaces is a major risk factor for ED violence. The ED is often a continuation of the community surrounding the ED. Controlling access of wanted and unwanted visitors to patient care spaces is crucial.
Strictly restrict and enforce limit on number of visitors	Most EDs allow only two visitors in the room with the patient. However, this is often not enforced. Health care workers often find themselves surrounded by a room full of people. The heightened anxiety of the patient and visitors creates a situation that can quickly escalate. This policy needs to be communicated and enforced.
Develop clear procedure for investigating threats of violence	Many threats do not end in physical violence, but some do. It is critical that if health care workers are threatened by patients or visitors, the situation be reported and evaluated. In addition, the person who makes the threat should have their name added to a log maintained in the department for high-risk repeat offenders.
Implement procedures for dealing with a violent event	A written plan for dealing with an aggressive patient/visitor or with a patient/visitor who has threatened or assaulted an employee should be developed and followed. The staff needs training on this plan and Q/A to ensure it is carried out correctly.
Review process and procedures for reviewing physical assaults	This procedure should include a critical incident review after every physical assault. Information obtained from these reviews may be used to revise violence policies and procedures.

ED = Emergency Department.

From: Department of Labor, Occupational Safety & Health Administration. Safety and health program management guidelines: issuance of voluntary guidelines. Federal Register# 59:3904-3916. Occupational Safety and Health Administration Website. Available at: [http://www.osha.gov/pls/oshaweb/owadisp.show\\_document?p\\_table=FEDERAL\\_REGISTER&p\\_id=12909](http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=FEDERAL_REGISTER&p_id=12909). Accessed December 11, 2011 (58).

**Table 3. Resources for the Prevention of Hospital-based Workplace Violence**

	Author/Title	Link
Websites	<ul style="list-style-type: none"> <li>■ Howard-Siewers M. Crisis intervention in the workplace. Advance for Nurses website (57).</li> <li>■ Occupational Safety and Health Administration, US Department of Labor. Guidelines for preventing workplace violence for healthcare and social service workers (51).</li> <li>■ Occupational Safety and Health Administration, US Department of Labor. Safety and health program management guidelines: Issuance of voluntary guidelines. Federal Register# 59:3904-3916 (54).</li> </ul>	<ul style="list-style-type: none"> <li>■ <a href="http://pn.advanceweb.com/editorial/content/editorial.aspx?CC=53345">http://pn.advanceweb.com/editorial/content/editorial.aspx?CC=53345</a></li> <li>■ <a href="http://www.osha.gov/Publications/OSHA3148/osha3148.html">www.osha.gov/Publications/OSHA3148/osha3148.html</a></li> <li>■ <a href="http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=FEDERAL_REGISTER&amp;p_id=12909">http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=FEDERAL_REGISTER&amp;p_id=12909</a></li> </ul>
Print	<ul style="list-style-type: none"> <li>■ Forster JA, Petty MT, Schleiger C, et al. kNOw workplace violence: developing programs for managing the risk of aggression in the health care setting. The Medical Journal of Australia. 2005;183:357-61 (56).</li> <li>■ Gallant-Roman MA. Strategies and tools to reduce workplace violence. Official Journal of the American Association of Occupational Health Nurses. 2008;56:449-54 (47).</li> <li>■ Runyan CW, Zakocs RC, Zwerling C. Administrative and behavioral interventions for workplace violence prevention. American Journal of Preventive Medicine. 2000;18(4 Suppl):116-27 (33).</li> <li>■ Simonowitz J. Guidelines for the Security and Safety of Health Care and Community Service Workers. Darby, PA: Diane Publishing Company; 1993 (53).</li> <li>■ Warsaw LJ, Messite J. Workplace violence: preventive and interventive strategies. Journal of Occupational and Environmental Medicine. 1996;38:993-1006 (52).</li> </ul>	

1) a WPV prevention program that has a commitment of support from management; 2) conduct worksite analysis specific to the environment; and 3) use the worksite analysis to develop site-specific interventions. Although these three components are not specific to the ED, they can serve as a starting place for ED leaders to address this critical problem at their site (54,58). The following section aims to provide a practical starting place to addressing physical aggression in the ED, as well as resources for enacting the steps.

First, ED leaders should obtain management and hospital commitment to reduce ED WPV.

*Management commitment.* A violence prevention program in the workplace must have a commitment from administration and involvement of staff (59). The organization must promote a philosophy that violence and aggression are unacceptable; that the organization values their employee's well-being and safety in the workplace; and must convey to patients that violence will not be tolerated and that sanctions will be applied (60). One of the challenges is that seldom are those with decision-making authority trained in worker security and safety. Most safety initiatives are focused on the patient and not the worker. Most administrators have a physician or nursing background. Administrators are worried about the public perception of implementing safety measures, such as metal detectors (22).

Second, complete a work-site-specific analysis of the ED site of interest.

*Worksite analysis.* The organization should conduct a work-site-specific analysis that includes an assessment of risk factors for violence in their specific community,

hospital, and department within the hospital. Primary risk factor assessments for violence in the ED include: the number of psychiatric patients or patients with substance use treated annually in the ED; patient population of victims of violence with potential for in-unit retaliation (i.e., gang violence); an assessment of staffing ratios, and the prevalence of handguns and weapons in the community, or carried into the ED by patients (61). The assessment should also consider risk factors that are part of the environmental design of the hospital, such as poorly lit corridors, rooms, and other areas such as parking lots (19).

Third, implement site-specific intervention to decrease WPV in the specific ED.

*Interventions to decrease workplace violence in the ED.* On completion of the work-site analysis, a site-specific intervention may be developed. Although WPV is a complex issue, there are clear actions that will improve safety of ED staff (62). Using an action research plan, including gathering best available evidence and input from all stakeholders (ED workers, managers, security, and patients), Gates et al. developed an action plan that leadership can use to start to develop interventions that may reduce violence in the ED (Table 2) (62). Although not a comprehensive list, Tables 2 and 3 provide a summary of initial actions and potential interventions that could be undertaken to improve worker safety and a list of resources to aid the process.

#### *Limitations*

Many of the studies are based on survey data that were collected in a retrospective manner and are inherently

flawed by recall bias. Most studies describing the WPV or an intervention were conducted at single sites, making it difficult to extrapolate the results. Furthermore, many of the studies are small, or have methodologic flaws making it difficult to generalize the results or recommendations. Anderson et al. came to a similar conclusion after an integrative literature review of interventions to reduce violence against ED nurses (63).

## CONCLUSION

WPV has emerged as a significant problem compromising security, self-esteem, work performance, relationships, and overall health of ED employees. There is a paucity of large, well-designed studies supporting any strategy aimed at preventing ED WPV. We are left with guidelines and recommendations from groups such as the Occupational Safety and Health Administration. It is time for the specialty of Emergency Medicine to move beyond the concept that violence in the ED is “part of the job”. Emergency Medicine must move toward creating evidence-based policies and interventions that protect employees, provide each worker a secure environment, and allow employees to provide the best services to patients while maintaining job satisfaction. To promote an efficient and safe ED work environment, the issue of WPV needs to be addressed more urgently by stakeholders in the field of Emergency Medicine through continued research on effective interventions specific to Emergency Medicine, coordination, cooperation and active commitment, and legislation.

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## ARTICLE SUMMARY

### 1. Why is this topic important?

Workplace violence (WPV) has increasingly become commonplace in US Emergency Departments (EDs); ED health care workers are at particularly high risk of being victims of WPV.

### 2. What does this study attempt to show?

This review article illustrates the extent of the problem of WPV against ED health care workers. This article shows that there are few data supporting strategies to reduce or prevent ED WPV.

### 3. What are the key findings?

- 1) ED WPV against health care workers is a serious problem.
- 2) There are potential long-term effects on victims of WPV, such as post-traumatic stress disorder.
- 3) There is limited research on which strategies will reduce or prevent WPV against ED health care workers.

### 4. How is patient care impacted?

- 1) Patient care is potentially impacted by ED WPV because workers who are victims not infrequently suffer long-term affects, such as post-traumatic stress disorder, which may impact their ability to do their job.
- 2) Strategies that make the ED safer for workers will likely make the environment safer for patients.