ARTICLE

Underreporting of Workplace Violence

Comparison of Self-Report and Actual Documentation of Hospital Incidents

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Abstract: This study examined differences between self-report and actual documentation of workplace violence (WPV) incidents in a cohort of health care workers. The study was conducted in an American hospital system with a central electronic database for reporting WPV events. In 2013, employees (n = 2010) were surveyed by mail about their experience of WPV in the previous year. Survey responses were compared with actual events entered into the electronic system. Of questionnaire respondents who self-reported a violent event in the past year, 88% had not documented an incident in the electronic system. However, more than 45% had reported violence informally, for example, to their supervisors. The researchers found that if employees were injured or lost time from work, they were more likely to formally report a violent event. Understanding the magnitude of underreporting and characteristics of health care workers who are less likely to report may assist hospitals in determining where to focus violence education and prevention efforts.

Keywords: workplace violence, health care workers, hospitals, underreporting

Accurate reporting of occupational illness and injury is the foundation of workplace-based interventions to improve worker health and safety (Azaroff, Levenstein, & Wegman, 2002; Pransky, Snyder, Dembe, & Himmelstein, 1999). Incident reports documenting adverse events can be used to calculate incidence and prevalence rates, identify risk factors, and develop prevention efforts for specific occupational hazards (Stout, 2008). However, underreporting of adverse workplace events is a significant barrier to injury prevention generally (Pransky et al., 1999), and to the prevention of workplace violence (WPV) specifically (Centers for Disease Control and Prevention–National Institute for Occupational Safety and Health [CDC–NIOSH], 2006). In the health care industry, WPV poses one of the most serious threats to worker health and safety (Gates, 2004; Janocha & Smith, 2010; McPhaul & Lipscomb, 2004), but underreporting has long been a recognized barrier to improvement (Arnetz 1998; Iennaco, Dixon, Whittemore, & Bowers, 2013; Lanza & Campbell, 1991). This study documented the magnitude and nature of WPV underreporting by examining differences between individual self-report and actual documentation of events in a cohort of health care workers.

Underreporting of WPV

Underreporting of violent events has been defined as failure of victimized employees to report these events to their employers, the police, or other officials (Findorff, McGovern, Wall, & Gerberich, 2005). Underreporting hinders violence prevention efforts in two ways. First, underreporting results in an underestimation of the true extent of the problem, thus indicating less of a need for prevention of possible negative effects than may actually be warranted (Bensley et al., 1997). Second, without knowledge of the full spectrum of violent events to which workers are exposed, prevention efforts can only be designed to affect limited aspects of the problem (Arnetz, 1998; Arnetz, Aranyos, Ager, & Upfal, 2011a). In health care, various reasons for underreporting WPV have included lack of injury or time lost, time-consuming incident reporting procedures (Arnetz, 1998; Gates, 2004; Lanza & Campbell, 1991), lack of supervisory or coworker support, fear of reprisal or blame (Gates, 2004; Sato, Wakabayashi, Kiyoshi-Teo, & Fukahori, 2013), belief that reporting will not lead to any positive changes (Gates, 2004; Kvas & Seljak 2014), and the common perception among health care workers that violence is

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Applying Research to Practice

Occupational health nurses should be aware of hospital workers' attitudes toward reporting violent events and work with hospital management on possible means to develop a non-punitive culture that encourages reporting. Possible solutions to this problem include education on underreporting, dissemination of hospital policies on reporting, and holding employees and supervisors accountable for reporting violent incidents that occur on their units.

simply "part of the job" (Gates, 2004; Lanza & Campbell, 1991; Lanza, Schmidt, McMillan, Demaio, & Forester, 2011). Varying definitions of violence among employees and within organizations (Arnetz, 1998; Sato et al., 2013) can also affect reporting behavior.

Physical assaults by patients, relatively common in emergency (Gacki-Smith et al., 2009; Gates, Ross, & McQueen, 2006; Taylor & Rew, 2011), psychiatric (Lanza et al., 2011), and geriatric (Leonard, Tinetti, Allore, & Drickamer, 2006; Zeller et al., 2009) departments, may not be reported if staff perceive that the aggressive behavior was unintentional, that is, related to the patient's illness (Hesketh et al., 2003; Lanza & Campbell, 1991; Sato et al., 2013). Health care workers may also be reluctant to report non-physical violence from patients or co-workers because the behavior incurs no injury and may be organizationally sensitive, especially when it concerns the misuse of power by the perpetrator, such as when an employee is bullied by a supervisor (Ferns & Meerabeau, 2009; Findorff et al., 2005).

Reporting Methods and the Magnitude of Underreporting

The magnitude of WPV underreporting among health care workers is difficult to quantify. Questionnaires have been used to measure reporting behavior among workers (Ferns & Meerabeau, 2009; Findorff et al., 2005; Sato et al., 2013). These studies have found a high prevalence of underreporting of both physical and non-physical violence, with all results based solely on employee self-report. Earlier research compared different forms of incident reporting (Arnetz, 1998; Bensley et al., 1997; Grenade & Macdonald, 1995) and also found high rates of underreporting. In a 12-month period, employees at 47 health care workplaces recorded 684 violent events on incident reporting forms developed for the research study; based on self-report, only 147 incidents (21%) were also filed as official work injury reports (Arnetz, 1998). Bensley and colleagues (1997) compared assault injury rates among staff in a psychiatric hospital using compensation claims, hospital incident reports, and questionnaire data. Rates differed widely: 13.8, 35, and 415 injuries per 100 employees per year were reported based on compensation claims, incident reports, and self-report, respectively. That study used the hospital ward as the unit of analysis because questionnaires were anonymous and it was not possible to link individual responses to individual workers' compensation or work injury reports. Grenade and Macdonald (1995) found student nurses' underreporting of physical assault using both documented incidents and a self-report questionnaire. However, that study only compared results via the two methods without linking the two data sets. To the researchers' knowledge, no study to date has linked individual questionnaire responses about WPV exposure and reporting behavior with actual incident documentation. Using individual workers as the unit of analysis could quantify the magnitude of violence underreporting and identify specific worker characteristics associated with underreporting.

The current study compared individual questionnaire responses with actual documentation of WPV events in a cohort of hospital employees. The aim of the study was to increase understanding of underreporting by investigating differences between self-report and actual documentation practices, and explore characteristics and reporting patterns of health care workers who underreport. Based on previous research (Arnetz, 1998; Bensley et al., 1997; Grenade & Macdonald, 1995), it was hypothesized that reports of violence via questionnaire would exceed the number of actual documented incidents. Furthermore, it was expected that reporting would be highest among hospital employees who were injured as a result of a WPV incident (Findorff et al., 2005; Sato et al., 2013) and among those working on psychiatric and emergency units (Arnetz, Hamblin, Ager, Aranyos, Upfal, et al., 2014).

Materials and Method

The study was conducted in an American hospital system comprised of seven hospitals and approximately 15,000 employees. The hospital system maintains a centralized electronic database of employee-reported occupational accidents and incidents, including needlestick injuries, slips, trips and falls, and violent events. Incident reports are documented by employees via any hospital system computer. The current study used a subset of the database that included only WPV data. Hospital employees are encouraged to report all types of WPV, both physical and non-physical, including incidents perpetrated by patients or visitors, known as Type II violence, and those perpetrated by other employees, Type III violence (Injury Prevention Research Center [IPRC], 2001). The violence database was linked to the human resource database that provides information on employee age, gender, job category, date of hire, employment status, and paid productive hours (PPH). This linkage enabled the calculation of standardized rates of violence per 100 full-time equivalents (FTEs) per year, thus providing the hospital system with comparison rates of violence occurrence across hospitals, work units, and over time. This population-based surveillance and reporting system and WPV database have been described previously (Arnetz et al., 2011a; Arnetz, Aranyos, Ager, & Upfal, 2011b). Hospital system policy required employees to document

all WPV incidents, both with and without resulting injury, via the electronic reporting system or to a supervisor (Arnetz, Hamblin, Ager, Aranyos, Essenmacher, et al., 2014). The current study was limited to employees on 42 hospital units (N = 2,010) across the hospital system. Based on analysis of rates of WPV from a 30-month period (January 2010-June 2012), these units were identified as being at increased risk for violence (Arnetz, Hamblin, Ager, Aranyos, Upfal, et al., 2014).

Instruments

The questionnaire developed for the study measured employees' experience with violence and aggression at work during the past year. *Socio-demographic/background* items included age, gender, place (hospital) of employment, job category, supervisor status (yes/no), length of employment in the health care field, and length of employment within the hospital system. *Violence* was defined as acts or threats of physical or verbal aggression. Employees were asked whether they had been a target of violence or aggression at work during the past year. Response alternatives were "No, never," "Yes, once or twice," and "Yes, several times" (Arnetz & Arnetz, 2001). *Violence-related injury*: Employees were also asked whether they had sustained any physical injury as a result of a violent incident (No, none; Yes, mild injury; Yes, serious injury) and whether they had *lost time from work* as a result of a violent event (No, Yes). Four items concerned *reporting of violent incidents* and asked whether employees were familiar with the centralized system for reporting incidents of WPV (No, Yes); whether they had reported a violent incident via the system during the past year (No, never; Yes, once or twice; Yes, several times); if employees had not reported a WPV incident in the electronic system, they were asked to provide a reason for not doing so; and whether they had reported WPV another way: to a supervisor, via the Compliance Hotline, a toll-free number that an employee may call to report any type of work-related issue anonymously, or by some other means.

Underreporting was defined as the percentage of employees who self-reported experiencing a WPV event but did not report any events into the electronic system. Current hospital system policy mandates employees report any known incidents of violence through the electronic system or to a supervisor. Supervisors must record all reported incidents through the electronic system within 24 hours from the end of the shift. Thus, incidents reported by employees to their supervisors are theoretically entered into the system, either by the employee or the supervisor.

Data Collection

In the spring of 2013, employees assigned to all 42 hospital units (N = 2,010) were asked by the researchers to participate in a questionnaire survey regarding their exposure to WPV and knowledge of the WPV reporting system. Questionnaires were mailed home to employees along with a postage-paid return envelope and a cover letter. The letter described the purpose of the study and informed employees that participation was voluntary and questionnaire responses were anonymous. Employees gave their consent to participate in the study by completing and returning the questionnaire. Each employee responding to the questionnaire received a US$10 gift card by mail. The cover letter explained that each questionnaire was coded with an identification number that enabled the research team to identify respondents from a master list. Once the questionnaires had been returned and the gift cards had been mailed out, the list linking identification numbers with respondent names and addresses was destroyed. Approximately 2 weeks after the first mailing, reminders and questionnaires were re-sent to non-respondents. Approval for this study was granted by the Institutional Review Board at the university and the Research Review Council of the hospital system.

Data Analysis

Using the pseudo identification numbers on the questionnaire survey, individual questionnaire responses were compared with actual events entered into the electronic reporting system in the previous 12 months. Questionnaire data were linked to the database by a hospital system data analyst; the research team only had access to de-identified data from the hospital system database.

Chi-square analysis was used to compare questionnaire respondents with non-respondents in regard to gender, age group, employment status (full-time, part-time, and contingent), job category, job tenure, and documentation of WPV incidents via the electronic system. Underreporters, that is, employees who reported WPV through this study but did not document any incidents in the electronic system, were compared with reporters, that is, employees who both self-reported an incident through this study and documented incidents in the system, using chi-square statistics. In a final step, forward stepwise logistic regression was used to determine factors associated with reporting. The dependent variable, reporting (yes/no), was calculated as having reported exposure to WPV on the questionnaire and also reported an incident in the electronic system. An additional logistic regression was conducted to assess factors associated with reporting a violent event to a supervisor. Independent variables in both regressions included employee age, gender, type of work unit, job tenure, employment status, violence-related injury, and lost work time due to a violent event.

Results

A total of 446 employees responded to the questionnaire (response rate 22%). More than 80% of respondents (n = 364) were female and 35% (n = 157) were 50 years of age or older. The majority of respondents (n = 269, 60%) were nursing staff, part-time employees (n = 194, 44%) and worked in either acute care nursing units (n = 157, 35%) or emergency departments (n = 120, 27%). Respondents differed significantly from non-respondents with regard to age (60.1% respondents vs. 49.1% non-respondents ≥ 40 years, $p < .001$), job tenure (17.5% respondents vs. 11.6% non-respondents worked ≥ 20 years in

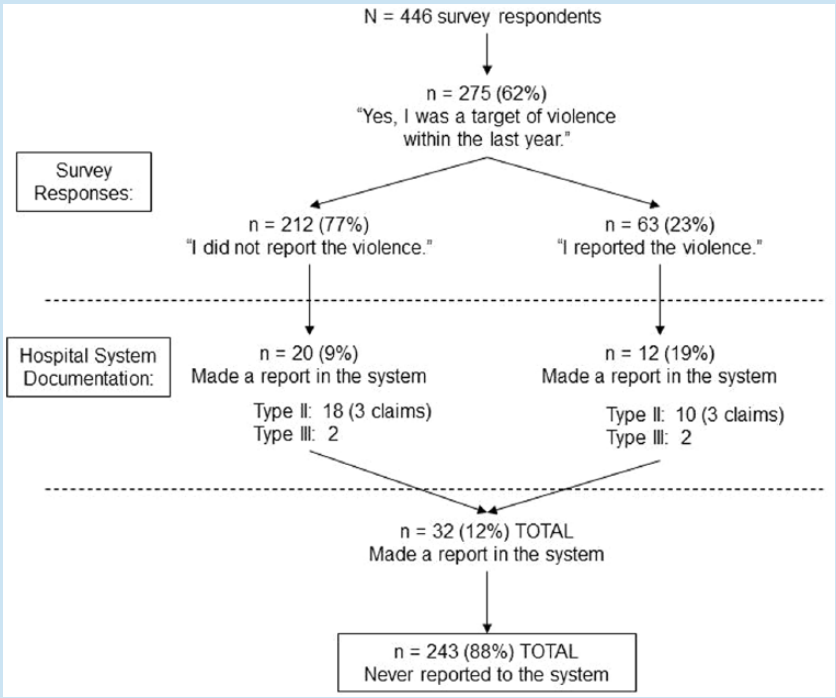

Figure 1. Flowchart comparing self-report (questionnaire) and actual documentation (electronic reporting system) of workplace violence (WPV) events among hospital employees (*N* = 446).

the hospital system, $p < .01$), and job category (5.2% patient care associates among respondents vs. 12.6% among non-respondents, $p < .001$). Respondents did not differ significantly from non-respondents with regard to documentation of a WPV incident in the electronic system in the past year (8.3% respondents vs. 6.5% non-respondents, $p = .19$).

Self-Report Versus Documented Incidents of WPV

Figure 1 presents a flowchart summarizing survey responses and hospital system documentation of violent workplace incidents. Of the 446 employees who responded to the questionnaire, 275 (62%) reported experiencing at least one WPV event in the previous year; of these, 243 did not document an incident in the database, representing an overall rate of underreporting of 88%. Surprisingly, 63 of the 275 who self-reported violent events (23%) also reported having documented at least one incident via the electronic reporting system, but only 12 (4%) actually did so. Among the remaining 212 employees who stated in the questionnaire that they did not document a violent incident electronically, 20 (9%) actually did so. Thus, in reality, only 32 of the 275 employees (12%) who self-reported a violent event had formally documented the incident via the electronic reporting system.

Characteristics of Reporters and Underreporters

Table 1 summarizes and compares characteristics of employees who documented violent events in the electronic reporting system ("reporters," $n = 32$) with employees who did not ("underreporters," $n = 243$). No significant differences were found between the two groups with regard to gender, age, or length of employment. Reporters included a significantly greater proportion of full-time employees than underreporters, and no contingent workers were found among reporters ($p < .05$). Fifty percent of reporters ($n = 16$) had been injured as a result of a WPV incident, compared with 11.5% ($n = 28$) among underreporters ($p < .001$); 25% of reporters ($n = 8$) had lost time from work due to a WPV incident compared with 4.5% ($n = 11$) among underreporters ($p < .001$).

Of the 275 questionnaire respondents who said they had experienced a WPV incident, 45% ($n = 125$) reported the violence using an alternative method (Table 2). Of the 32 who did report via the electronic system, 14 (43.8%) also reported in some other way. Among the 243 underreporters, who did not report an incident via the electronic system, 111 (45.7%) did report using an alternative method. Reporting to a supervisor was the most common alternative method; slightly less than 80% of both reporters and underreporters reported these incidents to their supervisors.

Table 3 summarizes the reasons for not reporting a WPV incident as described by the 212 questionnaire respondents who stated they had experienced a violent event, but had not reported it. As indicated in Figure 1, 20 of the 212 individuals actually had documented an incident in the electronic system; thus, Table 3 compares results by reporters and underreporters. The most common reasons for not reporting were that the

Table 1. Characteristics of Violence Reporters[a] ($n = 32$) and Underreporters[b] ($n = 243$)

Variable	Reporters *n* (%)	Underreporters *n* (%)	*p*
Gender			.31
Male	10 (31.3)	56 (23.0)	
Female	22 (68.8)	187 (77.0)	
Age (years)			.22
<29	3 (9.4)	61 (25.1)	
30-39	6 (18.8)	45 (18.5)	
40-49	9 (28.1)	60 (24.7)	
50+	14 (43.8)	77 (31.7)	
Length of employment at current workplace (years)			.19
<5	11 (34.4)	118 (48.6)	
5-9	10 (31.3)	46 (18.9)	
10-19	9 (28.1)	45 (18.5)	
20+	2 (6.3)	34 (14.0)	
Employment status			.02
Full-time	18 (56.3)	91 (37.4)	
Part-time	14 (43.8)	113 (46.5)	
Contingent	0 (0.0)	39 (16.0)	
Type of work unit			.03
Acute care nursing	6 (18.8)	78 (32.1)	
Emergency department	9 (28.1)	75 (30.9)	
Intensive care unit	2 (6.3)	22 (9.1)	
Surgery	1 (3.1)	22 (9.1)	
Security	8 (25.0)	31 (12.8)	
Psychiatry	6 (18.8)	15 (6.2)	
Job category			.02
Nursing	13 (40.6)	152 (62.6)	
Security	6 (18.8)	28 (11.5)	
Other technicians	6 (18.8)	11 (4.7)	
Manager/administrative professional	2 (6.3)	19 (7.8)	
Allied health professional	2 (6.3)	9 (3.7)	

(continued)

Table 1. (continued)

Variable	Reporters *n* (%)	Underreporters *n* (%)	*p*
Mental health technician	2 (6.3)	5 (2.1)	
Unit clerk	1 (3.1)	6 (2.5)	
Clerical	0 (0.0)	3 (1.2)	
Patient care associate/medical assistant	0 (0.0)	10 (4.1)	
Injured as a result of a violent event			<.001
No	16 (50.0)	215 (88.5)	
Yes, mild	13 (40.6)	25 (10.3)	
Yes, serious	3 (9.4)	3 (1.2)	
Lost time from work as a result of a violent event			<.001
No	24 (75.0)	232 (95.5)	
Yes	8 (25.0)	11 (4.5)	

Note. WPV = workplace violence.
[a]Reporters reported WPV via questionnaire and also documented the incident(s) via the electronic system.
[b]Underreporters reported WPV via questionnaire, but did not document the incident(s) via the electronic system.

Table 2. Alternative Methods of Reporting WPV: Comparison of Reporters[a] (*n* = 14) and Underreporters[b] (*n* = 111)

Variable	Total	Reporters *n* (%)	Underreporters *n* (%)	*p*
Supervisor	99 (79.2)	11 (78.6)	88 (79.3)	.84
Compliance hotline	19 (15.2)	4 (28.6)	15 (13.5)	.25
Other	23 (18.4)	3 (21.4)	20 (18.0)	.74
Total[c]	125 (100)	14 (100)	111 (100)	.84

Note. WPV = workplace violence.
[a]Reporters reported WPV via questionnaire and also documented the incident(s) via the electronic system.
[b]Underreporters reported WPV via questionnaire but did not document the incident(s) via the electronic system.
[c]Multiple response was possible; a total of 125 employees reported using an alternative method.

individual had not been a target of/witness to a violent event (29.9%) and did not believe that reporting leads to change (28.4%). The only significant difference between reporters and underreporters concerned being unsure of how to report; surprisingly, this was more common among reporters (20%) than underreporters (5.4%) although only 14 respondents in total had selected this alternative. Overall, 43 respondents had noted "other" reasons for not reporting including fear of retaliation (*n* = 13); the incident was reported by someone else (*n* = 6); the incident was patient-related (psychological or cognitive impairment) and was included in either patient notes or discussed among the health care team (*n* = 6).

Results of the logistic regression that examined factors associated with reporting incidents of violence in the electronic

Table 3. Reasons for Not Reporting Incidents of WPV Among the 212 Survey Respondents Who Stated That They Experienced Violence but Did Not Report It. Comparison of Reporters[a] (n = 20) and Underreporters[b] (n = 184 Valid Responses)

	Overall	Reporters	Underreporters	
Variable	***n* (%)**	***n* (%)**	***n* (%)**	***p***
Not a target or witness of violence				.60
Yes	61 (29.9)	7 (35.0)	54 (29.3)	
No	143 (70.1)	13 (65.0)	130 (70.7)	
Not aware of reporting system				1.00
Yes	8 (3.9)	0 (0.0)	8 (4.3)	
No	196 (96.1)	20 (100.0)	176 (75.7)	
Did not have time				.44
Yes	21 (10.3)	3 (15.0)	18 (9.8)	
No	183 (89.7)	17 (85.0)	166 (90.2)	
Not sure how to report				.04
Yes	14 (6.9)	4 (20.0)	10 (5.4)	
No	190 (93.1)	16 (80.0)	174 (94.6)	
Not important to report				1.00
Yes	38 (18.6)	3 (15.0)	35 (19.0)	
No	166 (81.4)	17 (85.0)	149 (81.0)	
Reporting never leads to changes				.38
Yes	58 (28.4)	4 (20.0)	54 (29.3)	
No	146 (71.6)	16 (80.0)	130 (70.7)	
Do not know/no particular reason				1.00
Yes	18 (8.8)	1 (5.0)	17 (9.2)	
No	186 (91.2)	19 (95.0)	167 (90.8)	
Other				1.00
Yes	43 (21.1)	4 (20.0)	39 (21.2)	
No	161 (78.9)	16 (80.0)	145 (78.8)	

Note. **WPV = workplace violence.**
[a]Reporters reported WPV via questionnaire and also documented the incident(s) via the electronic system.
[b]Underreporters reported WPV via questionnaire but did not document the incident(s) via the electronic system.

system are summarized in Table 4. Employees had a higher likelihood of reporting via the electronic system if they incurred a physical injury as the result of the violent incident (OR = 6.22) or if an incident resulted in time away from work (OR = 3.56). No other demographic or work-related factors were significant.

Factors associated with reporting WPV to a supervisor are summarized in Table 5. Having worked less than 5 years (OR = 0.42) and working as security staff (OR = 0.22) were both significantly associated with lower likelihood of reporting WPV to a supervisor.

Table 4. Logistic Regression Examining Factors Associated With Reporting WPV Incidents in the Electronic System[a] (n = 275)

Variable	β	*OR*	95% CI
Physical injury (yes/no)	1.83	6.22	[2.64, 14.64]
Lost work time (yes/no)	1.27	3.56	[1.15, 11.00]

Note. WPV = workplace violence; *OR* = odds ratio; CI=confidence interval.
[a]Adjusted for age, gender, type of work unit, job tenure, and employment status.

Table 5. Logistic Regression Examining Factors Associated With Reporting WPV Incidents to a Supervisor[a] (n = 275)

Variable	β	*OR*	95% CI
Job tenure (reference 20+ years)			
< 5 years	**–0.88**	**0.42**	**[0.19, 0.92]**
5-9 years	0.26	1.30	[0.54, 3.13]
10-19 years	–0.06	0.94	[0.39, 2.29]
Type of work unit (reference acute care nursing)			
Emergency department	–0.47	0.62	[0.32, 1.20]
Intensive care nursing	–0.46	0.63	[0.24, 1.69]
Surgery	0.11	1.12	[0.43, 2.93]
Security	**–1.53**	**0.22**	**[0.08, 0.57]**
Psychiatry	–0.21	0.81	[0.30, 2.21]

Note. Significant factors in bold. WPV = workplace violence; OR = odds ratio; CI=confidence interval.
[a]Adjusted for age, gender, employment status, physical injury, lost work time.

Discussion

The aims of this study were (a) to compare the self-report of WPV via the questionnaire with actual documentation of violent incidents in a cohort of hospital employees, and (b) to examine the individual and job characteristics and reporting patterns of "reporters" versus "underreporters." As hypothesized, a greater proportion of questionnaire respondents (62%) self-reported an incident of WPV in the previous 12 months, compared with 12% who actually documented the incident via the electronic reporting system. This finding is consistent with previous research (Ferns & Meerabeau, 2009; Findorff et al., 2005; Sato et al., 2013) based solely on self-report. Findorff and colleagues (2005) conducted a study in a single health care organization and found that less than 60% reported physical violence and less than 50% reported non-physical violence to their employers; most reports were oral and not otherwise documented. Ferns and Meerabeau (2009) reported that 45% of nursing students experienced verbal abuse during their clinical training and the majority (63%) stated they had reported the incident. However, only four incidents were documented in writing. Sato and colleagues (2013) found that more than 30% of nurses reported experiencing patient aggressive behavior in the previous month, but 70% did not report the incident.

The second hypothesis was that reporting would be highest among hospital employees who were injured, and among those working on psychiatric or emergency units; this was partially supported. A significantly greater proportion of reporters had been injured or lost time from work as a result of a violent event, compared with underreporters; these two factors were also significantly associated with a higher likelihood of reporting through the electronic system. This finding may in part be explained by hospital system policy, which states that employees who have been injured on the job and seek care at Occupational Health Services must document the incident in the electronic system. These findings support previous research that found a higher likelihood of reporting when the symptoms or

impact of the violence were more severe (Findorff et al., 2005; Sato et al., 2013). Both studies were based solely on self-report. Results of the current study did not support the hypothesis that psychiatric and emergency department employees are more likely to report violence compared with employees on other units. Comparisons by type of unit (Table 1) revealed that a larger proportion of psychiatric employees were reporters (18.8%) than underreporters (6.2%), but emergency department employees had a larger proportion of underreporters (30.9%) than reporters (28.1%). However, the researchers did not find a higher likelihood of reporting through the electronic system in any one type of work unit.

Only 32 of the 275 employees (12%) who self-reported violence in the workplace had formally documented the incident via the electronic reporting system. This finding suggests an overall underreporting rate of 88%. An earlier study of 47 health care workplaces based entirely on worker self-report found a similar underreporting rate of 79% (Arnetz, 1998). However, a closer look at the questionnaire data in the current study revealed that more than 45% of the 275 who self-reported violence in the past year (n = 125) used other methods to report the incident. Those individuals reported the incident verbally to their supervisors (79.2%), via the Compliance Hotline (15.2%), or other means (18.4%). Although a small number (n = 14, 11.2%) of personnel had also reported through the electronic system, the majority (n = 111) had not. The only factors significantly associated with informal incident reporting to a supervisor were short job tenure (< 5 years) and working as security staff; both were associated with lower likelihood of reporting. Sato and colleagues (2013) found that nurses with less work experience were less likely to report aggressive behavior. Combining all of the alternative methods with electronic documentation, the rate of underreporting dropped to 48%; 143 reporters (32 electronic reporters and 111reporters by other means) leaves 132 of 275 exposed who did not report. Although this is an improvement over 88%, almost half of the incidents were not reported.

No Data, No Problem!

This finding has implications for this and similar health care organizations. The hospital system in this study has worked for the past decade to establish a centralized electronic system for reporting WPV (Arnetz et al., 2011a, 2011b), and human resource policy mandates reporting of known incidents of violence. Although employees who verbally report incidents to their supervisors may be fulfilling their responsibility to report, these informal reports may not always be available to upper management for policy decisions. Much of the responsibility for entering incidents into the electronic system falls to unit supervisors, who may not have time to file reports, may have other tasks that demand priority, or may not be willing to admit that violence occurs on their units (Sato et al., 2013). As a result, the population-based rates of violence, calculated annually and based on documentation in the electronic system (Arnetz et al., 2011a, 2011b), may be substantially underestimated. Underreporting is a critical barrier to appropriate allocation of resources for WPV prevention. Accurate and complete surveillance of adverse events in the workplace, including incidents of WPV and potential threat, is a prerequisite for effective intervention (Azaroff et al., 2002; Bensley et al., 1997; Pransky et al., 1999), and the problem can be summarized quite simply: Without accurate data, the true extent and nature of the problem cannot be assessed.

Strengths and Limitations

This is the first study to examine underreporting of WPV among health care workers by linking and comparing individual questionnaire responses (self-report) regarding WPV experiences with actual incident documentation. However, a number of limitations should be considered. First, the study was conducted in a single hospital system in one geographic area of the United States, and results may not be generalized to hospitals in other areas. Second, the response rate on the questionnaire was low (22%). However, the researchers compared characteristics of respondents with those of non-respondents and found few significant differences. Moreover, all further analyses were limited to only the cohort of respondents who self-reported WPV (n = 275). Third, the questionnaire items related to experience of violence were retrospective (past year), and recall bias may have affected the results. This bias was especially evident in that 63 of the 275 who self-reported violent events (23%) also self-reported having documented at least one incident via the electronic reporting system, when, in fact, only 12 (4%) actually had done so. It may be that several of these individuals had indeed reported incidents in the electronic system earlier, but not in the past year. Conversely, of the 212 employees who self-reported that they did not record a violent incident electronically, 20 (9%) actually had. Finally, the main aim of this study was to better understand the magnitude of underreporting of WPV generally. Analyses did not examine the type of violence experienced or reported. As suggested in earlier research (Findorff et al., 2005), it is likely that underreporting of non-physical violence is greater than that of physical violence.

Implications for Practice

The lack of agreement between employees' survey responses and actual report practices may be due to lack of injury, recall bias, or a lack of motivation to use the central electronic reporting system to report violent events. Underreporting is a hindrance to determining the actual extent of WPV toward health care workers. Understanding the magnitude of underreporting and the characteristics of health care workers who are more likely to underreport may provide hospitals with a more accurate estimate of WPV and determine where to focus education, training, and prevention efforts.

Authors' Note

The content is solely the responsibility of the authors and does not necessarily represent the official views of Centers for Disease Control and Prevention National Institute for Occupational Safety and Health (CDC–NIOSH).

Conflict of Interest

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This study was funded by Centers for Disease Control and Prevention National Institute for Occupational Safety and Health (CDC–NIOSH), grant number R01OH009948.

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