

# **Office of Evidence Based Practice (EBP) – Critically Appraised Topic: Workplace Violence in the Emergency Department (ED)**

## **Specific Care Question**

What is the most effective nursing intervention for decreasing workplace violence (WPV) in Emergency Departments (ED)?

## **Recommendations Based on Current Literature (Best Evidence) Only**

No recommendation can be made on which countermeasure (or intervention) is most effective in decreasing ED WPV. However, this review of current literature by the department of EBP focuses on describing countermeasures employed by other hospitals to decrease workplace violence. When there is a lack of scientific evidence, standard work should be developed, implemented, and monitored.

## **Literature Summary**

**Background.** The National Institute for Occupational Safety and Health (NIOSH) defines workplace violence as any “violent acts (including physical assaults and threats of assaults) directed toward persons at work or on duty” (NIOSH, 2014, What is workplace violence?). Healthcare workers (HCW) are at an increased risk for workplace violence. Between 2002 through 2013, the incidence of serious workplace violence, on average, has been 4 times higher within the healthcare and social assistance sector than the other four reported sectors: construction, private industry, retail trade, and manufacturing (United States Department of Labor, n. d.). Nonfatal cases involving days away from work, for healthcare practitioners and technical occupations, due to intentional injury by another person between 2011 and 2018 has steadily increased from 24.2 per 10,000 full-time workers to 30.5, respectively (United States Department of Labor, 2019).

Based on the Occupational Safety and Health Administration (OSHA) law, all employees have the right to feel safe at work (United States Department of Labor, n. d.). This review will summarize identified literature to answer the specific care question regarding interventions to decrease workplace violence in the ED.

**Study characteristics.** The search for suitable studies was completed on November 19, 2019. A. Marks, MSN, RN, CPN reviewed the 42 titles and/or abstracts found in the search and identified 25 single studies believed to answer the question. An ancestry search found an additional 19 articles. After an in-depth review of the remaining articles, nine studies answered the question. The selected studies included one systematic review (SR) (D'Ettorre, Pellicani, Mazzotta, & Vullo, 2018), four quality improvement projects (Gillespie, Leming-Lee, Crutcher, & Mattei, 2016; Krull, Gusenius, Germain, & Schnepper, 2019; Stene, Larson, Levy, & Dohlman, 2015; Wong, Wing, Weiss, & Gang, 2015), three quasi-experimental studies (Gillespie, Farra, & Gates, 2014; Gillespie, Gates, Kowalenko, Bresler, & Succop, 2014; Gillespie, Gates, & Mentzel, 2012), and one mixed-methods study (Gerdzt et al., 2013).

## **Summary of Literature**

**Interventions.** A SR by D'Ettorre et al. (2018) focused on “risk assessment”, “risk management”, “occurrence rates”, and “physical/nonphysical consequences” for violence in the workplace. Sixty studies were identified, of which 19 focused on “risk management” including management interventions targeting staff and worksite analysis with the aim to eliminate or minimize WPV. The reported interventions included:

- Training, including training on how to handle and how to report incidents
- Improvement of skills in de-escalation techniques
- Teamwork
- Reporting of WPV incidents
- Alarm systems/panic buttons
- Closed system videos
- Employee safe rooms
- Interventions to minimize patient wait times
- Educate patients on wait times
- Minimize access to the patient treatment area



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Training based solely on lectures were less effective in preventing WPV compared to WPV training programs in hospital settings based on interactive and simulation exercises. Quantitative results of the interventions were not reported. D'Ettorre et al. (2018) reported training courses should focus on (a) constructing HCW-patient relationships, (b) improving HCW communication skills, (c) reporting each violent incident accurately, and (d) improving management commitment/employee involvement in WPV prevention programs.

**Certainty of the evidence.** The certainty of the body of evidence was very low based on four factors: Within-study risk of bias, directness of evidence, precision of effect estimates and consistency among studies. The body of evidence was assessed to have very serious risk of bias and very serious indirectness. While the total number was not reported, many of the studies were quality improvement projects, which increases the risk of bias and decrease the generalizability of the study findings. Indirectness was high due to most of the studies are from adult hospitals.

**Reporting WPV.** Gillespie et al. (2016) and Stene et al. (2015) initiated projects to increase the reporting of WPV. Stene (2015) shortened the reporting tool and provided training about the changes. Training and the improved tool resulted in increased reporting of violent acts (31% pre-intervention versus 43% post-intervention) and staff perceived the ED to be a safer environment (percent not provided). Gillespie (2016) used formal education, WPV reporting during rounds, and promotional ink pens for the project's campaign to increase reporting. The main rationale staff attributed to not reporting an incident included "incidents were too minor" and "no action would be taken."

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**Staff Attitudes and Knowledge.** Two quasi-experimental pre-/post-studies (Gillespie, Farra, et al., 2014; Gillespie et al., 2012), one mixed methods study (Gerdtz et al., 2013), and two quality improvement studies (Krull et al., 2019; Wong et al., 2015) used online classes, classroom training, and simulation training to improve ED staff knowledge, skills, and abilities to recognize and better handle WPV. Gillespie, Gates, et al. (2014) found that online and classroom training improved retention of skills needed for the prevention of WPV and risk assessment of WPV ( $p < .001$ ). Krull et al. (2019) found that computer-based training with simulation training improved ED staff ( $N = 96$ ) knowledge, skills, abilities, confidence, and preparedness to deal with WPV ( $p < .0001$ ). Wong et al. (2015) found that simulation training of ED personal ( $N = 162$ ) improved situational perception on patient aggression significantly post-intervention ( $p < .001$ ) but staff attitudes toward management of patient aggression did not significantly change ( $p = .542$ ). Gerdtz et al. (2013) found that despite simulation training, ED personal were undecided if it was possible to prevent patient aggression ( $p > 0.05$ ).

**Certainty of the evidence.** The certainty of the body of evidence was very low based on four factors: Within-study risk of bias, directness of evidence, precision of effect estimates and consistency among studies. The body of evidence was assessed to have very serious risk of bias, very serious indirectness. Risk of bias was very serious due to the studies being quality improvement in nature and quasi-experimental, which can decrease the generalizability of the evidence. Indirectness was high due to most of the studies are from adult hospitals.

**Reduction in Violence.** One quasi-experimental study (Gillespie, Gates, et al., 2014) reported on violence following the intervention of online and classroom training for ED personnel ( $N = 143$ ). A pre- and post-survey was completed at three participating EDs and the results were compared to three EDs that did not participate in the training. Intervention groups experienced a significant decrease in the rate of assaults and threats,  $p < .01$ . Survey results found that all ED personal did not complete a formal report for 60% of assaults and 62% of physical threats.



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### **Identification of Studies**

#### **Search Strategy and Results** (see Figure 1)

Search: ("Workplace Violence/prevention and control"[Mesh]) AND "Emergency Service, Hospital"[Mesh]

Records identified through database searching  $n = 42$

Additional records identified through other sources  $n = 19$

#### *Studies Included in this Review*

Citation	Study Type
D'Ettorre et al. (2018)	SR
Gerdtz et al. (2013)	Mixed methods
Gillespie et al. (2012)	Quasi-experimental
Gillespie, Farra, et al. (2014)	Quasi-experimental
Gillespie, Gates, et al. (2014)	Quasi-experimental
Gordon Lee Gillespie et al. (2016)	Quality Improvement
Krull et al. (2019)	Quality Improvement
Stene et al. (2015)	Quality Improvement
Wong et al. (2015)	Quality Improvement

#### *Studies Not Included in this Review with Exclusion Rationale*

Citation	Reason for exclusion
Calow, Lewis, Showen, and Hall (2016)	Screening tools
Sanchez, Young, and Baker (2018)	Active shooter training
Lenaghan, Cirrincione, and Henrich (2018)	Review article
Nolan-Kelley (2017)	Review article
Stowell, Hughes, and Rozel (2016)	Review article
Bybel (2016)	Review article
Whitman (2016)	Review article
Koller (2016)	Review article
Irinyi and Nemeth (2016)	Non-English
Kotora et al. (2014)	Active shooter training
Richardson, Grainger, Ardagh, and Morrison (2018)	No interventions
Avander, Heikki, Bjersa, and Engstrom (2016)	No interventions
Touzet et al. (2014)	Study protocol
Burchill (2015)	Violence Perception tool
Baydin and Erenler (2014)	Review article



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Wong, Combellick, Wispelwey, Squires, and Gang (2017)	Qualitative
Copeland and Henry (2017)	Qualitative
Kelley (2014)	Qualitative
Gillespie, Gates, Mentzel, Al-Natour, and Kowalenko (2013)	Repeat study population from other included study

### **Methods Used for Appraisal and Synthesis**

<sup>a</sup>Rayyan is a web-based software used for the initial screening of titles and / or abstracts for this analysis (Ouzzani, Hammady, Fedorowicz & Elmagarmid, 2017).

<sup>b</sup>Review Manager (Higgins & Green, 2011) is a Cochrane Collaborative computer program used to assess the study characteristics as well as the risk of bias and create the forest plots found in this analysis.

<sup>c</sup>The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) flow diagram depicts the process in which literature is searched, screened, and eligibility criteria is applied (Moher, Liberati, Tetzlaff, & Altman, 2009).

<sup>a</sup>Ouzzani, M., Hammady, H., Fedorowicz, Z., & Elmagarmid, A. (2016). Rayyan-a web and mobile app for systematic reviews. *Systematic Reviews*, 5(1), 210. doi:10.1186/s13643-016-0384-4

<sup>b</sup>Higgins, J. P. T., & Green, S. e. (2011). *Cochrane Handbook for Systematic Reviews of Interventions [updated March 2011]* (Version 5.1.0 ed.): The Cochrane Collaboration, 2011.

<sup>c</sup>Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. *PLoS Med* 6(7): e1000097. doi:10.1371/journal.pmed1000097 **For more information, visit [www.prisma-statement.org](http://www.prisma-statement.org).**

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### **Acronyms Used in this Document**

Acronym	Explanation
EBP	Evidence Based Practice
ED	Emergency Department
CAT	Critically Appraised Topic
HCW	Healthcare Worker
PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-Analyses
WPV	Workplace Violence



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**Date Developed/Updated**  
January 2020



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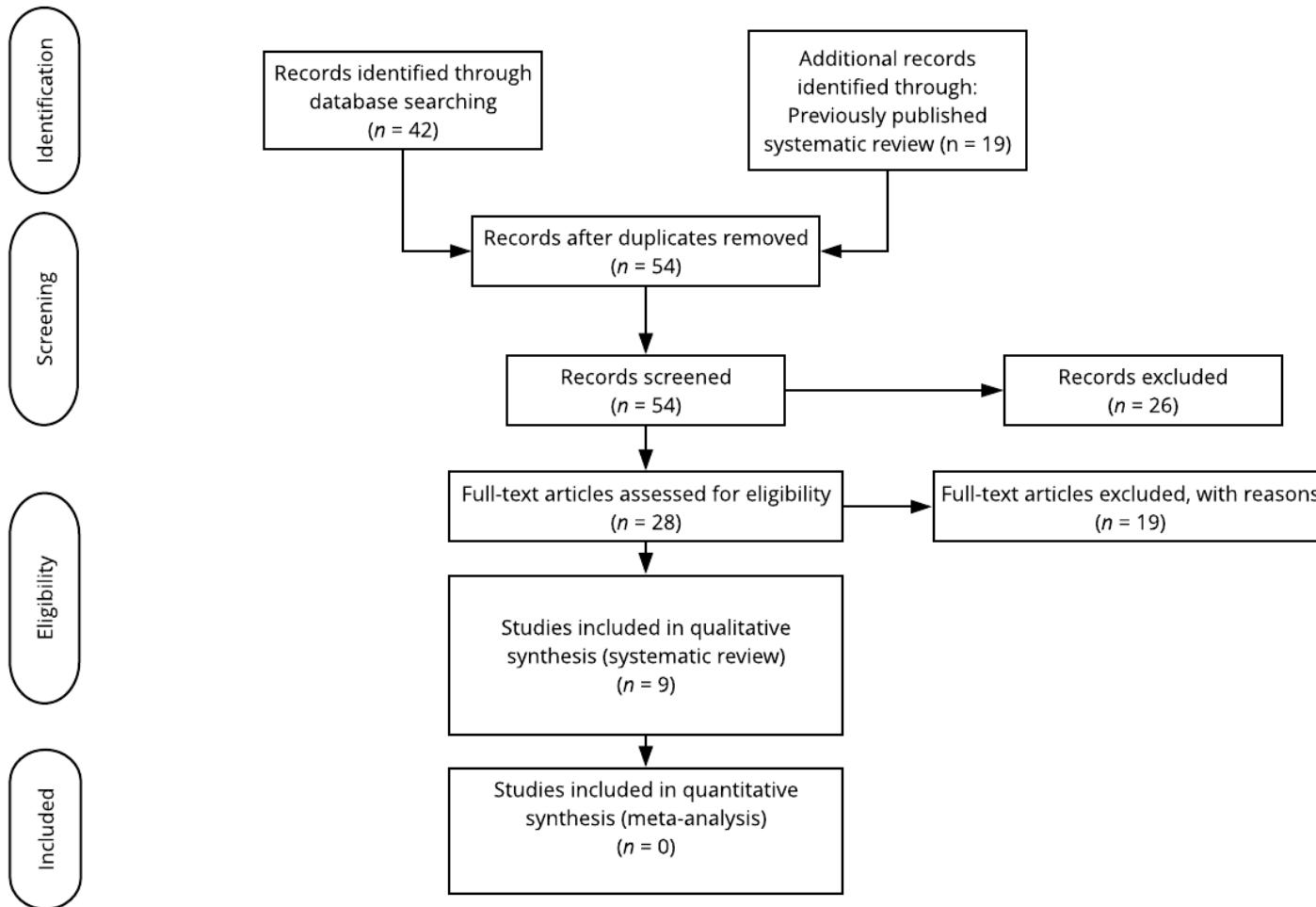


Figure 1. Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRIMSA)<sup>c</sup>



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*Characteristics of Intervention Studies*

D'Ettorre et al. (2018)

<b>Design</b>	<b>Systematic Review - Qualitative Synthesis</b>
<b>Objective</b>	<ul style="list-style-type: none"> <li>• To examine topics focused on and detect new evidence about workplace violence (WPV) toward healthcare workers (HCW) in EDs.</li> <li>• To explore the most common themes raised in the literature on WPV in the last 10 years.</li> </ul>
<b>Methods</b>	<p><b>Protocol and registration.</b> n/a</p> <p><b>Eligibility Criteria</b></p> <p><b>Inclusion criteria:</b></p> <ul style="list-style-type: none"> <li>• Original research articles</li> <li>• Published after January 2007</li> <li>• Written in English</li> <li>• Full reports</li> </ul> <p><b>Exclusion criteria:</b></p> <ul style="list-style-type: none"> <li>• Studies not regarding EDs</li> </ul> <p><b>Information sources</b></p> <ul style="list-style-type: none"> <li>• Pubmed</li> <li>• Web of Science</li> </ul> <p><b>Keywords</b> (systematically combined together to conduct search)</p> <ul style="list-style-type: none"> <li>• Violence</li> <li>• ED</li> <li>• Healthcare Worker</li> <li>• Assault</li> <li>• Prediction</li> <li>• Prevalence</li> <li>• Occupational Risk</li> <li>• Safety Measures</li> <li>• Risk Assessment</li> <li>• Risk Management</li> </ul> <p><b>Data collection process.</b></p> <ul style="list-style-type: none"> <li>• Phase 1: Articles were screened on the basis of title and abstract. Two independent reviewers assessed abstracts and categorized them as relevant, not relevant, and possibly relevant.</li> <li>• Phase 2: Full-text articles evaluated for eligibility by two reviewers. Any disagreements were independently checked by a third reviewer, and discussion was done until a consensus was reached.</li> </ul> <p><b>Risk of bias (RoB) across studies.</b> Not mentioned</p> <p><b>Summary measures.</b></p> <ul style="list-style-type: none"> <li>• Every full-text article that met inclusion criteria was categorized into one or more of the following four categories:</li> </ul>



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	<ul style="list-style-type: none"><li>○ Risk Assessment</li><li>○ Risk Management</li><li>○ Occurrence rates</li><li>○ Physical/nonphysical consequences</li></ul> <p>Most of the studies included information from 2-3 summary measures, two of the studies included information from all four summary measures.</p>
<b>Results</b>	<p><b>Study Selection.</b></p> <p><b>Number of articles identified:</b> <math>N = 653</math></p> <p><b>Full-text articles assessed for eligibility:</b> <math>n =</math> not specified</p> <ul style="list-style-type: none"><li>○ <b>Studies included in qualitative synthesis:</b> <math>n = 60</math></li></ul> <p><b>Synthesis of results.</b></p> <p>The number of studies in each of the summary measures is as follows:</p> <ul style="list-style-type: none"><li>• Risk Assessment = 37</li><li>• Risk Management = 29</li><li>• Occurrence rates = 32</li><li>• Physical/nonphysical consequences = 19</li></ul> <p><b>Risk Assessment</b></p> <ul style="list-style-type: none"><li>• Verbal violence towards HCW occurred more often from lucid patients; physical violence against HCW occurred more often from patients with mental illness or under the influence of drugs/alcohol</li><li>• EDs need to have action plans aimed to assess every patient for the risk of being violent</li><li>• Assessment tools (e.g. STAMPEDAR, STAMP) can be used to identify patients and visitors at risk for acts of violent behaviors</li><li>• Determinants of violence are:<ul style="list-style-type: none"><li>○ Inadequate HCW-patient relationship</li><li>○ High anxiety level among the staff</li><li>○ Poor safety climates</li><li>○ High job demands</li><li>○ Long waiting times</li><li>○ Excessive service volume</li></ul></li></ul> <p><b>Risk Management</b></p> <ul style="list-style-type: none"><li>• 19 studies discussed staff management<ul style="list-style-type: none"><li>○ Training, including training on how to handle and how to report incidents</li><li>○ Improvement of skills in de-escalation techniques</li><li>○ Teamwork</li><li>○ Reporting of WPV incidents</li></ul></li><li>• 10 studies addressed worksite analysis with the aim to eliminate or minimize potential hazards for WPV<ul style="list-style-type: none"><li>○ Alarm systems/panic buttons</li><li>○ Closed system videos</li><li>○ Employee safe rooms</li></ul></li></ul>



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	<ul style="list-style-type: none"> <li>○ Shatter proof glass</li> <li>○ Ways to either minimize wait times or educate patients on wait times</li> <li>○ Minimize access to patient treatment area</li> </ul> <p><b>Occurrence rates</b></p> <ul style="list-style-type: none"> <li>• 24-89% of HCWs have been victim of violence by a patient in the past 12 months</li> <li>• 46-75% of HCWs have received verbal assaults</li> <li>• 16-48% of HCWs have received physical assaults</li> <li>• 9-14% of HCWs have received sexual harassment assaults</li> </ul> <p><b>Physical/non physical consequences</b></p> <ul style="list-style-type: none"> <li>• All 19 studies reported psychological consequences of WPV           <ul style="list-style-type: none"> <li>○ These psychological consequences               <ul style="list-style-type: none"> <li>▪ Can reduce the ability of HCWs to provide care</li> <li>▪ Can be a predictor of burnout and lost productivity</li> <li>▪ 94% of nurses experienced at least one post traumatic stress disorder (PTSD) symptom</li> </ul> </li> </ul> </li> </ul> <p><b>Risk of bias across studies.</b> Not mentioned</p>
<b>Discussion</b>	<p><b>Summary of evidence.</b></p> <ul style="list-style-type: none"> <li>• WPV is underreported</li> <li>• It is unclear if there are long-term consequences of violence towards HCWs, more study is advised</li> <li>• Mentally ill/patients with substance intoxication in waiting rooms tend to be problematic</li> <li>• Effective management of WPV should prioritize training courses focused on           <ul style="list-style-type: none"> <li>○ Constructing HCW-patient relationships</li> <li>○ Improving HCW communication skills</li> <li>○ Reporting of each violent incident accurately</li> <li>○ Improving management commitment/employee involvement in WPV prevention programs</li> </ul> </li> </ul> <p><b>Limitations.</b></p> <ul style="list-style-type: none"> <li>• Most studies happened in adult or combination adult/pediatric EDs</li> <li>• Some studies only analyzed physical violence, others analyzed both physical and verbal violence</li> </ul>
<b>Funding</b>	<b>Funding.</b> Not specified

**Gerdtz et al. (2013)**

<b>Methods</b>	Mixed Methods
<b>Participants</b>	<p><b>Participants:</b></p> <ul style="list-style-type: none"> <li>• ED Nurses, Midwives, Nurse Managers</li> </ul> <p><b>Setting:</b> Eighteen public sector hospital ED located in metropolitan and regional Victoria, Australia.</p> <p><b>Number enrolled into study:</b></p> <ul style="list-style-type: none"> <li>• Took part in the program <math>N = 913</math></li> </ul> <p><b>Number completed:</b></p> <ul style="list-style-type: none"> <li>• Completed survey before and after training: <math>n = 471</math></li> <li>• Completed interviews post-training: <math>n = 28</math></li> </ul> <p><b>Gender, males:</b></p>



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	<ul style="list-style-type: none"> <li>Completed <math>n = 44</math></li> </ul> <p><b>Race / ethnicity or nationality:</b></p> <ul style="list-style-type: none"> <li>The study occurred in Victoria, Australia. The authors did not identify race or ethnicity of the participants.</li> </ul> <p><b>Age, years:</b></p> <p>20-20: <math>n = 221</math>      30-39: <math>n = 146</math>      40-49: <math>n = 133</math>      50+: <math>n = 100</math>      Missing: <math>n = 67</math></p> <p><b>Inclusion criteria:</b></p> <p>Nurses working in these ED's who expressed an interest to participate</p> <p><b>Exclusion criteria:</b></p> <p>Nurse working in these ED's who did not wish to participate.</p> <p><b>Covariates identified:</b></p> <p>The number of years of experience as a registered nurse working in the ED <math>p = .049</math>.      Response bias related to the non-random convenience sample.</p>				
<b>Interventions</b>	<p>Participants were surveyed prior to participating in the training.</p> <p>Participants received Management of Clinical Aggression - Rapid ED Intervention (MOCA-REDI)</p> <ul style="list-style-type: none"> <li>Participants view a 3.5min DVD simulation of an episode of patient aggression in the ED</li> <li>Participants are presented with and discuss the research evidence regarding the prevention of aggression in a healthcare setting generally and with respect to the case depicted in the simulation</li> <li>Process of facilitated reflection, participants review the current approaches used to manage episodes of aggression in their workplace and consider the ways in which practice may be improved.</li> </ul> <p>Six to eight weeks after training, participants completed post-round survey.</p>				
<b>Outcomes</b>	<p><b>Primary outcome(s):</b></p> <ul style="list-style-type: none"> <li>Staff attitudes on environmental, situational and person-related factors for aggression pre- and post-participation in the MOCA-REDI program.*</li> <li>Staff attitudes on management factors for aggression pre- and post-participation in the MOCA-REDI program. *</li> </ul> <p><b>Secondary outcome(s)</b></p> <ul style="list-style-type: none"> <li>Not reported.</li> </ul> <p><b>Safety outcome(s):</b></p> <ul style="list-style-type: none"> <li>Not reported.</li> </ul> <p>*Outcomes of interest to the CMH CPG or CAT development team</p>				
<b>Notes</b>	<p><b>Results:</b></p> <p><b>Significant shifts in Participants Attitudes</b></p> <table border="1"> <thead> <tr> <th>Survey items</th> <th>Pre-training median</th> <th>Post-training median</th> <th><i>p</i> value</th> </tr> </thead> </table>	Survey items	Pre-training median	Post-training median	<i>p</i> value
Survey items	Pre-training median	Post-training median	<i>p</i> value		



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If the physical environment were different, patients would be less aggressive (environment)	4.00 (4.00-2.50)	3.70 (5.00-2.40)	p = .00
Other people make patients aggressive or violent (situation)	4.20 (6.33-2.60)	4.00 (5.50-2.50)	p = .02
Patients commonly become aggressive because staff do no listed to them (situation)	3.50 (5.50-2.20)	3.00 (4.50-2.00)	p = .00*
There appear to be types of patients who frequently become aggressive towards staff (person)	2.00 (3.50-1.00)	2.40 (3.50-1.50)	p = .01*
Patients who are violent are often restrained for their own safety	3.00 (5.00-1.75)	3.50 (5.48-2.00)	p = .03

\* p ≤ .01

Highlights from interviews with 28 of the individuals who participated in the study.

Can you describe your experience of the MOCA-REDI program up until now?

- *MOCA-REDI is a time efficient way to deliver training in the ED. It brought the staff together as a team. It was relevant and triggered a lot of discussion.*
- *It is an easy, hard hitting, short, training package and due to the duration of the sessions, it allows no time for staff to lose interest.*
- Environmental awareness.
- *...better able to identify the dangers of having equipment left on the table and the fact this could be used as a weapon.*
- *more mindful of things like exits and being aware of the risks in our ED.*
- *...more aware of the environment and the way sound carries. Handovers are now conducted in a closed room.*
- Awareness of effect on staff attitudes on communication interactions.
- *...staff communication has improved, and staff are recognizing escalating situations earlier and actively responding by using strategies.*
- *...staff are now listening, trying to work out what the problems are for the patient and attempting to resolve any issues. Those staff who previously met aggression with an aggressive attitude were no longer doing that.*
- *The staff who have failed to respond appropriately to aggressive situations in the past, continue to do so but now they are challenged by other staff.*
- Awareness of the patient's perspective.



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	<ul style="list-style-type: none"> <li>• A number of our staff admitted that they have noticed patients trying to catch their attention from the cubicles as they pass. They said they have previously ignored these patients at times as they felt that their own jobs took priority. They felt MOCA-REDI served as a reminder that the patient's needs are a priority to them, and they should be responded to accordingly.</li> <li>• The program helped staff consider what the patient feels compared to how they themselves see the situation.</li> <li>• A common experience during training was staff saying they hadn't really thought about things from the patient's perspective, only from their own point of view.</li> </ul>
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Gillespie et al. (2012)

<b>Methods</b>	Quasi-experimental
<b>Participants</b>	<p><b>Participants:</b> ED employees in three different hospitals.  <b>Setting:</b> Midwestern, U.S.  <b>Number enrolled into study:</b> <math>N = 315</math></p> <ul style="list-style-type: none"> <li>• <b>Group 1, Web-based learning:</b> <math>n = 95</math></li> <li>• <b>Group 2, Hybrid learning:</b> <math>n = 220</math></li> </ul> <p><b>Number completed:</b> <math>N = 315</math></p> <ul style="list-style-type: none"> <li>• <b>Group 1:</b> <math>n = 95</math></li> <li>• <b>Group 2:</b> <math>n = 220</math></li> </ul> <p><b>Gender, males:</b> (as defined by researchers):</p> <ul style="list-style-type: none"> <li>• Not reported</li> </ul> <p><b>Race / ethnicity or nationality (as defined by researchers):</b></p> <ul style="list-style-type: none"> <li>• The study occurred in Midwestern United States. The authors did not identify race or ethnicity of the participants.</li> </ul> <p><b>Age:</b></p> <ul style="list-style-type: none"> <li>• not reported</li> </ul> <p><b>Inclusion criteria:</b></p> <ul style="list-style-type: none"> <li>• Employment in ED</li> <li>• Completed posttest by given deadline</li> </ul> <p><b>Exclusion criteria:</b></p> <ul style="list-style-type: none"> <li>• Maternity leave</li> <li>• Sick leave</li> </ul>
<b>Interventions</b>	<p>Participants took a pre- and post-test to assess attainment of knowledge</p> <p>WPV Educational Intervention Consisted of Four Units:</p> <ul style="list-style-type: none"> <li>• Units 1-3: Were Web-based and based in the cognitive domain of learning. Included a pre- and post-test.</li> <li>• Unit 4: Classroom-based (2-hours) educational program that addressed both the cognitive and psychomotor domains of learning.</li> </ul> <p><b>Group 1:</b> Completed Web-based learning only</p> <p><b>Group 2:</b> Completed unit 4, classroom learning after completing Web-based units 1-3.</p>
<b>Outcomes</b>	<p><b>Primary outcome(s):</b></p> <ul style="list-style-type: none"> <li>• Knowledge attainment</li> </ul>



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	<p><b>Secondary outcome(s)</b></p> <ul style="list-style-type: none"> <li>• Web-based learning knowledge attainment compared to hybrid learning knowledge attainment.</li> </ul> <p><b>Safety outcome(s):</b></p> <ul style="list-style-type: none"> <li>• Not reported</li> </ul>																																			
<b>Notes</b>	<p><b>Results:</b></p> <ul style="list-style-type: none"> <li>• Increase in knowledge attainment after workplace violence program was significant</li> <li>• No significant difference in knowledge attainment between web-based only learners and hybrid learning model of web-based plus classroom education.</li> </ul> <p><b>Learning outcomes for WVP</b></p> <table border="1"> <thead> <tr> <th></th><th>Pretest mean (%)</th><th>Posttest mean (%)</th><th>Mean of paired differences (%)</th><th>t-Test statistic</th><th>df</th><th>p</th></tr> </thead> <tbody> <tr> <td>Change in knowledge attainment, all employees (<i>n</i> = 315)</td><td>61.67</td><td>68.46</td><td>6.79</td><td>10.811</td><td>314</td><td>&lt;.001</td></tr> <tr> <td>Group comparison for knowledge attainment (<i>n</i> = 315)</td><td></td><td></td><td></td><td>1.493</td><td>313</td><td>0.136</td></tr> <tr> <td>Web-based learning group (<i>n</i> = 95)</td><td>61.79</td><td>67.16</td><td>5.37</td><td></td><td></td><td></td></tr> <tr> <td>Hybrid learning group (<i>n</i> = 220)</td><td>61.61</td><td>69.02</td><td>7.41</td><td></td><td></td><td></td></tr> </tbody> </table>		Pretest mean (%)	Posttest mean (%)	Mean of paired differences (%)	t-Test statistic	df	p	Change in knowledge attainment, all employees ( <i>n</i> = 315)	61.67	68.46	6.79	10.811	314	<.001	Group comparison for knowledge attainment ( <i>n</i> = 315)				1.493	313	0.136	Web-based learning group ( <i>n</i> = 95)	61.79	67.16	5.37				Hybrid learning group ( <i>n</i> = 220)	61.61	69.02	7.41			
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**Gillespie et al. (2016)**

Methods	Quality Improvement
<b>Participants</b>	<p><b>Participants:</b> Health Care Workers</p> <p><b>Setting:</b> USA, Urban Pediatric Hospital ED</p> <p><b>Number completed Survey:</b> <i>N</i> = 150</p> <ul style="list-style-type: none"> <li>• <b>Preintervention:</b> <i>n</i> = 101</li> <li>• <b>Postintervention:</b> <i>n</i> = 49</li> </ul> <p><b>Gender, males:</b></p> <ul style="list-style-type: none"> <li>• <b>Preintervention:</b> <i>n</i> = 16 (16.2%)</li> <li>• <b>Postintervention:</b> <i>n</i> = 7 (14.3%)</li> </ul> <p><b>Race / ethnicity or nationality (White/Caucasian):</b></p> <ul style="list-style-type: none"> <li>• <b>Preintervention:</b> <i>n</i> = 87 (88.8%)</li> <li>• <b>Postintervention:</b> <i>n</i> = 30 (83.3%)</li> </ul> <p><b>Age, mean in years:</b></p>



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	<ul style="list-style-type: none"> <li>• Preintervention: 34.9</li> <li>• Postintervention: 35.2</li> </ul> <p><b>Inclusion criteria:</b></p> <ul style="list-style-type: none"> <li>• Employees working in the pediatric ED</li> </ul> <p><b>Exclusion criteria:</b></p> <ul style="list-style-type: none"> <li>• Not reported</li> </ul> <p><b>Covariates identified:</b></p> <ul style="list-style-type: none"> <li>• Not reported</li> </ul>																														
<b>Interventions</b>	<p>Goal increase nurse reporting of WPV</p> <p>Three interventions were employed:</p> <ul style="list-style-type: none"> <li>• Ink pens branded with "Workplace Violence: CHART IT TO STOP IT"</li> <li>• Formal education to provide an overview of WPV, results from the pre-intervention survey, process from WPV reporting strategies to increase reporting, and the rationale for reporting</li> <li>• Nurse rounding every 4 hours, reminding ED workers to report any incidents or near misses Pre- and Post-Survey</li> </ul>																														
<b>Outcomes</b>	<p><b>Primary outcome(s):</b></p> <ul style="list-style-type: none"> <li>• Frequency of Reporting and Underreporting of Workplace Aggression*</li> </ul> <p><b>Secondary outcome(s)</b></p> <ul style="list-style-type: none"> <li>• Reasons for Reporting and Not Reporting Workplace Aggression*</li> </ul> <p><b>Safety outcome(s):</b></p> <ul style="list-style-type: none"> <li>• Not reported</li> </ul> <p>*Outcomes of interest to the CMH CPG or CAT development team</p>																														
<b>Notes</b>	<p><b>Results:</b></p> <ul style="list-style-type: none"> <li>• Workplace aggression reporting decreased from 53.3% to 46.7%, not achieving the goal of increased reporting.</li> <li>• Reasons for not reporting <ul style="list-style-type: none"> <li>◦ Incidents were too minor and belief that no action would be taken.</li> </ul> </li> <li>• Reporting of threats of aggression by patients decreased (75% to 39.3%; <math>p &lt; .01</math>).</li> <li>• Reporting of assaults by patients increased (55.9% to 90.9%; <math>p = .02</math>).</li> <li>• Reporting to another employee is most likely notification of workplace aggression</li> <li>• Patient threat of aggression is most likely to be reported to police/security.</li> </ul> <p><b>Reporting Workplace Aggression Frequency</b></p> <table border="1"> <thead> <tr> <th></th> <th colspan="2">Aggression by Patient, n (%)</th> <th colspan="2">Aggression by Visitor, n (%)</th> </tr> <tr> <th></th> <th>Pre</th> <th>Post</th> <th>Pre</th> <th>Post</th> </tr> </thead> <tbody> <tr> <td>Verbal abuse reported to</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Police/security</td> <td>20 (35.7)</td> <td>16 (53.3)</td> <td>28 (35.9)</td> <td>9 (32.1)</td> </tr> <tr> <td>Leadership</td> <td>19 (33.09)</td> <td>8 (26.7)</td> <td>33 (42.3)</td> <td>6 (21.4)</td> </tr> <tr> <td>Another employee</td> <td>40 (71.4)</td> <td>19 (63.3)</td> <td>54 (69.2)</td> <td>19 (67.9)</td> </tr> </tbody> </table>		Aggression by Patient, n (%)		Aggression by Visitor, n (%)			Pre	Post	Pre	Post	Verbal abuse reported to					Police/security	20 (35.7)	16 (53.3)	28 (35.9)	9 (32.1)	Leadership	19 (33.09)	8 (26.7)	33 (42.3)	6 (21.4)	Another employee	40 (71.4)	19 (63.3)	54 (69.2)	19 (67.9)
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	Event reporting system	0	2 (6.7)	1 (1.3)	4 (14.3)
<b>Aggression threat reported to</b>					
	Police/security	19 (79.2)	9 (81.8)	9 (60)	2 (66.7)
	Leadership	6 (25)	5 (45.5)	5 (33.3)	0 (0)
	Another employee	8 (33.3)	5 (45.5)	13 (86.7)	2 (66.7)
	Event reporting system	1 (4.2)	5 (45.5)	0 (0)	0 (0)
<b>Assault reported to</b>					
	Police/security	20 (60.6)	4 (40)	2 (100)	No incidents
	Leadership	13 (39.4)	5 (40)	1 (50)	No incidents
	Another employee	24 (72.7)	7 (70)	2 (100)	No incidents
	Event reporting system	3 (9.1)	1 (10)	0 (0)	No incidents
<b>Reporting and Not Reporting Workplace Aggression Reasons</b>					
		Preintervention, n (%)		Postintervention, n (%)	
	Reasons for Reporting	<i>n</i> = 41		<i>n</i> = 21	
	Severity of incident	11 (26.8)		8 (38.1)	
	Asked to report	9 (22)		8 (38.1)	
	Ease of reporting system	5 (12.2)		4 (19)	
	Reasons for not reporting	<i>n</i> = 61		<i>n</i> = 22	
	Not serious/too minor	46 (75.4)		17 (73.9)	
	No action will be taken	30 (49.2)		8 (34.8)	
	Part of the job	27 (44.3)		11 (47.8)	
	Incident not on purpose	11 (18)		4 (17.4)	
	Too much time to report	9 (14.8)		5 (21.7)	
	Not wanting to involve leadership	5 (8.2)		4 (17.4)	

Gillespie, Farra, et al. (2014)

<b>Methods</b>	<b>Quasi-Experimental</b>
<b>Participants</b>	<p><b>Participants:</b> ED employees</p> <p><b>Setting:</b> Two healthcare systems in the Midwest, United States, one pediatric specialty system and one adult/pediatric ED</p> <p><b>Number enrolled into study:</b> <i>N</i> = 143</p> <ul style="list-style-type: none"> <li>• <b>Time 1, pretest:</b> <i>n</i> = 143</li> <li>• <b>Time 2, posttest:</b> <i>n</i> = 143</li> <li>• <b>Time 3, 6-month posttest:</b> <i>n</i> = 143</li> </ul>



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	<p><b>Number completed:</b> <math>N = 120</math></p> <ul style="list-style-type: none"> <li>• <b>Time 1:</b> <math>n = 120</math></li> <li>• <b>Time 2:</b> <math>n = 120</math></li> <li>• <b>Time 3:</b> <math>n = 120</math></li> </ul> <p><b>Gender, males:</b> (as defined by researchers)</p> <ul style="list-style-type: none"> <li>• <b>Time 1:</b> <math>n = 16</math> (13.3 %)</li> <li>• <b>Time 2:</b> <math>n = 16</math> (13.3 %)</li> <li>• <b>Time 3:</b> <math>n = 16</math> (13.3 %)</li> </ul> <p><b>Race / ethnicity or nationality (as defined by researchers):</b></p> <ul style="list-style-type: none"> <li>• This study occurred in the United States.</li> </ul> <p><b>Race:</b></p> <ul style="list-style-type: none"> <li>• White: <math>n = 112</math> (93.3 %)</li> <li>• Black/Other: <math>n = 8</math> (6.7 %)</li> </ul> <p><b>Ethnicity:</b></p> <ul style="list-style-type: none"> <li>• Hispanic: <math>n = 2</math> (1.8 %)</li> <li>• Non-Hispanic: <math>n = 110</math> (98.2 %)</li> </ul> <p><b>Age:</b> Not reported</p> <p><b>Inclusion criteria:</b></p> <ul style="list-style-type: none"> <li>• Participants complete all components of the hybrid education offered to the employees during summer 2011</li> <li>• Eligible participants were: nurses, social workers, child life specialists, and unlicensed assistive personnel</li> </ul> <p><b>Exclusion criteria:</b> None</p> <p><b>Power Analysis:</b> A sample size of 120 was determined to yield enough power of <math>&gt; 95\%</math>, given effect size .310, <math>\alpha = .05</math></p>					
<b>Interventions</b>	<ul style="list-style-type: none"> <li>• Twenty question pretest on workplace violence (questions developed to measure knowledge in preventing, managing, and reporting incidents of WPV)</li> <li>• All participants completed: <ul style="list-style-type: none"> <li>◦ Online Training Program focusing on prevention, environmental safety, risk assessment, and communicating effectively.</li> <li>◦ Two-hour classroom training, interactive training with video vignettes, employees discuss, apply, and collaborate on the best management of WPV.</li> </ul> </li> <li>• Twenty question posttest on workplace violence</li> <li>• Six-month follow up posttest</li> </ul>					
<b>Outcomes</b>	<p><b>Primary outcome(s):</b></p> <p>*Determine the knowledge retention of workplace violence program content following a hybrid educational intervention</p>					
<b>Notes</b>	<p><b>Results</b></p> <p><b>Participant Test Scores</b></p> <table border="1"> <thead> <tr> <th></th> <th>Mean Test Score</th> <th>Standard Deviation</th> <th>Paired Difference (<math>T_2 - T_n</math>)</th> <th>Paired Difference (<math>T_3 - T_n</math>)</th> </tr> </thead> </table>		Mean Test Score	Standard Deviation	Paired Difference ( $T_2 - T_n$ )	Paired Difference ( $T_3 - T_n$ )
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	Time 1 Pretest (T1)	58.5	10.6	3.208	8.250
	Time 2 Posttest (T2)	61.8	10.1	--	5.042
	Time 3 6months Posttest (T3)	66.8	9.3	-5.042	--

Gillespie, Gates, et al. (2014)

<b>Methods</b>	Quasi-experimental
<b>Participants</b>	<p><b>Participants:</b> Patient care providers  <b>Setting:</b> USA, Hospital EDs  <b>Number enrolled into study:</b> <math>N = 213</math>  <b>Number completed:</b> <math>N = 209</math>  <b>Gender, males:</b> (as defined by participants)  • <math>n = 60</math> (28.7%)  <b>Race / ethnicity or nationality (as defined by researchers):</b>  • The study occurred in 2011, the site locations were not disclosed. The authors did not identify race or ethnicity of the participants.  <b>Age, mean (SD and range) in years</b>  • 37.3 (SD = 10.5; range 20-65)  <b>Inclusion criteria:</b>  • Direct patient care provider (physician, physician assistant, nurse practitioner, licensed practical nurse, paramedic, and patient care assistant)  • Working at least 20 hours per week  <b>Exclusion criteria:</b>  • Not reported  <b>Covariates identified:</b>  • Not reported </p>
<b>Interventions</b>	<ul style="list-style-type: none"> <li>Environmental change</li> <li>Policies and procedures</li> <li>Education and training (online and classroom)</li> </ul>
<b>Outcomes</b>	<p><b>Primary outcome:</b>  Violent events <ul style="list-style-type: none"> <li>Assaults were defined as hitting with a body part, slapping, kicking, punching, pinching, scratching, biting, pulling hair, hitting with an object, throwing an object, spitting, beating, shooting, stabbing, squeezing, and twisting.</li> <li>Physical threats were defined as actions, statements, and written or nonverbal messages conveying threats of physical injury, which were serious enough to be unsettling, as well as expressions of intent to inflict pain, injury, or punishment.</li> </ul> <b>Safety outcome:</b>  Not reported </p>
<b>Notes</b>	<b>Results*:</b>



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	<p>Violent events reported <math>N = 1,333</math></p> <ul style="list-style-type: none"> <li>• Assaults, <math>n = 346</math> (26%)             <ul style="list-style-type: none"> <li>◦ 72% of violent event surveys were completed</li> </ul> </li> <li>• Physical threats, <math>n = 987</math> (74%)             <ul style="list-style-type: none"> <li>◦ 59% of violent event surveys were completed</li> </ul> </li> <li>• Violent Event Surveys completed, <math>n = 832</math> (62%)</li> <li>• Assaults, <math>n = 252</math> (30.3%)</li> <li>• Injury from assault, <math>n = 50</math> (20%)</li> <li>• Physical threats, <math>n = 580</math> (69.7%)</li> <li>• Perpetrator description based on completed surveys             <ul style="list-style-type: none"> <li>◦ Patients                     <ul style="list-style-type: none"> <li>▪ Assaults, <math>n = 240</math> (96%)</li> <li>▪ Physical threats, <math>n = 499</math> (86.3%)</li> </ul> </li> <li>◦ Visitors                     <ul style="list-style-type: none"> <li>▪ Assaults, <math>n = 10</math> (4%)</li> <li>▪ Physical threats, <math>n = 79</math> (13.6%)</li> </ul> </li> </ul> </li> <li>• Violent Event Surveys <i>not completed</i>, <math>n = 501</math> (38%)             <ul style="list-style-type: none"> <li>◦ Assaults, <math>n = 94</math> (19%)</li> <li>◦ Physical threats, <math>n = 407</math> (81%)</li> </ul> </li> <li>• Authors description of debriefing**             <ul style="list-style-type: none"> <li>◦ Debriefing was provided for 12% of assaults</li> <li>◦ Debriefing was provided for 11% of physical threats</li> <li>◦ Informal debriefing was provided most often (98)</li> </ul> </li> </ul> <p>A significant decrease in violent events did not occur at intervention sites</p> <p>*The authors did not compare the intervention group to the control group</p> <p>**Debriefing was not disclosed as part of the intervention</p>
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Krull et al. (2019)

Methods	Quality/practice improvement, pre/post intervention
Participants	<p><b>Participants:</b> ED staff</p> <ul style="list-style-type: none"> <li>• Registered nurses</li> <li>• Patient care assistants</li> <li>• Providers (physicians, physician assistants, nurse practitioners)</li> <li>• Security</li> <li>• Social services</li> <li>• Health unit coordinator</li> </ul> <p><b>Setting:</b> USA, upper Midwest</p> <p><b>Number enrolled into study:</b> <math>N = 96</math></p>



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	<ul style="list-style-type: none"> <li>• Registered nurses <math>n = 52</math></li> <li>• Patient care assistants <math>n = 17</math></li> <li>• Providers <math>n = 9</math></li> <li>• Security <math>n = 11</math></li> <li>• Social services <math>n = 5</math></li> <li>• Health unit coordinator <math>n = 1</math></li> </ul> <p><b>Gender, males:</b> <math>n = 23</math> (26%)</p> <p><b>Race / ethnicity or nationality:</b> The study occurred in the USA. The authors did not identify race or ethnicity of the participants.</p> <p><b>Number of years in current role: n (%)</b></p> <ul style="list-style-type: none"> <li>• 0 - 1: 14 (15)</li> <li>• 2 - 5: 31 (33)</li> <li>• 6 - 10: 20 (21)</li> <li>• 11 - 15: 12 (13)</li> <li>• <math>&gt;/= 16</math>: 18 (18)</li> </ul> <p><b>Inclusion criteria:</b></p> <ul style="list-style-type: none"> <li>• Nursing staff from the ED</li> <li>• Non-nursing staff from same ED</li> </ul> <p><b>Exclusion criteria:</b></p> <ul style="list-style-type: none"> <li>• None specified</li> </ul> <p><b>Covariates identified:</b></p> <ul style="list-style-type: none"> <li>• Whether the simulation team was a group that habitually worked together and had signed up to work the simulation together</li> <li>• Whether the simulation team had an identified leader</li> </ul>
<b>Interventions</b>	<p>The participants' perceptions were collected in a pre- and post- survey.</p> <ul style="list-style-type: none"> <li>• Participants received individual computer-based training on de-escalation techniques</li> <li>• Participants then signed up for a team for a group simulation to be held in two weeks</li> <li>• Participants attended the group simulation training exercise on de-escalation techniques and restraint application</li> <li>• A simulation debriefing was held after the group simulation training</li> </ul>
<b>Outcomes</b>	<p>Does the addition of interprofessional simulation training on response to violent patient behavior to the current classroom-based education program enhance:</p> <ul style="list-style-type: none"> <li>• Staff learning style satisfaction</li> <li>• Self-confidence in learning</li> <li>• Self-perception of knowledge, skills, ability, confidence, and preparedness</li> </ul>
<b>Notes</b>	<ul style="list-style-type: none"> <li>• Attempts were made to make the groups homogeneous</li> <li>• Groups that worked together on the unit had better and faster training exercises than groups who did not work together regularly</li> </ul>



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- Training was mandatory for RNs and strongly encouraged for other personnel, this led to heterogeneous groups, which led to decreased perceived fidelity.
- Participants with less experience were more satisfied with the training than those who have been in their roles for 16+ years.

**ALL participants: Knowledge, skills, abilities, confidence, and preparedness rating changes**

Self-Perception Category	Pretest Rating, <i>n</i>				<i>p</i> -value	Change in rating (%)
		Strongly Disagree	Agree	Strongly Agree		
		Strongly Disagree	Disagree	Neutral		
Knowledge	26	68	6	88	<.001	20/94 (21)
Skills	29	65	10	84	<.001	19/94 (20)
Abilities	30	63	12	81	<.001	18/93 (19)
Confidence	33	59	14	78	<.001	19/93 (20)
Preparedness	38	55	10	83	<.001	28/93 (30)

**RN participants: Knowledge, skills, abilities, confidence, and preparedness rating changes**

Self-Perception Category	Pretest Rating, <i>n</i>				<i>p</i> -value	Change in rating (%)
		Strongly Disagree	Agree	Strongly Agree		
		Strongly Disagree	Disagree	Neutral		
Knowledge	17	34	3	48	.0018	14/51 (27)
Skills	21	30	7	44	.0016	14/51 (27)
Abilities	20	31	7	44	.0097	13/51 (25)
Confidence	21	28	10	39	.0054	11/49 (22)
Preparedness	23	27	6	44	.0003	17/50 (34)

Stene et al. (2015)

<b>Methods</b>	<b>Quality Improvement</b>
<b>Participants</b>	<b>Participants:</b> Nursing care team <b>Setting:</b> Level 1 trauma center, upper Midwest, U.S.A.



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	<p><b>Number enrolled into study:</b> <math>N = 357</math></p> <ul style="list-style-type: none"> <li>• <b>Group 1, Initial survey:</b> <math>n = 154</math></li> <li>• <b>Group 2, Follow-up survey:</b> <math>n = 203</math></li> </ul> <p><b>Number completed:</b> <math>N = 234</math></p> <ul style="list-style-type: none"> <li>• <b>Group 1:</b> <math>n = 114</math> completed the survey (74% completion rate)</li> <li>• <b>Group 2:</b> <math>n = 120</math> completed the survey (59% completion rate)</li> </ul> <p><b>Gender, males:</b> (as defined by researchers): Not reported</p> <p><b>Race / ethnicity or nationality (as defined by researchers):</b></p> <ul style="list-style-type: none"> <li>• The study occurred in Midwestern city, U.S.A. The authors did not identify race or ethnicity of the participants</li> </ul> <p><b>Age:</b></p> <ul style="list-style-type: none"> <li>• Not reported</li> </ul> <p><b>Inclusion criteria:</b></p> <ul style="list-style-type: none"> <li>• Registered nurses</li> <li>• Patient care assistants</li> </ul> <p><b>Exclusion criteria:</b></p> <ul style="list-style-type: none"> <li>• Not reported</li> </ul> <p><b>Covariates identified:</b> Not reported</p>									
<b>Interventions</b>	<p>A survey with 19 questions was sent electronically to the entire nursing care team on staff before interventions and one year after interventions.</p> <ul style="list-style-type: none"> <li>• Educational program presented to staff 2 months after initial survey data was collected</li> <li>• Created a supplemental tool for reporting workplace violence (WPV) to record events in real-time taking approximately 1-2 minutes to complete</li> </ul> <p>Follow-up by leadership to reports</p>									
<b>Outcomes</b>	<p><b>Primary outcome(s):</b></p> <ul style="list-style-type: none"> <li>• Reporting of WPV</li> </ul>									
<b>Notes</b>	<p><b>Results:</b></p> <ul style="list-style-type: none"> <li>• Prior to project, no WPV incidences were reported in the previous year</li> <li>• Fifty incidences were reported in the year following implementation of the project</li> </ul> <p>They stated the incident reporting system at the hospital was cumbersome and took a nurse or PCA up to 20 minutes to complete. Using this tool allowed the event to be captured. Nursing leadership was then responsible for entering the event into the formal event reporting tool.</p> <p><b>Percentage of staff reporting verbal and physical abuse</b></p> <table border="1"> <thead> <tr> <th>Type of abuse</th> <th>Initial survey %</th> <th>Follow-up survey %</th> </tr> </thead> <tbody> <tr> <td align="center" style="text-align: center;"><u>Verbal abuse</u></td> <td></td> <td></td> </tr> <tr> <td align="center" style="text-align: center;">0 times</td> <td align="center" style="text-align: center;">21</td> <td align="center" style="text-align: center;">19</td> </tr> </tbody> </table>	Type of abuse	Initial survey %	Follow-up survey %	<u>Verbal abuse</u>			0 times	21	19
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1-10 times	70	79
>10 times	9	2
<u>Physical abuse</u>		
0 times	75	85
1-10 times	25	15
>10 times	0	0

**Answers to question: "Is WPV part of the job in the ED?"**

Response	Initial survey, % (n = 154)	Follow-up survey, % (n = 203)
Yes	55.8	24.2
No	44.2	75.8

**Answers to question: "Do you feel that WPV has increased, remained the same or decreased in the past year?"**

Response	Initial survey, %	Follow-up survey, %
Increased	55	43
Remained the same	45	51
Decreased		6

**Answer to question: "Have you formally reported WPV?"**

Response	Initial survey, %	Follow-up survey, %
Yes	31	43
No	69	57

Wong et al. (2015)

Methods	Quality Improvement
Participants	<b>Participants:</b> ED staff members <b>Setting:</b> ED simulation setting <b>Number enrolled into study:</b> N = 162 <b>Number completed:</b> N = 106  <b>Gender, males:</b> • 44 (41%) <b>Race / ethnicity or nationality (as defined by researchers):</b>



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	<ul style="list-style-type: none"> <li>The study occurred in the United States. The authors did not identify race or ethnicity of the participants</li> </ul> <p><b>Age, years</b></p> <ul style="list-style-type: none"> <li>21 to 25, n = 2</li> <li>26 to 30, n = 36</li> <li>31 to 35, n = 14</li> <li>36 to 40, n = 13</li> <li>41 to 45, n = 12</li> <li>46 to 50, n = 9</li> <li>51 to 55, n = 11</li> <li>56 or older, n = 9</li> </ul> <p><b>Inclusion criteria:</b></p> <ul style="list-style-type: none"> <li>Current ED staff member</li> <li>Physicians</li> <li>Nurses</li> <li>Patient care technicians</li> </ul> <p><b>Exclusion criteria:</b></p> <ul style="list-style-type: none"> <li>None</li> </ul>
<b>Interventions</b>	<p><b>All ED Staff:</b></p> <ul style="list-style-type: none"> <li>Three-30-minute introductory interactive lectures from core elements of validated aggression management courses consisting of topics regarding crisis management principles, de-escalation techniques, and proper application of restraints.</li> <li>Two simulation scenarios and structured debriefing hour Sessions Participants completed a pre-simulation Management of Aggression and Violence Attitude Scale (MAVAS) survey immediately prior to the simulation, participated in a simulation and immediately completed a post-simulation MAVAS survey.</li> </ul>
<b>Outcomes</b>	<p><b>Primary outcome(s):</b></p> <ul style="list-style-type: none"> <li>Describe and demonstrate effective interprofessional teamwork and communication skills to treat the patients with a behavioral emergency in ED.</li> <li>ID roles and responsibilities of members of an interprofessional team that care for acutely agitated patients.</li> <li>Display effective violence mitigation and de-escalation techniques.</li> <li>Appropriately apply physical restraints and medical interventions during treatment of the agitated patient in the ED.</li> <li>Demonstrate improvements in attitudes toward patients with behavioral emergencies through a better understanding of factors contributing to patient aggression.</li> </ul>
<b>Notes</b>	<p><b>Results:</b></p> <ul style="list-style-type: none"> <li>Total of 106 pre-post surveys were returned <ul style="list-style-type: none"> <li>40% nursing</li> <li>34% Physician</li> <li>6% Ancillary staff</li> <li>20% Hospital police</li> </ul> </li> <li>Staff attitudes toward management of patient aggression did not significantly change (<math>p = .542</math>).</li> </ul>



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|  | <ul style="list-style-type: none"><li>• Constructs for internal factors, external factors, and situational/interaction perspectives on patient aggression significantly improved post-intervention (<math>p &lt; .001</math>, <math>p &lt; .002</math>, <math>p &lt; .001</math>, respectively)</li><li>• Staff participants gradually generated a list of quality improvement initiatives as the weeks went by, many of which were successfully implemented including the creation of an ED-based interprofessional crisis management alert and response protocol.</li></ul> |
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**Limitation:**

Course was time and resource intensive



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