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Prevalence of Workplace Violence and Effects of De-escalation Training Among Hospitalists: A Pilot Study[☆]

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Abstract

Introduction: Workplace violence (WPV) is increasing in healthcare and negatively impacts healthcare worker outcomes. De-escalation training for healthcare workers is recommended to reduce WPV from patients and visitors. Hospitalists may be at high risk for WPV, but the magnitude of WPV and the impact of de-escalation training among hospitalists is not known.

Methods: We investigated the baseline prevalence of WPV experienced by 37 hospitalists at a single center. After an in-person de-escalation training, we measured hospitalists' self-reported "Confidence in Coping with Patient Aggression" using a validated scale (score range 10–110).

Results: In the 12 months before de-escalation training, 86.5% of participants reported at least one form of WPV: 83.8% verbal abuse, 29.7% racial abuse, 18.9% physical violence, and 16.2% sexual abuse. The mean confidence score increased significantly from pre-training (43.2) to immediately after training (68.5) and remained significantly elevated at three months (57.2), six months (60.2), and after 12 months (59.9) (all $P < 0.05$; $P_{\text{trend}} < 0.05$).

Conclusion: Hospitalists are at high risk for WPV. Structured in-person de-escalation training may provide the sustained ability for hospitalists to cope with WPV.

Keywords: De-escalation, Workplace violence, Hospitalists, Crisis prevention, Abuse

1. Introduction

Workplace Violence (WPV) is defined as incidents where staff is abused, threatened, or assaulted in the circumstances related to their work (including commuting to and from work), involving an explicit or implicit challenge to their safety, well-being, or health.¹ In the United States (US), between 2011 and 2013, more than three-fourths of all workplace assaults occurred in healthcare and social services settings, and this is rising.^{2,3} Increasingly, hospitalists provide care to patients admitted to the hospital, including those with mental health disorders, substance use

disorders, and delirium. Often, they are the primary providers for patients on the medical floor to address their concerns and complaints. These factors may place hospitalists at high risk for WPV from patients and visitors, but little is known about the magnitude of WPV faced by hospitalists. The frequency of exposure to WPV is associated with burnout, intent to leave, and suicidal thoughts.⁴⁻⁶ It is essential to understand the extent of WPV faced by hospitalists to guide future interventions.

In addition, although many professional societies recommend de-escalation strategies as the first-line strategy, such training is not a part of the formal medical education curriculum for physicians or

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advanced practice providers.^{7,8} This may limit the hospitalist's ability and confidence in the face of patient aggression. Aggression is a form of behavior characterized by verbal or physical attack.⁹ Harassment means to create an unpleasant or hostile situation by uninvited and unwelcome verbal or physical conduct.¹⁰

We conducted a pilot study to understand the prevalence of WPV among hospitalists at our hospital and measure the impact of de-escalation training on hospitalists at a single medical center. We hypothesize that (i) hospitalists are at high risk for WPV and (ii) de-escalation training can increase their confidence in managing aggressive patients.

2. Methods

2.1. Setting and participants

We conducted this study from April 2019 to December 2020 at a 420-bed community academic urban medical center in Baltimore, Maryland. All hospitalists participated in a mandatory institution sponsored de-escalation training. In this study, we asked the participants to complete pre- and post-training surveys. All hospitalists (physicians and advance practice providers) who attended the de-escalation training were eligible to participate in the study. Participation in the study was voluntary. Our institutional review board approved this study (IRB00206517).

2.2. Pre-training survey

The pre-training survey asked about demographics, work experience, and sentinel WPV incident reporting practices. In addition, this survey contained two existing questionnaires: (1) "Exposure to Workplace Violence" questionnaire and (2) "Confidence in Coping with Patient Aggression" questionnaire. We adapted the exposure to workplace violence questionnaire from the survey developed jointly by the World Health Organization, International Labor Office, International Council of Nurses, and Public Services International.¹¹ This survey assesses the frequency of exposure to physical violence, verbal abuse, sexual harassment, and racial abuse in the 12 months preceding training. Physical violence episodes are reported in numeric digits based on the counts reported in the survey, while other forms of WPV are recorded on a 4-point Likert scale (rarely, sometimes, frequently, and most of the time). The Confidence in coping with patient aggression questionnaire is a validated 10-item instrument with an 11-point Likert scale (1 = low confidence to

11 = high confidence) and has robust precision and internal consistency.¹² The sum of 10 item scores yields an overall confidence score (range 10–110). We obtained permission to use both these questionnaires from the respective copyright owners.

2.3. De-escalation training

The Interprofessional Practice and Patient Safety Department of the hospital developed an in-person 3-h training session, which included didactics and hands-on role-play practice of self-defense skills. First, we educated the participants on the definition of WPV, the types of WPV, and recognizing signs of potential aggression from patients. Then, we discussed de-escalation strategies based on a five-phase assault cycle of aggression.¹³ Finally, we discussed specific interventions depending on patient behavior. The study authors had access to the training material but were not involved in its development or instruction.

2.4. Post-training survey

Post-training survey consisted of the "Confidence in Coping with Patient Aggression" questionnaire. Serial surveys were administered to assess if the effects of the training were sustained over time. It was administered four times: immediately (same day) after training, at three months, six months, and finally twelve months after the initial training.

2.5. Statistical analysis

We used descriptive statistics to report participant characteristics, prevalence, and frequency of exposure to WPV. Participants' individual "Confidence in Coping with Patient Aggression" scores were calculated during the following periods: pre-training and post-training (immediately after training, at three months, at six months, and after twelve months). After calculating the mean clinician confidence rate per period: all post-training scores were compared to pre-training scores using the paired T-Test statistic. A linear regression model was fitted with the period as an independent continuous variable to obtain the coefficient per period-unit increase and corresponding P_{trend} .

3. Results

3.1. Demographics and work profile

Of the 37 hospitalists who completed the de-escalation training, 36 (97.3%) completed the WPV

survey. The median work experience as a hospitalist was seven years. 59.5% were physicians, 56.8% were female, and 37.8% identified as non-white (Table 1). 35.1% of respondents were international medical graduates, and 75.7% had never received prior de-escalation training.

3.2. Prevalence of WPV inflicted by patients or visitors

About 86.5% reported at least one form of workplace violence by patients or visitors in the 12 months preceding training. Among respondents, 83.8% reported experiencing verbal abuse, 29.7% racial abuse, 18.9% physical violence, and 16.2% sexual harassment (Fig. 1 A). Seven out of thirty-seven participants (18.9%) reported a total of 11 episodes of physical violence. Of those who experienced verbal abuse, 77.4% experienced at least “sometimes.” Among those who experienced racial or sexual abuse, 45.6% and 14.7% reported it at least “sometimes,” respectively (Fig. 1B).

3.3. WPV reporting

While 73% of hospitalists were aware of the protocol to report WPV, only 12.9% reported WPV episodes (Table 2). The most cited reasons for not reporting were: (1) it is a common occurrence (41.4%), (2) nothing would change (31.0%), and (3) did not know how to report these incidents (20.7%).

3.4. Longitudinal confidence in coping with aggressive patients

The response rate for confidence in coping scale was 86.5% pre-training, 70.3% immediately post-

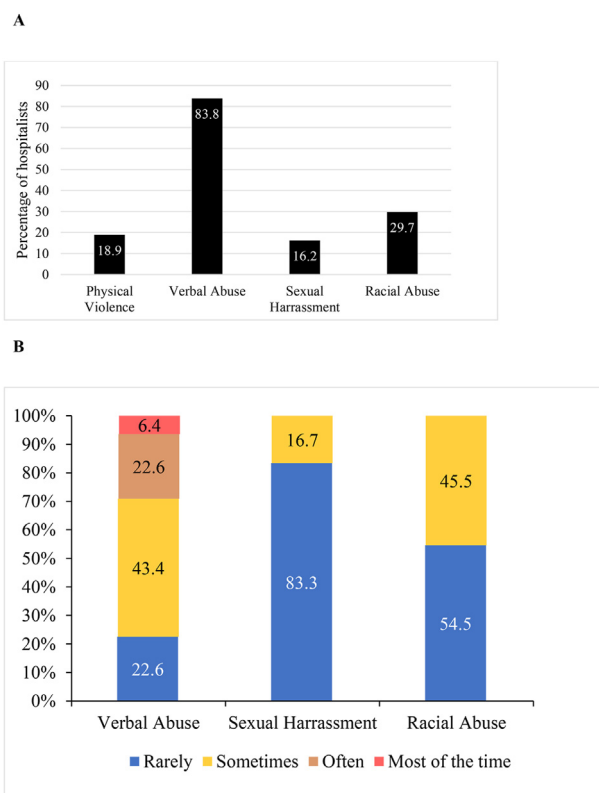


Fig. 1. Prevalence (A) and frequency (B) of hospitalist-reported violence perpetrated by patients/visitors in the 12 months preceding de-escalation training.

training, 70.3% at three months, 45.9% at six months, and 70.3% at 12 months. 13 of the 36 hospitalists responded to all five “Confidence in Coping” survey. Mean clinician confidence in coping with aggressive patients increased from 43.2 to 68.5 from pre-training to immediately after training ($p < 0.05$) (Fig. 2). The increase was noted across all ten items. The mean clinician confidence score was 57.2 at three months, 60.2 at six months, and 59.9 at 12 months of training (all $P < 0.05$ and $P_{trend} < 0.05$).

Table 1. Demographic characteristics of all study participants.

Characteristics	n = 37 (%)
Median Age in years [IQR]	36 [31, 43]
Median Work experience in years [IQR]	7 [3, 11.5]
Hospitalist Role ^a	
Physicians	22 (59.5%)
APPs	14 (37.8%)
Sex ^a	
Female	21 (56.8%)
Male	15 (40.5%)
Ethnicity ^a	
Caucasian	18 (48.7%)
Non-Caucasian	14 (37.8%)
International Medical Graduate	13 (35.1%)
Received Prior training in de-escalation	9 (24.3%)

Data are in n (%) or median (interquartile range). Abbreviations: APPs: Advanced Practice Providers (nurse practitioners and physician assistants), IQR (Interquartile range).

^a Contains missing data due to item non-response.

Table 2. Characteristics of reporting of workplace violence incidents.

Characteristic	n (%)
Clinicians aware of WPV reporting procedures	27 (73%)
Clinicians who experienced WPV and reported the incident	6 (12.9%)
Reasons for not reporting WPV incidents (n = 29)	n (%)
Did not know how	6 (20.7%)
Common occurrence	12 (41.4%)
Nothing would have changed	9 (31.03%)
Fear of negative consequences	2 (6.8%)
Reported by others	3 (10.3%)
Did not feel necessary for various reasons	6 (20.7%)
Time into the process	1 (3.4%)
Others	4 (13.8%)

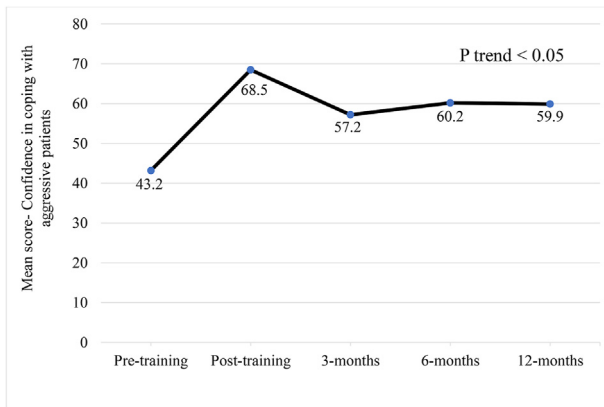


Fig. 2. Hospitalist confidence in coping with patient aggression before and after de-escalation training.

4. Discussion

This pilot study reveals a high prevalence of WPV among hospitalists in our hospital, and de-escalation training may be an effective solution to improve confidence among hospitalists to cope with patient aggression. Our study highlights an urgent need to understand the prevalence and impact of workplace violence among hospitalists at a larger level. This study provides the basis to investigate further the impact of de-escalation training among hospitalists to prevent WPV.

The high prevalence and frequency of WPV amongst hospitalists seen in our study are parallel to reports from other high-risk healthcare worker groups.^{6,14,15} A recent poll highlighted that 8 out of 10 emergency room (ER) physicians reported facing WPV.¹⁵ The high rates of WPV are likely a result of the complex interplay between staff, patient characteristics, social factors, regulatory frameworks, and the hospital's physical environment. Hospitalists may face similar risk factors to ER physicians: providing care for patients with decompensated behavioral health, the primary point of contact for patients in emotional and psychological distress (e.g., in the face of bad news or iatrogenic complication), and overcrowding. The participants may have limited skills to cope with agitated patients as only 1 out of 4 had undergone de-escalation training in the past. Additionally, Baltimore City has higher rates of homelessness, violent crime, substance use disorder, and unmet mental health needs compared to the State of Maryland, all of which have been postulated as risk factors for WPV.¹⁶

The increase in hospitalist confidence after de-escalation training reaffirms the utility of such training for hospitalists. The rise in confidence among hospitalists after de-escalation training is

consistent with previous studies reporting improvement in self-reported confidence among nurses, nursing students, psychiatry staff, and general hospital staff after de-escalation training.^{17,18} Although the initial boost in confidence was expected immediately after training, sustained gains for up to 12 months were a surprising finding. The results on the duration of such gains are variable in the available literature.^{13,17,18} A recent Cochrane review highlighted the dearth of evidence about the efficacy of training programs in reducing WPV, making this an important area for future exploration.¹⁹

Some limitations of this study merit discussion. Like any survey-based study, the results are subject to response and recall bias. The drop in subsequent response rates could be attributed to both survey fatigue and the ongoing COVID-19 clinician fatigue. Second, self-reported confidence may not be a surrogate of the actual ability to de-escalate WPV. Conducting real-world workplace studies to measure the ability to de-escalate an aggressive patient presents extraordinary logistical and ethical challenges. Third, studying the impact of de-escalation training on WPV reporting was outside the scope of this pilot study due to low reporting rates. An awareness education intervention may provide an avenue to study this question in the future. Lastly, this single-center pilot study may have limited generalizability, which calls for future large-scale multi-center studies.

5. Conclusion

Hospitalists may face a high risk of violence at work. De-escalation training may empower hospitalists with confidence to cope with WPV incidents. This pilot study suggests the urgent need to understand the prevalence and the reasons for WPV among hospitalists and to implement strategies to prevent WPV directed against hospitalists.

Conflict of interest

Authors do not have any conflict of interest to disclose.

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