



# **Interventions to Reduce Workplace Violence**

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## Introduction

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The Nova Scotia Health Research Foundation (NSHRF) was commissioned to create a synthesis of available evidence pertaining to interventions to prevent workplace violence in a range of healthcare settings. NSHRF undertook to create the synthesis of this broad topic in short time frame.

In order to structure the report to best aide decision making, the NSHRF focused on the “influencers” identified by the Workplace Violence Working Group in a document generated by their May 5, 2017 meeting. The influencers used to categorize proposed actions to address workplace violence are:

- Policies and Legislation
- Occupational Health and Safety Management Systems
- Accountability Mechanisms
- Training and Education
- Communication
- Leadership
- Work Environment
- Social Context (not addressed in this report)

The evidence available in the literature did not always fit clearly into one of the influencer categories, and the NSHRF was not always able to identify evidence to support actions listed within each influencer.

Workplace violence presents a serious challenge to the healthcare workforce, with healthcare workers in some settings at significant risk of experiencing violence (Canadian Centre for Occupational Health and Safety, 2017; Gillespie, Gates, & Fisher, 2015). A survey of Canadian nurses in Alberta, British Columbia, and Ontario found that most nurses experience violence in their careers, though most do not report violent incidences at work (Hesketh et al., 2003). While violence may come from family members of patients or other staff, the majority of incidents, especially those involving physical violence or threats of it, were enacted by patients (Foley & Rauser, 2012). In the United States in 2013, patients were responsible for 80% of injuries that resulted in days away from work (United States Department of Labor- Occupational Health and Safety Administration, n.d., p. 2). For that reason, this report primarily focuses on patient to staff violence.

Analysis of serious incidents of violence that resulted in significant physical injury by the Joint Commission in the United States determined that the most common root causes of the events were:

- failures in communication
- inadequate patient observation
- lack of compliance with violence prevention policies
- lack of/inadequate behavioral health assessments to identify aggressive tendencies (Wyatt, Anderson-Dreves, & Van Male, 2016).

Hills and Joyce’s (2013) literature review on the topic of violence in clinical medical practice outlines a hierarchy of control to describe and prioritize interventions, illustrated in **Table 1**:

Table 1. “Hierarchy of Control” to describe interventions to prevent or minimize workplace violence.

Level in Hierarchy	Description
Risk elimination	Elimination of risk through design. Most likely to be efficacious and cost effective over long term.
Risk minimization	Minimizing risk by reducing or enclosing the hazard, or isolating workers from the hazard
Risk reduction	Reducing risk through organizational policy, incident reporting and analysis, and education and training programs

This synthesis is broad in scope, considering interventions at all three levels where information was available, and considers a range of health care settings – including but not limited to long term care, home care, and community services. “Interventions” refers to a variety of policies, strategies, and initiatives intended to eliminate, minimize or reduce the harm from workplace violence.

## Definition of Violence

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“Violence” in this report refers to any act of aggression or assault that results in physical or psychological harm. As such, “violence” may be physical or strictly verbal in nature. This definition of violence does not distinguish between acts of deliberate malice intended to harm and actions that may arise from mental illness or decreased or impaired cognition (Accreditation Canada, 2015; Hesketh et al., 2003).

## Methods

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This review considered both peer reviewed and grey literature on the topic of interventions to reduce or prevent incidents of workplace violence in healthcare settings. However, the focus on evidence to support interventions does result in greater focus on peer reviewed, academic literature over grey literature. See Appendix A for definitions of peer reviewed and grey literature.

### Peer Reviewed Literature

For peer reviewed literature, searches were conducted in the following databases: PubMed, CINAHL, Academic Search Premier, Embase, PAIS, ABI Inform, Scopus, Web of Science and Google Scholar. Search terms included “workplace violence,” “workplace safety” and “prevention,” “strategy,” “intervention,” “health,” “hospital,” “long term care” and “home care,” among others. Results were filtered to include those published since 2007 in English.

Appropriate results from each source were exported to Mendeley (a reference management system) where duplicate results were removed.

Snowball sampling was also used, whereby the references of articles were consulted, sometimes resulting in the inclusion of publications prior to 2007.

### Grey Literature

The search for grey literature included consulting the Leading Practices Database hosted by Health Standards Organization (HSO), the TRIP database, CRD-NHS Centre for Reviews and Dissemination, OAIster, and the Ontario Public Health Libraries Association (OPHLA) list of organizations and resources was also examined.

Google and Carrot2 search engines were also used with such phrases as, “workplace violence healthcare” and “violence prevention home care.”

## Inclusion and Exclusion Criteria

The inclusion criteria for the peer reviewed and grey literature searches are outlined in **Table 2** and were based on examination of the title and abstracts of documents (where available). These criteria were developed in consultation with representatives of the Workplace Safety Action Plan for Nova Scotia’s Health and Community Services Sectors.

**Table 2. Criteria to determine which articles should be considered for inclusion in this report.**

Inclusion	Exclusion
<ul style="list-style-type: none"> <li>• Focus on identifying interventions in health care setting/long term care/home care/community services</li> <li>• Focus on evaluating interventions in settings (above)</li> <li>• Focus on barriers or facilitators to interventions</li> <li>• English</li> </ul>	<ul style="list-style-type: none"> <li>• Non-English</li> <li>• Focused on describing/ spreading awareness of issue</li> <li>• Focus on determining how employees feel</li> <li>• Editorials that do not present evidence or basis for expert opinion</li> <li>• Descriptions of demographics associated with violent acts</li> <li>• Focus on risk factors for victimization</li> <li>• Minimal detail on interventions and whether effective</li> <li>• Chemical/pharmaceutical interventions</li> </ul>

## Limitations

The topic of workplace violence in the healthcare setting is expansive. Every effort was made to identify and include interventions discussed by the literature within the short timeframe available for the project. However, this report is by no means an exhaustive review of all literature on this topic.

Despite the large body of work on the topic, the examination of patient on worker violence as the subject of ongoing research and solutions remain elusive. In many cases, definitive evidence to support or reject a proposed intervention is not available. A frequent observation of researchers considering workplace violence in healthcare is that more research is needed on a variety of issues, but in particular on the efficacy of interventions (Hills & Joyce, 2013; Robinson & Tappen, 2008). As James P. Phillips noted in a 2016 review article, “To date, most research has been directed at quantifying the problem and attempting to profile perpetrators and their victims. The few studies that have focused on interventions to reduce violence have highlighted the unlikelihood of finding a simple, one-size-fits-all solution to prevent this violence” (2016, p. 1661). The relative lack of empirical evidence to support workplace violence interventions results in a reliance on expert opinion to support programs and direct new research (Phillips, 2016).

Hills and Joyce (2013) citing Mayhew 2004 suggest that within the health sector there has been more focus on lower order risk reduction and therefore less expertise or evidence to support other interventions. Furthermore, the quality of many studies are compromised by weak methodology, including lack of control group and small sample sizes (Arnetz et al., 2017; Wassell, 2009).

## Policies and Legislation

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Written policies can serve as the backbone of workplace violence prevention by providing clear guidance as to what behavior is unacceptable, how that behavior is addressed, and what roles and responsibilities belong to which staff members. It is important that careful thought be applied to policy development; policies that are vague or inconsistent inhibit systematic responses to incidents of workplace violence (Adamson, Vincent, & Cundiff, 2009). Multidisciplinary committees that include staff who work directly with patients are desirable for identifying risks in specific situations and feasible responses (The Joint Commission, 2014).

A study of home care agencies in California (Gross, Peek-Asa, Nocera, & Casteel, 2013) noted a widespread lack of comprehensive policies to protect home care workers from the risk of violence, despite state government recommendations. What policies and procedures were in place were often lacking. For example, the authors noted more agencies evaluated for the presence of pets in the house than guns, substance abuse or patient history of violence. The authors suggest that the apparent existence of barriers to program development and implementation requires study to determine what the barriers are and how to overcome them (Gross et al., 2013).

The literature suggests that active participation of management, supervisors, and front line workers is necessary for the development of the most effective prevention policies and programs. While top management is required to ensure the commitment of resources to a program, broad participation in the planning process helps support buy-in from all parties and the development of a violence prevention culture (Clements, Deranieri, Clark, & Manno, 2005; Department of Health and Human services, 2004).

Policy enforcement is also key. Accreditation Canada's Qmetum program includes workplace violence standards intended to address the issue. Evaluation of the program found that compliance fell from 87% in 2011 to 77% in 2013 (Accreditation Canada, 2015, p. 10). The authors of the report interpret that negative fluctuation as an indication that workplace violence prevention requires ongoing focus by leadership (Accreditation Canada, 2015).

### Identification of Risk Factors

Arguably, a key requirement to the development of effective policy is understanding the risk factors of a given setting. Circumstances unique to each setting may present increased risk to staff. Administrative interventions must first identify what those risk factors are so they can be addressed (Ontario Nurses Association, 2016). This includes analysis of the contributing factors to past events to recognize circumstances of increased risk. When the root causes of violence events can be identified, staff can be trained to mitigate the risks (Adamson et al., 2009; Arnetz et al., 2015; Occupational Safety and Health Administration, 2016).

A prerequisite to risk factor identification is data to analyze. The United States Occupational Health and Safety Administration (OSHA) recommends that record reviews should include, "medical, safety, specific threat assessments, workers' compensation and insurance records...In addition, incident/near-miss logs, a facility's general event or daily log, and police reports" (Occupational Safety and Health Administration, 2016, p. 9). As efforts to encourage reporting of incidents may result in richer data sets with the passage of time, risk identification may be ongoing.

A study by Arnetz et al. (2015) of 214 incidents of patient on staff violence in an American hospital system with centralized reporting found that particular circumstances, such as points of transition, were times of elevated risk. Doxbury and Whittington (2005) considered the question of causes of violence from the perspective of the patients, as well as the staff and noted significant differences in perspective. Data about

the circumstances of increased risk of violence can allow for a more targeted response plan for eliminating, minimizing and reducing risk.

A detox facility attached to a hospital in Denver provides an example of the necessity of risk assessment for effective policy development. They found some risk factors were inherent in the nature of the facility—the client population it served were those under the influence of drugs or alcohol. Many of these individuals had a history of psychiatric co-morbidity or violence. The majority of the clients were also present involuntarily. However, other risks were the result of administrative circumstances. These included inadequate staff during increased activity, inconsistent surveillance, and insufficient training for clinical and security staff. Some of the risks identified were specific to that type of facility and demonstrate why assessments need to be done to identify unique circumstances that require attention (Adamson et al., 2009).

The importance of understanding unique risk factors based on the environment under examination also rings true in the home care setting. To identify risks for community health workers, an evidence-based screening tool was developed and validated by Western Health regional health authority in western Newfoundland (Lundrigan, Hutchings, Mathews, Lynch, & Goosney, 2010). The tool was designed to aid community workers to recognize and address risk factors for workplace violence. After identifying risk factors, the tool includes instructions to discuss the situation with a supervisor and the need to develop a plan tailored to the patient/client and circumstances. The screening tool is not a stand-alone solution to the challenge of workplace violence in a community or home setting, but provides a standardized framework and language for assessing and describing risk and risk-mitigating responses (Lundrigan et al., 2010).

### Zero Tolerance Policies

Zero tolerance policies attempt to address a widespread belief among care workers in many contexts that abuse or violent behavior is part of the job. The belief suggests that as a part of the job, it cannot be avoided and nothing will change as a result of reporting it (Nachreiner, 2005; Phillips, 2016). While the idea behind zero tolerance is widely supported, there is some concern about the implications of zero tolerance, particularly from a caregiving perspective. Violence can be a manifestation of clinical illness and an inflexible policy may overstep a clinician's judgement. There is also concern that "zero tolerance" diminishes nuance in interactions with a blanket attribute of blame to the patient and encouragement of intolerance among health care workers (Wand & Coulson, 2006). For that reason, critical consideration of what "zero tolerance" entails is necessary for a successful policy—does it necessarily come with a refusal to provide care? According to Adamson et al. (2009), zero tolerance informs the creation of procedures that attempt to shift this common belief that violence is part of the job with visible, active efforts and commitment of resources to address and reduce violence (2009).

Typically, zero tolerance is a policy that requires every episode of workplace violence, broadly defined, to be immediately reported to supervisors and security and addressed with the enactor of the violence. It is suggested that such policies may prevent escalation of violent occurrences (Phillips, 2016). Exactly how "zero tolerance" is defined and what the consequences are can vary considerably, which makes comparing policies challenging (Nachreiner, 2005). Zero tolerance was one of the interventions analyzed by Nachreiner et al. (2005). The authors found different results depending on how they analyzed the data. More sophisticated analysis that took into consideration multiple variables saw that none of the policies under consideration, including zero tolerance, offered more than a suggestion of protective results (Nachreiner, 2005).

### Home Care Specific Policies

The unique circumstances of the home care setting results in recommendations specific to that setting. Recommended policies for home care workers and agencies to reduce violence include:

- Assessing risk using a consistent tool or framework (Mathiews & Salmond, 2013).
- Having in place specific policies and procedures as to how home visits will be conducted, who else will be present in the home, and the refusal to provide services in clearly hazardous situations.
- Advising workers carry only ID and a small amount of money (Letizia & Casagrande, 2005).
- Advising workers to avoid necklaces or chains to avoid potential for strangulation (Letizia & Casagrande, 2005).
- Having in place a daily workplan with a contact person informed about whereabouts throughout the workday and a protocol for the contact person to follow up if an employee does not check in as expected (Letizia & Casagrande, 2005).
- Requiring accompanied visits for high risk or night visits (McPhaul, 2004).
- Instructing patients that firearms should either be removed from the home before a visit, or stored unloaded in a locked container with ammunition stored separately. Care plans should mention the presence of firearms in the house (Gillespie, Gates, Miller, & Howard, 2010).
- Ensuring that home healthcare workers are eligible for compensation for injuries that occur during travel between workplaces (Fitzpatrick & Neis, 2015).
- Requiring that all agencies follow the guidelines for working safely, this includes development of a safe visit plan and a standard safety awareness checklist (Fitzpatrick & Neis, 2015).
- Providing paid occupational safety and health training opportunities and adequate supervision of workers (Fitzpatrick & Neis, 2015).
- Disclosing client's behavioral problems and contagious diseases to workers (Fitzpatrick & Neis, 2015).

McPhaul et al. (2010) suggest further study is needed to determine whether it is more effective for safety measures to be mandated by employers or whether the common practice of leaving their use up to the discretion of employees is sufficient. They further suggest that barriers such as cost may inhibit the use of staff going in pairs on high risk visits (McPhaul, Lipscomb, & Johnson, 2010).

## Legislation

In some jurisdictions, policies are guided by legislation. Most Canadian jurisdictions have Occupational Health and Safety legislation that is meant to ensure that all reasonable precautions are taken to protect employees, including those associated with known risks of violence (Canadian Centre for Occupational Health and Safety, 2017). Nevertheless, studies evaluating the impact of workplace violence prevention legislation are limited in both number of studies and the conclusions they can reach.

A study of California's Hospital Safety and Security Act (Casteel et al., 2009) found some suggestion that legislation may be of value in addressing violence in healthcare settings. The Hospital Safety and Security Act requires comprehensive security plans across a broad range of variables, including physical layout, staffing, availability of security personnel, personnel policies, education and training of employees, and reporting of violent occurrences. Comparison of assault rates of violent events in California before and after implementation of the legislation, compared with similar data from New Jersey where there is no comparable legislation, saw reduction in the rates for emergency departments in smaller hospitals and for-profit hospitals. The reduced rate lasted 1-1.5 years after the enactment of the legislation before rates began to return to previously levels. The authors suggest the relative ease of policy implementation in smaller institutions and the desire to protect against lawsuits were factors for the initial benefit to those two types of organizations, respectively. The temporary nature of the improvement may be the result of low enforcement. Some limitations of the study include the inability to decisively attribute the decreased rates to the legislation, inability of the authors to determine the degree of hospital compliance with the law, and data

that included only incidents violent enough to result in missed work or medical treatment beyond first aid (Casteel et al., 2009).

Washington state, which also has legislation to address workplace violence, has seen mixed results. The legislation was put in place requiring a hazard assessment, staff training of workplace violence risk factors, patient violence, de-escalation techniques, and post-incident procedures, and to develop and maintain a workplace violence incident tracking system. Since implementation, reduction in workplace violence claims have been seen in healthcare and social services sectors such as nursing home facilities, home health care services and vocational rehabilitation services. Similar results have not been seen in psychiatric care facilities. Whether or not the reduction is due to the legislation has not been determined (Foley & Rauser, 2012).

The Marty Smith Act is a piece of legislation in Washington state intended to protect mental health professionals who do assessments in clients' homes. It is named for a worker who was murdered by a client during a home visit. It requires that mental health professionals be accompanied by another person at their request, that written training plans be developed, and that backup staff and communication plans be available. Staff are required to have a cell phone and access to information on the history of clients who pose risk. Staff are also protected from retaliation if they refuse to make a home visit alone. Compliance is monitored by the Department of Social and Health Services as part of the provider licensing process. While a drop in workplace violence claims has been observed in Washington after the implementation of workplace violence legislation, a cause/effect relationship has not been established (Foley & Rauser, 2012).

## Occupational Health and Safety Management Systems

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### Reporting

Communication of risks and experience from staff and development of effective policies and supports by administrators depends on full and routine reporting of violent incidents. Despite the importance of reporting, a frequent challenge associated with addressing workplace violence in healthcare is underreporting of incidents. It is widely suggested in the literature that staff do not routinely report incidents of violence enacted by patients for a variety of reasons. These include the belief that such acts are part of the job, a sense that the aggression arises from the patient's medical condition for which they are not accountable, a belief that nothing will be done to change the circumstances, and fear that the staff member will be blamed for the incident. Lack of clear definition of what constitutes "violence" is also a barrier (Blando, Ridenour, Hartley, & Casteel, 2015; Gacki-Smith et al., 2009; Lipscomb & El Ghaziri, 2013; Phillips, 2016; Wyatt et al., 2016).

Wyatt et al. (2016) suggest that in order to encourage and promote reporting, reporting systems should:

- be simple and secure with the option to remain anonymous,
- have transparent outcomes, and
- be fully supported by leadership and unions.

Based on findings through literature review, Pompeii et al. (2013) recommend an online intranet report for convenience and ease of reporting. Data obtained through the report should include:

- worker demographics (title, department),
- subcategory of violence (verbal abuse, threat, physical assault),
- perpetrator characteristics (patient, visitor, gender),

- setting (in person, phone email),
- location (emergency department, etc.),
- contributing factors (wait times, receiving bad news, medication withdrawal)
- warning signs (agitation, mumbling),
- intervention (verbal de-escalation, call for security),
- Immediate consequences to worker (injured, frightened),
- worker’s description of event, and
- worker’s recommendations for prevention of similar events.

Details might vary depending on the type of healthcare facility, but the data should allow for analysis of root causes and contributing factors in order to address the risk that is identified. Review of reports by interdisciplinary teams and development of formal responses and protocols as appropriate help to demonstrate that reporting is taken seriously and does have a positive impact on the work environment (Wyatt et al., 2016). Team members should include representatives from human resources, front-line employees, union members, security personnel, management, administration, and possibly legal representation and public relations staff (Clements et al., 2005).

### Accreditation Requirements

A report that stemmed from a 2004 conference, “Partnering in Workplace Violence Prevention: Translating Research to Practice,” published by the Department of Health and Human Services in the United States suggests that accreditation bodies require workplace violence prevention programs, including training requirements, in order to meet accreditation standards. The report did not specify what details should be included in such programs (Department of Health and Human services, 2004). Accreditation Canada’s Qmentum program does include workplace violence elements (Accreditation Canada, 2015).

## Accountability Mechanisms

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### Managerial Accountability

Blando et al. (2015) suggest there are many ways for management to establish accountability. In particular, the authors emphasize representation in decision making groups. For example, in New Jersey, 50% of workplace violence committee members are required to have direct patient contact. Partnering with unions is another suggested way to demonstrate accountability (Blando et al., 2015). McPhaul (2004) suggests, “management demonstrates its commitment to staff safety by devoting resources and remaining accountable for staff safety” (McPhaul, 2004).

Fitzpatrick et al.’s (2015) study of homecare workers in Newfoundland and Labrador identified examples of non-compliance with the Occupational Health and Safety Act and a lack of workplace safety inspections by the government as evidence of regulatory failure. Lack of government oversight combined with financial disincentives in the form of added costs associated with safety interventions led the authors to conclude that future collective agreements and union support might offer better protection for homecare workers than was available at the time of their study by holding employers accountable (Fitzpatrick & Neis, 2015).

### Protocol for External Reporting

Violent incidents that involve threats or physical assaults may be criminal matters with repercussions outside of the health care administration. After an assault has taken place, the impacted staff have to make decisions

as to whether or not law enforcement should be involved. A standardized protocol that not only includes internal processes for reporting and responding to violence, but which considers the potential involvement of external agencies is desirable, according to Privitera et al. (2005). They suggest this is because, “the mere existence of such protocols would legitimize the rights of staff-victims and aid the administrator’s support to the individual as well” (2005, p. 485).

## Training and Education

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A number of training programs are available for health care employers to guide staff to address the threat of violence. For more detail on various programs available and the evidence available to support them, see the asset map created by NSHRF, “Workplace Violence Training/Education Programs.” In addition, Behavioural Supports Ontario published a tool called, “Behavioural education and training supports inventory (BETSI)” which is intended to guide decision-making on educational programs for those offering care to older adults with responsive behaviors associated with complex mental health, addictions, dementia and other neurological conditions (Behavioural Supports Ontario, n.d.).

The evidence supporting the use of many staff training programs is generally not robust. Livingston et al.’s (2010) narrative review found that research was divided equally as to whether or not training programs resulted in reduction of patient enacted violence. Some studies do show that programs can have positive impacts, including greater staff member confidence in their ability to handle violent patients and lower stress levels as well as staff experiencing reduced levels of aggression by patients, while others do not. The same study suggests that training programs do reduce staff injuries in psychiatric hospitals (Livingston, Verdun-Jones, Brink, Lussier, & Nicholls, 2010).

At the same time, training is not in itself a full solution to the problem of patient enacted violence on health care workers, but should be part of a suite of approaches (Livingston et al., 2010). For example, Kling et al. (2011) found that training, used in conjunction with the ALERT system to flag patient records, did not impact the rate of violent incidents experienced by health care workers at the hands of patients. As a result, the authors argued for multiple interventions to address the problem (Kling, Yassi, Smailes, Lovato, & Koehoorn, 2011).

In long term care, Robinson and Tappen (2008) assert that, “Basic nursing assistant certification alone is not sufficient...to cope with aggressive residents” (2008, p. 13). The authors recommend training that involves role-playing for more realistic experience coping with verbal and physical aggression. Frank conversations about the appropriateness of various strategies is also recommended (Robinson & Tappen, 2008). The basis of these recommendations appears to be the authors’ expertise on the topic.

A Dutch program to assist home care workers to cope with workplace violence provides an example of a program found to be effective on evaluation. The program was intended to teach homecare workers to be more assertive and better prepared to cope with aggressive clients. The evaluation focused the impact of a training program on staff behavior, as reported by the participants (Oostrom & Van Mierlo, 2008).

## Communication

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Access to all pertinent information needed for patient care—including avoiding violence--depends on effective, routine, standard communication (Andersen & Westgaard, 2015). Through clear communication, risk can be identified and mitigated. Without information on risk, caregivers approach their work blindly and

with greater vulnerability—they are unable to learn and benefit from a patient’s history and the experiences of others who have cared for him.

A case of acute workplace violence from a psychiatric facility exemplifies the importance of communication and access to information throughout all levels and settings within the healthcare system. Roca et al.’s (2016) case report involves a violent incident in a psychiatric hospital in which a nurse was beaten in the head and stabbed with a pen. Root cause analysis of the event found that the patient’s full medical history was not available to the treatment team in the hospital—including the fact that the patient had stabbed a health care worker with a pen in a previous institution (Roca, Charen, Boronow, & Barale, 2016). The authors conclude that patient history should be available and carefully considered when forming a care plan for patients at risk of enacting violence. In the case described by Roca et al. (2016) the patient’s history of incarceration was not sufficiently considered, according to the authors. The patient care team was less experienced with premeditated aggression from a patient who was without outward signs of agitation. However, patients with a history of incarceration may present a higher risk of violence. The patient’s history also included predatory incidents such as hiding in the bathroom of a female patient which may demonstrate premeditation to do harm. Indicators such as these could have alerted staff to the need for more precautions than were actually taken prior to the attack (Roca et al., 2016).

Likewise, in the home care setting, Byon et al. (2016) found that home care workers were at increased risk to suffer harm from violent clients when the clients has a history of violence, mental illness or substance abuse. Yet, these histories were typically not available to the home care workers in order to take appropriate cautions to reduce or mitigate the risk. The authors conclude that historical and clinical risk factors should be included in a client assessment in home care settings to better protect the home care worker (Byon, Storr, Edwards, & Lipscomb, 2016).

One of the more methodologically rigorous studies on workplace violence interventions in health care (Arnetz et al., 2017) considered the impact of supplying hospital units with data on their workplace violence history to serve as the basis of a program of interventions compared to a control group who was not supplied with the data. Data was collected over a five year period in a hospital system within the Midwestern United States. Arnetz et al. (2007) found that rates of incidents of violence and injury did not decrease significantly for the intervention group over the course of the study period; however, the intervention group did have significantly lower risk of events and injuries over time, compared to the control group. That the rates of incidents and injuries for the intervention group held steady at time when violence related injury rates were generally increasing in the United States suggests that the communication of information combined with at least one intervention had a positive impact in reducing risk of workplace violence for healthcare workers. The study did not consider the interventions themselves and therefore cannot provide support for specific interventions, only the conclusion that any response is better than none (Arnetz et al., 2017).

### Flagging Patient Charts

Highlighting a patient’s history of violent behavior and care plans to address violence triggers is a key way to ensure the flow of communication regarding risk of violence posed by a patient. The use of “flags” on paper or electronic records as well as other indicators that staff should seek out information before approaching a patient (such as door magnets or wrist bands of a particular color) can help ensure that staff have the information they need to stay safe (Public Services Health & Safety Association, 2016). Though the use of flagging is on the rise, much of the work to determine which, if any, practices are effective at reducing violence remains to be done (Kling et al., 2011).

A major challenge to the flow of communication offered by flagging in the fragmentation of the healthcare system, with different electronic systems, policies, and definitions hampering the communication of risk from one organization to another. For more information on this topic, see the NSHRF's companion report, "Flagging patient records: Report on a method of communicating risk."

## Leadership

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"Prevention of workplace aggression and violence first and foremost requires the creation and sustenance of a positive work culture where people are treated with respect by management and co-workers, where good work is recognized, and where conflict is effectively dealt with as it arises" (Dillon, 2012, p. 17). This creation and sustenance of the positive culture relies on positive and pro-active leadership.

A series of surveys and focus groups of long term care workers in three Canadian provinces and four Scandinavian countries articulates that poor leadership serves as a barrier to workplace violence prevention. Management that dismisses complaints as unworthy of response or concern normalize violence and allows its perpetuation (Daly, Banerjee, Armstrong, Armstrong, & Szebehely, 2011).

Robinson and Tappen (2008) recommend that education provided to staff should include ancillary staff, supervisors, and managers. Likewise, Gallant-Roman (2008) suggests supervisors should be the first to receive violence prevention training, as their support is critical to success.

It is also important that managers be actively supportive of employees who have been the object of patient violence. As staff are often inclined to blame themselves for not preventing a violence occurrence, management should offer validation of feelings and encouragement toward normalcy to facilitate recovery of the staff member after the incident (Clements et al., 2005).

Nachreiner et al. (2005) point to the importance of leadership in influencing the culture of a healthcare organization. Organizational culture can impact behavior quite apart from policies; they suggest a zero tolerance policy without managerial commitment may indicate little about the impact of the policy on the safety environment of the workplace. Likewise, an attitude of lower tolerance to violence can impact behavior even without a formal policy (Nachreiner, 2005).

Gillespie et al.'s (2014) study of anti-violence interventions in emergency departments found that two of the three sites studied saw a significant decrease in violent events during the study period. The study did not consider the impact of individual interventions, but noted that the site with the most significant reduction in incidents are had the highest level of training participation and the most effective management at implementing program elements—both circumstances that depend on effective leadership (Gillespie, Gates, Kowalenko, Bresler, & Succop, 2014).

## Violence Climate

A series of articles by Spector et al. (2007), Kessler et al. (2008), and Gadegaard et al. (2015) expand on the concept of "violence climate" in the workplace and the role that peers, supervisors, and managers play in creating an environment that may impact the degree to which violence is experienced in the workplace. According to Spector et al. (2007), a good violence climate is created by management through an emphasis on containing or eliminating violence which is perceived by employees. While most workplace violence is enacted by patients/clients in the healthcare setting, work on violence climate suggests that a general atmosphere of incivility or hostility can spill over into how staff interact with patients and provoke or escalate violent responses (Kessler, Spector, Chang, & Parr, 2008). The good violence climate is created by:

- instituting policies and procedures to deal with violence
- providing training to avoid or manage violence
- modelling constructive interactions by supervisors
- creating reporting procedures
- promoting the idea, formally and informally, that violence is unacceptable
- promoting awareness of one’s own behavior and how it might provoke violence in others
- promoting recognition of precursors to violence and how to avoid escalation (Spector, Coulter, Stockwell, & Matz, 2007).

Kessler et al.’s (2008) work refines the conceptualization of violence climate by considering three interactive dimensions that create it, as seen in **Table 3**.

**Table 3. Kessler et al.’s violence prevention climate construct**

<i>Dimension</i>	<b>Policies and Procedures</b>	<b>Practices and Responses</b>	<b>Pressure for Unsafe Practices</b>
<i>Definition</i>	Employees’ awareness of formal regulation and distribution of information	Employees’ perception of management’s adherence to formal regulation. Management’s actual response to violent incidents.	Employees’ perception of pressure to ignore policies and procedures to meet other demands

The authors suggest that a favorable violence climate must not only have appropriate policies, but a climate that supports their observation. The “pressure for unsafe practices” refers to priorities, explicit or tacit, that encourage employees to cut safety or violence prevention corners in order to increase productivity to conform to workplace culture that does not value violence prevention policies (Kessler et al., 2008). From their survey of employees in a range of sectors, Kessler et al. (2008) conclude that the “Practices and Responses” dimension was the more important predictor of physical violence while “Policies and Procedures” was more relevant to verbal aggression. Management’s role in both ensuring the existence of workplace violence policies and adherence to them are key factors to the creation of a violence prevention climate.

Gadegaard et al.’s (2015) longitudinal study found that violence prevention policies and behaviors at management level, supervisor level and among co-workers are associated with lower exposure to violence in the fields of psychiatry and elder care. The authors observed that the degree of impact varied depending on the frequency of exposure to violence. For example, if the impact of top management was not significant in areas of infrequent violence exposure, but was of primary importance in psychiatric settings where exposure is high (Gadegaard, Andersen, & Høgh, 2015).

## Work Environment

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### Staffing Levels

The need for adequate staffing is frequently mentioned as an important measure to inhibit the circumstances that lead to violence enacted by patients on staff. Inadequate staffing is frequently identified as a risk factor for violence (Adamson et al., 2009). A detox facility in Denver increased staffing levels during key periods by mixing traditional 8-hour shifts with overlapping 12-hour shifts. Consideration of staff qualifications and

experience are also made in staff scheduling (Adamson et al., 2009). In some contexts, such as emergency departments, staff levels can also address long wait times for patients, another circumstance associated with higher risk (Lipscomb & El Ghaziri, 2013).

In addition, staff who are tired, over-worked, or emotionally depleted may have reduced capacity to empathize with patients. Strained interpersonal interactions can heighten a sense of frustration and powerlessness and increase hostility in patients which is believed to increase the risk of violence (Daly et al., 2011).

According to Roca et al. (2016), risk to staff who work with potentially violent patients is reduced when at least two staff members work together when in close proximity to the patient. Availability of multiple staff to focus on one patient depends on adequate staffing levels (2016).

Staffing levels are also a consideration in long term care (LTC) facilities. Robinson and Tappen (2008) note heavy workloads cause stress for caregivers in LTC and increases the likelihood of delivering care in a rough and hurried manner. Such handling can trigger aggressive behavior, increasing the risk of violence. In addition, a slower pace of work is required for implementing skills to avert aggression, like distraction or time-out. Even if employers provide extensive training in these skills, they are of little value for workers who do not have time to implement them (Robinson & Tappen, 2008).

Similarly, Daly et al.'s (2011) study that compared the experiences of workers in long term care facilities in Canada and in four Scandinavian countries found that the working conditions in Canada, with lower staffing levels, and heavier workloads were associated with higher levels of violence experienced by Canadian long term care workers than by their Scandinavian counterparts. The study provided a picture of staff struggling to care for many residents in a short period of time which both compromises patient care and the ability of staff to address risk in a constructive way (Daly et al., 2011).

While staffing levels are commonly mentioned in the literature as a key way to address the occurrence of workplace violence on staff by patients and the intervention has face validity, there is limited empirical evidence to support the recommendation (Whitman, 2017). Nevertheless, some studies are suggestive. Violence against staff has been found to be higher where staff-patient ratios and costs expended per patient are lower (Foley & Rauser, 2012 citing Lee et al., 1999 and Lehmann et al., 1999).

In addition, some kinds of interventions presume adequate staffing levels to be feasible. For example, Enmarker et al.'s review (2010) of non-pharmaceutical interventions to address violent behavior in dementia patients determined that a "person centered approach" that considered the root cause of violent behavior (such as pain or discomfort while bathing) may be able to minimize the cause through nursing activities and reduce the risk of violence to staff. A person centered approach suggests greater sensitivity and personalization to patient care, which requires more staff-patient interaction and ultimately, more staff time and energy (Enmarker, Olsen, & Hellzen, 2011). Such an approach does not appear to be possible in the grim setting described by Daly et al.'s (2011) informants, who describe staff spread so thin that they are encouraged to rely on diapering residents rather than attend them to the toilet.

Staffing levels also present a challenge in the home care environment. Although bringing a second person as a "buddy" to increase safety in home with identified risk is mentioned in the literature as a safety strategy to address the possibility of violence, in practice it may not always be available. Barriers to buddies include lack of availability of other staff or lack of policy as to when the use of a buddy is approved by management. Different managers may be more or less willing to approve the use of additional staff and the associated expense (Hutchings, Lundrigan, Mathews, Lynch, & Goosney, 2010).

## Arrangement of Space and Furniture

The physical environment in which care takes place can facilitate acts of violence and inhibit harm-minimizing responses.

In hospitals or residential treatment facilities, these include blind spots in hallways, unsecured furnishings that may serve as potential weapons, and spatial arrangements that can cut off escape for workers with volatile patients (Gillespie et al., 2015; Lipscomb & El Ghaziri, 2013). Furniture should be arranged so that workers have a clear exit route from any space in which they care for patients and when possible, two exits should be available. To the extent possible, furniture should be secured so that it cannot become a weapon and cabinets and drawers should be kept locked. Sharp edges, such as on metal table frames, should be replaced or padded. Deep counters at nurses stations and offices, lockable, separate bathroom facilities for staff, and all keeping unused doors locked are also recommended (Occupational Safety and Health Administration, 2016).

In community care or home care situations, managers and workers are advised to assess homes for exit routes. In addition, any equipment or medicines that are carried to the site should have locks (Occupational Safety and Health Administration, 2016).

Other recommendations include providing comfortable waiting areas to reduce stress and divided waiting areas to limit the spread of agitation among those waiting. Use of curved mirrors, glass panels, effective lighting, and placement of nurses stations in areas that permit scanning of areas are other ways to heighten visibility of workers and potentially reduce violent episodes (Occupational Safety and Health Administration, 2016).

In addition, care should be taken to limit availability of commonplace objects that could become weapons, such as office supplies and hot beverages. Roca et al. (2016) suggest that pens and pencils can be replaced with crayons and soft markers for patient use, for example.

## Other Recommendations

To make sure that help is available for workers who encounter violence, infrastructure in the form of panic buttons, personal alarm devices or paging systems at workstations in health care facilities must work with protocols to ensure the call is answered (Occupational Safety and Health Administration, 2016).

One practice involves escorting patients and prohibiting unsupervised movement of patients in clinic areas. Key card access may assist enforcement of the policy (Occupational Safety and Health Administration, 2016).

In some settings, metal detectors may be appropriate to ensure that weapons are not brought into the facility. When metal detectors are used, they need to be supported by staff trained to use the equipment and remove weapons when they are detected (Occupational Safety and Health Administration, 2016).

The presence of adequate security personnel conveys a message to staff that their safety is valued and provides a warning that violent behavior will be addressed (Daly et al., 2011). Security personnel may be required to help caregivers deal with violent patients. However, while staff safety is paramount, so too is patient care. When violence arises from mental illness or diminished cognition, the application of undue force may compromise patient care. Security officers with special training in verbal de-escalation may be able to anticipate and prevent violence (Ontario Nurses Association, 2016; Roca et al., 2016).

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## Appendix A: Operating definitions used by the NSHRF

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**Peer-reviewed literature** is evaluated by experts in a field in order to determine the quality of articles submitted for publication in a scholarly journal. Articles are evaluated for their validity and contribution to the field. The peer review process seeks to maintain standards of quality and provide credibility.

**Grey literature** is published material which contributes to the evidence base but is not peer-reviewed, and can include articles, reports, brochures, newsletters, theses, dissertations, conference proceedings, working papers, patents, databases, websites, legislation, and policy documents. These materials can be produced by government, non-profit organizations, health research institutes, professional organizations, universities, international organizations, media, and others. Grey literature can be very useful in informing decision making as it is helpful for understanding new and emerging opinions and issues, for understanding processes of individual programs and approaches, and for planning purposes. The inclusion of grey literature can help to broaden the scope of and provide a more comprehensive review by including evidence from a wider variety of sources and reducing publication bias. However, grey literature has not been exposed to a rigorous systematic review process to assess its quality, reliability and validity which means that the quality of grey literature can be quite varied. Grey literature and media coverage play a particularly important role in providing evidence on topics which are contemporary, continually evolving and where there is limited evidence available in the peer-reviewed literature.