

# Workplace Violence in the Setting of Pain Management

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## Abstract

In the context of the opioid crisis, increased attention has been placed on the risk of violence in outpatient pain medicine clinics. The primary objective of this study was to determine the prevalence and characteristics of workplace violence in a mixed group of clinicians (ie, practicing physicians, resident and fellow physicians in training, nurse practitioners, physician assistants, psychologists) participating in a workplace violence education session at a national pain conference held March 6 through March 10, 2019. A published survey instrument developed to assess workplace violence among pain management clinicians was offered to all 70 attendees, and 58 (82.9%) completed the survey. The mean age of respondents was 47.5 years, and 23 of 56 (41.1%) were female. Of the 58 respondents, 48 (82.8%) reported calling security at least once in the past year, and 39 of 57 (68.4%) reported being threatened with bodily harm. Among those threatened (multiple responses possible per respondent), 41 of 78 responses (52.6%) reported verbal threats, 11 of 78 (14.1%) reported being threatened with an object, and 11 of 78 (14.1%) reported threats of physical violence. Of 59 responses, 15 (25.6%) endorsed carrying a weapon or using protective equipment. When asked about the clinical context of threats, 37 of 77 responses (48.1%) cited opioid management, 9 (11.7%) cited Workers' Compensation, 6 (7.8%) cited disability request, and 4 (5.2%) cited litigation related to an automobile accident. The observations from this survey suggest that clinicians practicing pain medicine experience workplace violence and threats of violence on a frequent basis. It is imperative for clinicians to acknowledge the risk of workplace violence and to recognize high-risk clinical scenarios. Future research should be directed toward developing and implementing data-driven risk mitigation strategies aimed at reducing the rate of workplace violence in outpatient pain clinics.

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Workplace violence occurs in health care settings. According to the National Institute for Occupational Safety and Health, 16,890 workers in private industry sustained nonfatal trauma related to workplace violence in 2016.<sup>1</sup> Among individuals who experienced trauma from workplace violence, 70% worked in the health care and social assistance industries; 21% of workers required 31 or more days away from work to recover, and 19% required 3 to 5 days away from work. In this report, 70% of injured workers were female, and 67% were 25 and 54 years of age.<sup>1</sup>

Several health care settings have long been recognized to be at high risk for workplace violence. For example, over 75% of emergency medicine physicians reported experiencing

workplace violence during a 12-month period.<sup>2</sup> A study from the US Veterans Health Administration found that 41% of assaults on health care workers occurred on inpatient psychiatric units.<sup>3</sup> However, in the context of the opioid crisis, increased attention has been placed on the risk of violence in outpatient pain clinics.<sup>4</sup> In 2015, 51% of chronic pain care clinicians reported having received threats and 2% were assaulted.<sup>5</sup> Thus, the primary objective of this study was to determine the prevalence of workplace violence in a group of clinicians participating in a workplace violence education session at a national pain conference. Secondary objectives included (1) characterizing how violence and threats of violence were perpetrated and (2) identification of patient- and clinician-level risk factors associated with workplace violence.

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**TABLE 1. Demographic and Practice Characteristics of the 58 Study Participant**

Question	Overall	Assault	No assault	P value
Level of training (N=56)				.816
Nurse practitioner	9	5	4	
Physician assistant	5	4	1	
Residency	4	3	1	
Fellowship	2	1	1	
Practicing physician	30	21	9	
Psychologist	4	2	2	
Other	2	2	0	
Practicing pain medicine (N=56)				.390
Yes	50	33	17	
No	6	5	1	
Time practicing pain medicine (%) (N=54)				.262
0	2	2	0	
1-25	5	4	1	
26-50	4	4	0	
51-75	7	3	4	
76-100	36	24	12	
Age (y), mean $\pm$ SD	47.5 $\pm$ 12.0	47.9 $\pm$ 2.0	46.0 $\pm$ 3.2	.591
Sex (N=54)				.216
Male	32	24	8	
Female	22	13	9	
Primary specialty (N=44)				.128
Anesthesiology	17	15	2	
Family medicine	7	2	5	
Internal medicine	2	1	1	
Pediatrics	0	0	0	
Neurology	3	2	1	
Palliative care	2	1	1	
Physical medicine and rehabilitation	8	6	2	
Psychiatry	1	0	1	
Psychology	4	2	2	
Years in practice (N=56)				.586
Currently in fellowship	3	2	1	
0-5	17	9	8	
6-10	9	6	3	
11-15	4	3	1	
16-20	8	7	1	
21-25	7	4	3	
$\geq$ 26	8	4	4	
Practice location (N=50)				.455
Urban	19	17	2	
Suburban	22	13	9	
Rural	9	7	2	

## PARTICIPANTS AND METHODS

The Mayo Foundation Institutional Review Board determined that this activity did not

require review in accordance with the Code of Federal Regulations (45 CFR 46).<sup>6</sup> Our group has experience administering questionnaires to clinicians attending pain-related education sessions.<sup>7-9</sup>

### Participants

Individuals eligible to complete the survey were clinicians attending a 1-hour education session at the 2019 American Academy of Pain Medicine Annual Meeting entitled “Chronic Pain Patient-Physician Scenarios Which Can Lead to Violence.” The annual meeting was held in Denver, Colorado, from March 6 through March 10, 2019. Eligible clinicians included physicians, physician assistants, nurse practitioners, nurses, and other health care practitioners in attendance. The survey was offered to all 70 attendees, and 58 (82.9%) completed the survey.

### Survey Questionnaire

The survey questionnaire was administered and completed in written form. All surveys were completed during the 1-hour education session. The survey has been published and consists of 15 items grouped in 2 distinct sections.<sup>5</sup> The first section (questions 1-7) focuses on demographic information including age, sex, level of training, and practice setting details. The second section (questions 8-15) focuses on information about the frequency of calls to security personnel, frequency of violent threats, details about methods for perpetrating threats of physical harm, method used to cause a workplace injury, risk mitigation strategies, use of personal protective equipment, and clinical context of threats. An additional item was added to the 15-item survey, “What percent of your practice consists of pain management?”.

### Statistical Analyses

Differences in demographic and practice characteristics based on experiencing an assault were analyzed using the  $\chi^2$  test for categorical variables and independent sample *t* tests for continuous variables. A logistic regression analysis with the occurrence of a threat as the dependent variable was conducted, and independent variables included clinician age, sex, and years in practice. These variables were selected to identify demographic factors

**TABLE 2. Responses of the 58 Survey Participants Regarding Violence and Threats<sup>a</sup>**

Question	Response
Call security or police	
Never	10 (17.2)
Weekly	1 (1.7)
Monthly	1 (1.7)
2-3 Times per month	4 (6.9)
Every 6 months	8 (13.8)
At least once a year	34 (58.6)
Threatened by patient with bodily harm (N=57)	
Never	18 (31.6)
Weekly	1 (1.8)
Monthly	0 (0)
2-3 times per month	3 (5.3)
Every 6 months	4 (7.0)
At least once a year	31 (54.4)
Threatened method of harm (N=78) <sup>b</sup>	
Never threatened	10 (12.8)
Gunshot	8 (10.3)
Knife	1 (1.3)
Physical violence	11 (14.1)
Blunt object	2 (2.6)
Verbal	41 (52.6)
Other	5 (6.4)
Physically harmed or injured by patient (N=56)	
Yes	5 (8.9)
No	51 (91.1)
Method of injury (N=56)	
Never injured	51 (91.1)
Gunshot	0 (0)
Knife	1 (1.8)
Physical violence	5 (8.9)
Blunt object	0 (0)
Other	0 (0)
Risk mitigation strategies (N=77) <sup>b</sup>	
None	9 (11.7)
Personnel protective equipment	8 (10.4)
Discharge patient	30 (39.0)
Hired security guard	2 (2.6)
Moved or closed practice	1 (1.3)
Requested police check-in	14 (18.2)
Restraining order	3 (3.9)
Other	10 (13.0)
Carry weapons or protective equipment (N=59) <sup>b</sup>	
None	44 (74.6)
Blunt object	0 (0)
Body armor	0 (0)
Gun	5 (8.5)

*Continued on next column*

**TABLE 2. Continued**

Question	Response
Carry weapons or protective equipment (N=59) <sup>b</sup> , continued	
Knife	3 (5.1)
Mace	4 (6.8)
Stun gun	1 (1.7)
Other	2 (3.4)
Clinical context of threat (N=77) <sup>b</sup>	
Never threatened	10 (13.0)
Auto accident litigation	4 (5.2)
Disability request	6 (7.8)
Interventional treatment	1 (1.3)
Nonopioid medication management	2 (2.6)
Opioid management	37 (48.1)
Workers' Compensation	9 (11.7)
Other	8 (10.4)

<sup>a</sup>Data are presented as No. (percentage) of participants or responses.

<sup>b</sup>The 58 participants were allowed to report more than one item.

associated with threats of violence. The level of statistical significance was set at  $P < .05$ . All survey results were coded in a Microsoft Excel file and were analyzed with Stata statistical software, version 14 (StataCorp).

## RESULTS

### Demographic and Practice Characteristics

Table 1 summarizes demographic and practice characteristics of the respondents. The mean  $\pm$  SD age of the respondents was  $47.5 \pm 12.0$  years, and 23 of 56 (41.1%) were female; 32 respondents (55.2%) were practicing physicians, and 43 of 54 clinicians (79.6%) reported practicing pain medicine the majority of the time. Over half of responding clinicians (29 of 56 [51.9.4%]) had less than 10 years of experience. Among the 44 respondents who provided information on specialty, the 3 most common medical specialties were anesthesiology (17 [38.6%]), physical medicine and rehabilitation (8 [18.2%]), and family medicine (7 [15.9%]). Practice location was 38.0% urban (19 of 50), 44.0% suburban (22 of 50), and 18.0% rural (9 of 50).

### Prevalence of Violence and Violent Threats

In response to the question, "Have you been physically harmed or injured by a patient,"

**TABLE 3. Logistic Regression for Odds of Violence Based on Clinician Demographic Factors**

Clinician factor	Odds ratio	95% CI	P value
Age	1.41	0.35-5.74	.63
Sex	0.94	0.76-1.15	.54
Years in practice	1.22	0.83-1.79	.31

5 of 56 participants (8.9%) reported having been physically attacked (Table 2). In response to the question, “How often do you call security or the police due to a disruptive or argumentative patient,” 48 of the 58 participants (82.8%) responded at least once a year or more frequently. In response to the question, “How often are you threatened by a patient with bodily harm,” 39 of 57 participants (68.4%) responded at least once a year or more frequently. Among those threatened (multiple responses possible per respondent), 41 of 78 responses (52.6%) reported verbal threats, 11 of 78 (14.1%) reported being threatened with an object, and 11 of 78 (14.1%) reported threats of physical violence. In logistic regression analysis, no statistically significant associations were observed between the dependent variable threats of violence and the independent variables clinician age ( $P=.63$ ), sex ( $P=.54$ ), or years of practice ( $P=.31$ ) (Table 3). A Hosmer-Lemeshow goodness-of-fit test was run on each model, indicating  $P>.05$  for each model.

#### Method of Injury, Risk Mitigation Strategies, and Personal Protective Equipment

Of 56 respondents, 5 who reported being injured cited the occurrence of a physical altercation with the perpetrator; 1 respondent also cited use of a knife (Table 2). When threatened, the most commonly cited mitigation strategy was dismissal of the patient from future care (30 of 77 responses [39.0%]) (Table 2). In response to the question, “Do you carry any weapons or protective equipment to work,” 15 of 59 responses (25.6%) endorsed carrying a weapon or using protective equipment (Table 2).

#### Clinical Context to Threat

In response to the question, “What was the clinical context of the threat,” 37 of 77 responses (48.1%) cited opioid management, 9

(11.7%) cited Workers’ Compensation, 6 (7.8%) cited disability request, and 4 (5.2%) cited litigation related to an automobile accident (Table 2).

#### DISCUSSION

The observations from this survey suggest that clinicians practicing pain medicine experience workplace violence and threats of violence on a frequent basis and that risk mitigation strategies are often employed. Violence and violent threats frequently occur in the setting of complex medical situations including opioid management and Workers’ Compensation cases. Compared with the 2015 survey,<sup>5</sup> the rate of engaging security personnel was greater in our cohort (82.8% vs 57%), but the frequency of violent threats was slightly less (68.4% vs 72%).

In a large epidemiological study, several patient-level factors were associated with violence, including intoxication and decompensated mental health conditions.<sup>10</sup> Among individuals with chronic pain, depression, anxiety, substance use disorders, and psychosocial distress are highly prevalent and frequently encountered in daily clinical practice.<sup>11</sup> Although individual patient determinants of violence against pain medicine clinicians are highly variable, it can be postulated that a key mechanism is dissatisfaction with care. This issue is important because high levels of patient dissatisfaction in the context of mental health problems could coalesce to become a key driver of workplace violence.

Clinician and practice characteristics may also influence workplace violence. For example, female clinicians are nearly twice as likely to report verbal threats and stalking behaviors as male clinicians.<sup>12</sup> Sex differences in workplace violence in our study are consistent with previous studies that suggest that female clinicians are more likely to utilize appropriate reporting recommendations compared with male clinicians, which could be due, in part, to sex-based differences in neural processing of perceived threats.<sup>12-14</sup> Additionally, working in an urban setting has been associated with a 1.5-times greater risk of experiencing indirect physical violence,<sup>12</sup> and working in a setting with poor violence prevention protocols has been associated with higher rates of

verbal threats and acts of violence.<sup>15</sup> Regression analyses of our survey results did not confirm similar trends, possibly due to differences that are unique to chronic pain management practice settings.

Clinician response to risk of aggression may influence future risk. Risk mitigation strategies reported in the literature include alarm systems, panic buttons, withdrawal or restriction of high-risk patient access to facilities, optimization of ease of clinician escape in examination rooms (eg, seated closer to the door than the patient), closed-circuit video recording, employee “safe rooms” for use in emergencies, and minimization of stress in patient waiting areas by optimizing lighting, noise levels, and comfort.<sup>16,17</sup> Our survey results suggest that clinicians more commonly withdraw access of high-risk patients to facilities in response to perceived risk. In contrast, Hills and Joyce<sup>17</sup> conducted a large survey of Australian practitioners and found that restricting or withdrawing high-risk patient access was positively associated with aggression whereas optimizing comfort in patient waiting areas was associated with less aggression.

Our study has several limitations. First, the study utilized a cross-sectional, self-report survey that can only identify associations but cannot determine causal elements of violence toward clinicians. The format of the survey also introduces the risk of recall bias. The survey findings from this small group of clinicians attending a specialized session about workplace violence at a national pain conference may not be generalizable to all clinicians or clinical settings where patients with chronic pain receive care. Finally, although 48.1% of threats occurred in the context of opioid management, information about specific clinical scenarios was not collected.

## CONCLUSION

Clinicians involved in pain medicine are at risk of experiencing workplace violence. Thus, it is imperative for clinicians to acknowledge this risk and to recognize high-risk clinical scenarios. Future research should be directed toward developing and implementing data-driven risk mitigation strategies aimed at reducing the rate of workplace violence in outpatient pain clinics.

**Potential Competing Interests:** The authors report no competing interests.

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