

# Worker-to-Worker Violence in Hospitals

## Perpetrator Characteristics and Common Dyads

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**Abstract:** Worker-to-worker (Type III) violence is prevalent in health care settings and has potential adverse consequences for employees and organizations. Little research has examined perpetrator characteristics of this type of violence. The current study is a descriptive examination of the common demographic and work-related characteristics of perpetrators of Type III workplace violence among hospital workers. Analysis was based on documented incidents of Type III violence reported within a large hospital system from 2010 to 2012. Nurses were involved as either the perpetrator or target in the five most common perpetrator–target dyads. Incidence rate ratios revealed that patient care associates and nurses were significantly more likely to be perpetrators than other job titles. By examining characteristics of perpetrators and common worker dyads involved in Type III workplace violence, hospital stakeholders and unit supervisors have a starting point to develop strategies for reducing conflict between workers.

**Keywords:** workplace violence, mental health, hospital workers, perpetrators, Type III violence, perpetrator–target dyads, worker-to-worker

Workplace violence is a prevalent issue in health care settings internationally (Arnetz, Aranyos, Ager, & Upfal, 2011b). Researchers categorize violence toward workers into four types (I–IV) based on the perpetrator of the violent act (Injury Prevention Research Center [IPRC], 2001). Type I incidents are perpetrated by individuals with no legitimate business relationship to the worker or workplace, usually with criminal intent such as robbery. Type II involves a patient or visitor as the perpetrator, Type III involves a coworker as the perpetrator, and Type IV involves a perpetrator with no business relationship to the workplace but who has a

personal relationship to the worker. This article focuses on Type III workplace violence: worker-to-worker events.

Violent events between workers include physical assault, verbal aggression, harassment, intimidation, threats, and bullying (Jackson, Clare, & Mannix, 2002). Research suggests that Type III violence among health care workers may result from power imbalances (Felblinger, 2008) due to professional rank or seniority. For example, newer nursing staff members were frequently bullied by more senior nursing staff (Berry, Gillespie, Gates, & Schafer, 2012; Ditmer, 2010; McKenna, Smith, Poole, & Coverdale, 2003). Also, physicians have targeted medical residents (Acik et al., 2008) and nurses using disruptive behaviors (Hegney, Eley, Plank, Buikstra, & Parker, 2006; Rosenstein, 2002) and sexual harassment (Bronner, Peretz, & Ehrenfeld, 2003; Celik & Celik, 2007). However, “horizontal violence” (Ditmer, 2010; Farrell, 2001; McKenna et al., 2003) has also been described in studies of Type III workplace violence among nursing staff with the same professional rank.

Although Type III violence is most often nonphysical (Arnetz et al., 2011b), it may have negative health consequences for employees. Verbal violence between nurses has been associated with high levels of stress (Rowe & Sherlock, 2005) and psychological problems (Magnavita & Heponiemi, 2011); sexual harassment has been associated with poor mental health (Celik & Celik, 2007) and musculoskeletal pain (Stock & Tissot, 2012). Organizations suffer consequences as well; worker-on-worker violence has been inversely associated with retention and work satisfaction of nursing staff (Rosenstein, 2002); verbal abuse (Rowe & Sherlock, 2005) and bullying (Kivimaki, Elovainio, & Vahtera, 2000) have been linked to absenteeism. Bullying has also been linked to lower organizational commitment (Demir & Rodwell, 2012) and higher turnover (Hogh, Hoel, & Carneiro, 2011) among hospital workers.

### Applying Research to Practice

Occupational health nurses and hospital administrators should be aware that worker-to-worker violence may be more prevalent among certain professional groups. By focusing on prevalent perpetrator-target dyads, targeted interventions can be developed to reduce Type III workplace violence by promoting healthier work relationships. Potential strategies include encouraging hospital staff to report Type III events, reviewing documented incidents with all staff, and educating hospital workers about the importance of creating a culture of civility and a more positive health care work environment.

Little research to date has investigated characteristics of the perpetrators of Type III events in health care settings. Studying this population may provide valuable insights for researchers and health care stakeholders about points of intervention for the reduction of these events. However, the effectiveness of intervention efforts depends on accurate data. Typically, studies have used a cross-sectional, self-report survey or interview format to collect experiences of Type III workplace violence from the target's perspective (e.g., Demir & Rodwell, 2012; Hogg et al., 2011). Using organizational data from employee-documented incidents allows for a more accurate examination of the perpetrators, and which job relationships may be focal points of conflict.

This study aimed to examine the common demographic and work-related characteristics of Type III perpetrators in a large hospital system using documented violent incident reports linked to the hospital system's human resources database. This approach allowed researchers to examine characteristics of perpetrators (e.g., age, gender, job category, and tenure) and develop dyads based on job categories to show the common work relationships involved in worker-to-worker conflicts.

### Method

The study was conducted at a large, Midwestern hospital system with approximately 15,000 employees and seven hospitals. A central, electronic reporting system enables employees to report adverse work events, including workplace violence, from any hospital system computer. Workplace violence is defined by this hospital system as acts of physical assault, verbal aggression, sexual harassment, intimidation, bullying, and threats (Arnetz et al., 2011b). A zero tolerance policy is in place for acts of workplace violence, and an online learning module aimed at increasing employee awareness of workplace violence and the routines for filing a report is available to staff. Hospital system policy requires that employees report workplace violence events through the electronic reporting system or to a supervisor. If employees report a violent event to their supervisors but not into the electronic system, the responsibility lies with the supervisors to file the electronic report within 24 hours of the current shift. When reporting the incident through the electronic system, the reporter identifies the location, time, and description

of the incident as well as the identity of both the target and perpetrator of the violence. Data analysts, within the hospital system's office of Occupational Health Services (OHS), review and categorize reported violent events by type of violence (IPRC, 2001). The incident reports are linked to the hospital system's human resource database, thus linking the demographics and occupational data (e.g., job category, work unit) of employees involved. This reporting system has been described previously (Arnetz, Aranyos, Ager, & Upfal, 2011a, 2011b).

Descriptive statistics were collected for the entire sample of Type III workplace violence incidents reported via the electronic system between 2010 and 2012. Demographics and occupational information of the perpetrators were examined. Dyads based on the job categories of the perpetrator and target were examined for prevalence. Overall rates of Type III violence per 100 full-time equivalents (FTEs) were calculated using the number of workplace violence events as the numerator and the number of paid productive hours (PPHs) multiplied by three (the number of years) for the denominator. This calculation equaled the rates per 100 FTEs per year. FTEs were equal to PPHs/2,080, the total number of hours worked by an FTE in 1 year. Rate ratios and 95% confidence intervals (CIs) were calculated to enable comparisons by perpetrator job category, gender, age, and job tenure. For rate ratio calculations, incidence rates for each category were compared with the overall mean rate for the sample. CIs were calculated using the Dunnett procedure (Dunnett, 1955) to control Type I error when comparing multiple groups with the average rate for all groups (Arnetz et al., 2011b).

### Results

A total of 415 Type III workplace violence incidents were documented in the electronic system from 2010 to 2012. Only those incident reports in which both the perpetrator and target could be linked to the human resource databases were included in the study. Certain incidents ( $n = 111$ ) could not be linked to this database due to the status of the perpetrator or target, including temporary or contract workers who were not included in the database, or anonymously reported incidents. Most physicians were not employed by the hospital system; they are linked to a separate human resource database so their reports ( $n = 105$ ) could not be included in this study. With these restrictions, a sample of 199 incidents was collected. Within the 199 incident reports, a total of 185 perpetrators were identified, with some (9.2%) repeat offenders (single offenders,  $n = 168$ ; double offenders,  $n = 15$ ; triple offenders,  $n = 2$ ). Of the 185 perpetrators, 180 could be linked to their full demographic profile in the human resource database, with the remaining 5 only linked to their unit and job category. Perpetrators were mostly female (74.4%), worked full-time (60%), had a mean age of 45.2 years and a mean tenure of 11.7 years in the hospital system. Table 1 provides a breakdown of the forms of Type III violence that were reported.

Dyads were formed by examining the job categories listed in the human resource databases for the perpetrator and target of each incident. Nurses (e.g., registered nurses, licensed practical

Table 1. Reported Forms of Violence and Prevalent Perpetrator–Target Dyads by Job Category ( $n = 199$  Reported Incidents)

	Incidents ( $n$ )	Percentage (%)
<b>Forms of Type III violence</b>		
Verbal aggression	148	74.4
Harassment	20	10.1
Bullying	15	7.5
Assault	9	4.5
Threats	7	3.5
<b>Total</b>	<b>199</b>	<b>100</b>
<b>Perpetrator–target dyads</b>		
Nurse-to-nurse	40	21.6
Patient care associate-to-nurse	16	8.6
Allied health professional-to-nurse	13	7.0
Medical resident-to-nurse	12	6.5
Nurse-to-patient care associate	12	6.5
Other <sup>a</sup>	106	49.8
<b>Total</b>	<b>199</b>	<b>100</b>

<sup>a</sup>Only the most prevalent dyads were included in this table. Other dyads ranged between 0% and 4.3% of the total reported incidents.

nurses) were involved as either the perpetrator or target in all five of the most prevalent dyads (Table 1). Incidence rates and rate ratios per 100 FTEs based on demographics and work characteristics of the perpetrators are presented in Table 2. Based on rate ratios (RR), patient care associates (RR = 2.35, 95% CI = [1.36, 4.05]) and nurses (RR = 1.67, 95% CI = [1.18, 2.36]) were significantly more likely to be perpetrators. The least prevalent job categories were aggregated into an “other” category and found to have significantly less likelihood (RR = 0.44, 95% CI = [0.28, 0.68]) of being perpetrators. No increased risks of Type III violence was found based on worker gender, worker age, or job tenure.

## Discussion

The aims of this study were to examine the job characteristics of perpetrators of worker-on-worker violence in a hospital setting and to examine the perpetrator–target dyads commonly involved in the reported incidents. In the 199 analyzed incidents, perpetrators were mostly female, full-time workers and more likely to be patient care associates or nurses. Although rate ratios for Type III violence were highest among patient care associates (RR = 2.35), that work group was only identified in dyads with nurses. Nurses, however, were involved as perpetrators and/or targets in all five of the most commonly identified worker dyads, that is, with other nurses, patient care associates, allied health professionals, and medical residents.

Previous work on Type III workplace violence has also found nurses to be likely perpetrators and targets. Rowe and Sherlock (2005) reported that nurses were more frequent perpetrators of workplace verbal abuse in a teaching hospital than physicians, patients, or patient family members. Hader's (2008) study of nurse leaders found approximately half had been targeted by nurses, physicians, and other health care workers. However, neither of those studies used documented reports of violent incidents. Their data were based on retrospective self-report questionnaires, which asked respondents to select whether they had been targeted by other employees.

Power imbalances (Felblinger, 2008) and work interdependence (Hamblin et al., 2015) may be factors in the aggression between certain job categories (e.g., Acik et al., 2008; Hegney et al., 2006). For instance, patient care associates work as assistants to nurses on their units and must adjust their work based on decisions made by nurses and physicians. Patient care associates may also work across multiple units (Tveito et al., 2014), meaning greater points of contact with other workers and therefore greater chance for conflict. Working in close proximity in a high stress environment, such as caring for acutely ill patients, may contribute to violence between coworkers (Hesketh et al., 2003). Type III workplace violence can also breed its own negative social environments at work. Cultures of incivility (Yang, Caughlin, Gazica, Truxillo, & Spector, 2014) may develop on work units characterized by high

Table 2. Incidence Rates and Rate Ratios of Type III Violence by Perpetrator Job Category, Demographics, and Work Characteristics ( $n = 199$  Reported Incidents)

	Incidents	FTEs <sup>a</sup>	Rate/100 FTEs/year <sup>b</sup>	Rate ratio <sup>c</sup>	95% CI <sup>d</sup>
Job category					
Patient care associate	26	667	1.30	<b>2.35</b>	<b>[1.36, 4.05]</b>
Nurses	80	2,884	0.92	<b>1.67</b>	<b>[1.18, 2.36]</b>
Allied health professional	25	1,160	0.72	1.30	[0.75, 2.26]
Residents/interns/fellows	18	1,067	0.56	1.02	[0.53, 1.93]
Unit clerks	6	283	0.71	1.28	[0.43, 3.77]
Other job categories	44	5,929	0.25	<b>0.45</b>	<b>[0.29, 0.69]</b>
Gender					
Female	151	9,006	0.56	1.01	[0.80, 1.28]
Male	48	2,984	0.54	0.97	[0.68, 1.38]
Age group					
<45 years	63	4,630	0.45	0.82	[0.60, 1.13]
45+ years	136	7,360	0.62	0.87	[0.87, 1.42]
Tenure					
<10 years	118	7,004	0.56	1.02	[0.79, 1.31]
10+ years	81	4,986	0.54	0.98	[0.73, 1.31]
Overall mean rate	<b>199</b>	<b>11,990</b>	<b>0.55</b>	—	—

**Note.** Rate ratios in bold are statistically significant. FTEs = full-time equivalents; CI = confidence interval; PPH = paid productive hour.

<sup>a</sup>FTEs based on data from 2010 to 2012.

<sup>b</sup>Rates were calculated per year using PPH multiplied by 3 years as the denominator.

<sup>c</sup>Rate ratios were calculated by dividing the rate per 100 FTEs by the overall mean rate.

<sup>d</sup>CIs are Dunnett-adjusted.

prevalence of mistreatment between employees and perpetuation of those behaviors. Individual attributes, such as personality, may also contribute to interpersonal conflicts among workers (e.g., negative affectivity; Demir & Rodwell, 2012).

Although the consequences of Type III workplace violence are most often nonphysical and without injury, their impact on the individual worker and the organization may be significant. Organizations should be aware that worker-to-worker violence can have a negative influence on employee retention (Hogh et al., 2011; Rosenstein, 2002), job satisfaction (Rosenstein, 2002), and organizational commitment (Demir & Rodwell, 2012). Violence between workers has also been associated with employee absenteeism (Kivimäki et al., 2000; Rowe & Sherlock, 2005), stress (Rowe & Sherlock, 2005), mental health problems (Celik & Celik, 2007), and musculoskeletal pain (Stock & Tissot, 2012). In a recent study of documented incidents of Type III workplace violence within a hospital system, some employees were overwhelmed by

the mistreatment perpetrated by coworkers to the point of leaving their jobs. In one quote, a nurse claimed, “I just can’t take this place anymore” (Hamblin et al., 2015, p. 7), and left her work station with a patient unattended.

### Strengths and Limitations

A strength of this study was the use of documented incidents of Type III workplace violence, rather than retrospective self-report questionnaires that are subject to recall bias. However, a limitation of this study was the inability to link the full data set of Type III documented incidents to the human resources database. A total of 415 incidents were reported, but only 199 included perpetrators that could be linked to their demographic profile via the hospital system’s human resources database. Physicians were not employed by the hospital system, so had their own human resources department. They were perpetrators of 105 incidents, but could not be included in the current analysis due to the lack

of demographic data. The remaining excluded incidents ( $n = 111$ ) had no linking demographic data as well; temporary and contract workers were not included in the primary human resources database. In addition, some employees chose to report anonymously or not disclose their perpetrators. Underreporting of workplace violence is a well-recognized problem in health care (Arnetz et al., 2015) and may have played a role in the current study. More covert cases of Type III workplace violence may go unrecognized or unreported due to the nature of more subtle behaviors. Researchers and stakeholders can only work with available data, such as documented incident reports. Therefore, reporting is essential in a system such as the one described; the hospital system had a zero tolerance policy for these behaviors with clear expectations for employees to report the incidents.

### Implications for Professional Practice

Identification of perpetrator characteristics does not reveal the reasons behind Type III workplace violence. By analyzing documented incidents over a longer time span (e.g., 3 years), researchers could calculate rates of these events. Calculation of rates allowed for comparison across multiple job categories and demographic variables despite wide variation in the number of employees per category. Rate ratios and CIs provided estimates of the likelihood that a perpetrator belonged to a certain demographic group or job category, identifying who may be at greater risk. These results do not point directly to the cause of these incidents, but rather give a starting point for discovering the catalysts of violence between employees.

Further examination of the potential sources of these violent events between hospital coworkers is still warranted. Hospitals and other health care settings can be sites of high stress and fast-paced environments that require interdependence and close communication. Opportunities for miscommunication and reactions to work stress abound, and may contribute in part to the conflict across highly interdependent job categories. To maintain professional practice and employee well-being, health care organizations must prioritize work relationships and reduce Type III workplace violence. Using documented incidents of these events provides valuable insights into possible points of intervention among staff.

Type III workplace violence should be a priority for hospital system stakeholders and unit supervisors, and reporting should be strongly encouraged. At the organizational level, a zero tolerance policy for workplace violence plays an important role in establishing behavioral guidelines for employees and consequences for breaching those guidelines (Dimarino, 2011). However, zero tolerance policies are only effective if incidents can be used as learning experiences and contribute to the empowerment and education of staff members following these events (Longo & Sherman, 2007; Rosenstein & O'Daniel, 2008). At the unit level, supervisors and staff members should regularly review incidents reported in their units, discuss unacceptable behaviors, and plan for prevention of these behaviors in the future (Arnetz & Arnetz, 2000; Longo & Sherman, 2007). A second unit-level strategy is

to continually educate employees about forms of Type III workplace violence that occur and the negative effects these behaviors have on employees. Occupational health professionals and other health care workers must be aware of the various forms of Type III workplace violence, particularly those that are more covert in nature and therefore may be overlooked. Third, unit supervisors should promote a culture of civility and empowerment among staff members (Longo & Sherman, 2007; Osatuke, Moore, Ward, Dyrenforth, & Belton, 2009). Using these and other relevant strategies, hospitals may prevent future worker-to-worker violence, promote more acceptable treatment among coworkers, and create a safer health care work environment.

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