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**MEASUREMENT OF VIOLENCE IN THE EMERGENCY
DEPARTMENT AND ASSESSMENT OF A STRATEGY TO
REDUCE HEALTH CARE WORKER RISK**

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Measurement of Violence in the Emergency Department and Assessment of a Strategy to Reduce Health Care Worker Risk

Issue: The impact of violence against health care workers in an emergency department setting.
Agency: St. Paul's Hospital
Representative: Chris Fernandes
Funding: \$39,675

Context: Hospital emergency departments are recognized as a particularly violent environment for health care workers. However the definitions of violence vary, and the incidence of severe episodes and their effect on workers is unknown.

Objective: To examine the perceived levels of violence in an emergency department and obtain from personnel a definition of violence, the degree of stress experienced following a violent incident, and suggested coping and prevention methods. The study would then evaluate the effect of the Prevention Management of Aggressive Behaviour Program (PMABP) on reducing the incidence of violence and improving workers' coping abilities within an emergency department setting.

Design: The study was divided into two phases. Phase one was a retrospective written survey of all 1996 emergency department employees. Phase two used a baseline survey delivered to all emergency department personnel at the end of each clinical shift, every second day, over a two-week period. The PMABP was then delivered to staff over a five-week period. A violence survey was distributed at three-month and six-month intervals following the training period. Each survey was distributed over a two-week period similar to the baseline survey.

Setting: St. Paul's Hospital, an urban inner-city tertiary care centre in Vancouver.

Subjects: Phase one involved 163 emergency department employees from 1996. Phase two included all emergency department personnel working during each of the three survey periods. A total of 729 phase two surveys were completed.

Main Outcome Measures: The phase one survey collected demographic information, personal definitions of violence, the reported frequency of violent incidents and the degree of stress experienced. It also solicited suggestions for preventing violence. Phase two recorded characteristics and frequency of violent

events, the professions of staff who experienced the events, the lost time due to violence the worker's perception of safety.

Results: Phase one – workers' definitions of violence included not only physical and verbal abuse, but also witnessing these types of events. The majority of workers had experienced violent incidents. Sixty-eight percent reported an increased frequency of violence over time, while 60 percent reported increased severity. It was evident that the under-reporting of violent incidences occurred particularly for verbal abuse or when the worker sustained no physical injury. Violence in the workplace was reported as having had a detrimental effect on workers' job satisfaction and performance. Seventy-three percent were afraid of patients as a result of violence, and 49 percent hid their identities from patients, while 74 percent had reduced job satisfaction as a result. Twenty-seven percent took days off due to violence. Sixty-seven percent reported that they left the job at least partly as a result of violence. Phase two – an initial reduction in violent events was reported in the early post intervention survey, however an increase in violent events was reported at the late post intervention survey. Security personnel experienced violent incidences most frequently, followed by nurses, social workers and physicians. Seven individuals reported losing more than two hours of work due to a violent incident.

Conclusion: Violence in the emergency department is frequent and has substantial effect on staff well being and job satisfaction. Further investigation into strategies to support staff at risk is required.

Violence in the Emergency Department:
A Survey of Healthcare Workers

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Abstract:

Background: Violence in the workplace is an ill-defined and underreported concern for health care workers. The objectives of this study were (1) To examine perceived levels of violence in the emergency department; (2) To obtain health care workers' definitions of violence; (3) To determine the impact of violence on health care workers; and (4) To examine coping and potential preventative strategies.

Methods: A retrospective cross-sectional written survey of all emergency department employees working in 1996 at an urban inner-city tertiary care centre. All respondents provided demographic information, personal definitions of violence, perceptions of its severity, degree of stress, and estimates of the number of encounters in one year with violence in the workplace. We examined the effects of violence on job performance and job satisfaction, as well as reviewing coping and potential preventative strategies.

Results: 106 of 163 staff (65%) completed the survey. 68% (70/103) reported an increased frequency of violence over time, while 60% (64/106) reported increased severity. Most staff felt that violence included witnessed verbal abuse and witnessed physical threats/assaults. 57% (60/105) were assaulted in 1996. Forty-nine percent (51/105) reported deleterious job performance for the rest of the shift or the rest of the week. Seventy-three percent (77/105) were afraid of patients as a result of violence, and 49% (49/100) hid their identities from patients, while 74% (78/106) had reduced job satisfaction as a result. Twenty-seven percent (27/101) took days off due to violence. 12/18 (67%) staff reported that they left the job at least partly as a result of violence. Twenty-four hour security and a workshop on violence were felt to be the most useful

potential preventative strategies. Physical exercise, sleep, and the company of family and friends were the most commonly reported coping strategies.

Interpretation: Violence in the workplace is frequent, and significantly affects staff well-being. If the frequency of violent incidents is reduced, there could be increased job satisfaction and job retention, reduced fear, and improved staff-patient relationships.

Introduction:

Violence in the workplace is a well-recognized concern for health care workers (1-3), with most perpetrated by patients, and, to a lesser extent, by visitors (4-7). ED staff and managers perceive substance abuse and psychiatric disorders as some of the main contributing factors to violence (2, 7, 8).

Despite the Emergency Department (ED) being recognized as a particularly violent environment (3-5, 9), the true incidence of significant violent episodes is unknown, since violence in ED settings is underreported (2, 8, 10, 11). In addition, violence definitions vary, with verbal abuse often not included (6) and yet, most studies consistently show that verbal abuse, threats, and assaults are common (4, 7, 8). For instance, in a survey of ED nurses in Pennsylvania hospitals, nearly all reported verbal abuse (97%) and physical threats (94%), and a majority (66%) had been physically assaulted (6).

Violent incidents have a significant long-lasting impact on health care workers. Lower morale, anger, loss of confidence, burnout, time off work, disability, and change in job status have been reported (6, 8, 12, 13). The effects may be underestimated, since each incident impacts a number of staff.

This survey of healthcare workers in a tertiary care, urban ED was designed (1) to examine perceived levels of violence in the emergency department and health care workers' definitions of violence. (2) to examine the self-reported impact of violence on health care workers. (3) to examine self-reported coping mechanisms. (4) to report potential preventative strategies.

Methods:

This study was conducted at St. Paul's hospital, an urban hospital in downtown Vancouver, with 55,000 ED visits annually. The ED is staffed 24 hours a day by certified emergency physicians, with a complement of rotating medical students and residents. Twenty-four hour on-site staff include 10-12 nurses, one emergency psychiatry nurse, a social worker, one unit coordinator, 2-3 admitting clerks, and protection services personnel.

After approval from the Ethics committee for Human Experimentation at St. Paul's Hospital, a cross-sectional retrospective survey was distributed to all 163 emergency department staff employed during 1996. Surveys were distributed in person, and by mail if the staff no longer worked at the hospital. Surveys were returned by mail, with all information anonymous and confidential.

Survey questions probed the respondents' definitions of violence, their perception of its severity and associated degree of stress (based on a scale of 1 to 5, from "Not severe" to "Extremely severe"), the number of violent encounters in the previous year, the frequency of reporting, and the effect of violence on job performance, fear of patients, job satisfaction, and career choice. Finally, the staff's coping mechanisms, and value of preventative strategies were assessed.

The data was double entered into an Excel98 spreadsheet and analyzed using SAS 6.12 and Splus 3.4 (Mathisoft Inc.). Data was summarized with medians for skewed continuous and ordinal data, means for normally distributed continuous data and proportions for categorical data.

Results: One hundred and six staff (65% return rate) responded to the survey: 47 nurses, 13 physicians, 19 protection services personnel, 2 ward aides, 8 admitting clerks, 4 unit coordinators, 1 porter, 5 licensed practical nurses, and 7 social workers. Mean age was 37 years, 63 were females and 43 males. They had worked an average of 9.2 years in EDs, with 7.1 years at St. Paul's Hospital ED. There were 58 full-time, 27 part-time, and 21 casual workers.

When asked how they defined violence against themselves (see Table 1), 76% (76/100) included witnessed verbal abuse, and 86% (86/100) included witnessed physical threats or assault. Most respondents also identify experiencing verbal abuse (92% or 94/102), physical threats (97% or 99/102), and physical assault (92% or 93/101) as violence against themselves. The remainder of respondents in each category did not identify the particular experience as violence.

Significantly, 55% (57/103) reported experiencing physical assault as the most severe violence against themselves in 1996, followed by witnessing physical threat/assault (21% or 22/103), experiencing verbal abuse (12% or 12/103), and physical threat (10% or 10/103). The frequency of each form of violence is listed in Table 2.

The percentage of respondents rating the degree of stress from each manifestation of violence as moderately to extremely severe was 30% (31/103) for witnessed verbal abuse, 82% (84/103) for witnessed physical threats/assault, 55% (57/103) for verbal abuse, 81% (81/103) for physical threats, and 96% (98/103) for physical assault.

Figure 1 relates occupation to the most severe experienced violence. Protection services personnel and nurses were the two groups with the highest number of respondents experiencing violence.

68% (70/103) reported an increased frequency of violence over time. 60% (64/106) reported an increased severity of violence over time.

66% (68/103) of staff reported that in 1996 verbal abuse was never or rarely reported. Of the 70 respondents who were physically assaulted without injury, 38 (54%) never or rarely reported it. Of the 48 respondents who were physically assaulted with injury, 21 (44%) never or rarely reported it. Most staff felt that violence-related incidents are underreported (91% or 95/104).

38% (39/102) considered a job outside the health care system due to violence on the job. Eighteen staff no longer worked in the ED. Of these, 12/18 staff (67%) reported that they left the job at least partly as a result of violence. 25% (26/105) reported deleterious job performance for the rest of the shift, 24% (24/105) for the rest of the week, and 19% (20/105) for a longer period. 27% (27/101) took days off work due to violence. As a result of violence in the ED, 73% (77/105) were afraid of patients—24% (25/105) were afraid of only the violent patient, 35% (37/105) of patients they perceived to have “the potential for being violent,” and 14% (15/105) of patients in general. 49% (49/100) hid their identities from patients due to fear. Violence in the ED interfered with job satisfaction for 74% (78/106).

After a violent incident, respondents mainly sought support from colleagues versus support mechanisms already in place such as the manager or critical incident stress debriefing.

95% (100/105) and 68% (70/103) of the staff respectively rated twenty-four hour protection services coverage and a workshop on prevention strategies as the most useful

interventions. Physical exercise, sleep, and the company of family and friends were the most frequent coping strategies.

Discussion:

Verbal and physical violence in the ED is frequent, underreported, and has a negative influence on staff working conditions. One respondent stated, “Not only has the violence increased, but people seem less inhibited about acting violently. This lack of an internal braking system crosses all socioeconomic groups.”

The frequency of contact with violence is very high. Eighty-four percent of staff report witnessing verbal abuse at least once per shift. Over half the staff have been physically assaulted in a given year. Over 90 percent have been verbally abused more than once a week. More than 20 percent recall physical threats over 20 times in a year. It appears that ED staff work in an environment where they are constantly exposed to situations with aggressive individuals.

Protection services personnel and nurses were the most frequent victims of violence. The data on nurses is consistent with previous literature (5). However, there has been little focus previously on security officers, suggesting that future programs need to strengthen training for these staff.

The increase in frequency and severity of violence is not surprising, in view of the increased contact with patients at high-risk for initiating violence, such as drug abusers, alcoholics, the mentally ill, and gang members (2, 4). Factors unique to the ED (long waiting times, high-stress illness, noisy environment, and a non-selective 24-hour open-door policy) (6) might well predispose this setting to violence. The experience of violence contributes to the sense of victimization among staff (14). The resultant effects are significant in their cost and patient care implications.

Staff use a variety of coping mechanisms. Most staff sought support from colleagues rather than any official debriefing. The fact that colleague support rated highly both as a coping mechanism and in providing tension relief suggests that avenues of support to be explored include acquisition of debriefing skills by ED staff, and a regular debriefing format triggered by witnessed violence.

There are a number of limitations to this study. First, there may be an inflated reporting of violence due to recall bias, the magnitude of which will be determined by comparing this data with that from a study currently underway. Second, any conclusions from this survey may not be applicable to other healthcare systems. Third, there may be a nonresponse bias. The 57 staff who did not respond may have been more or less likely to experience violence. Fourth, this data may be unique to our ED.

Nonetheless, this study raises topics for further research, such as comparing the actual incidence and nature of violence to the perception of the survey respondents; assessing violence prevention programs and measures in the ED; examining the best strategies available to recognize potentially violent situations; and finally, testing strategies to support ED victims of violence. Would the unique characteristics of the ED require changes in established/popular programs? (15)

The survey responses provide a greater understanding of ED staff definitions of violence and its effects. This is an issue which, if addressed, may have a positive effect on staff well-being, with improved job satisfaction and job retention, reduced fear, and better staff-patient relationships.

References:

1. Murray MG, Snyder JC: When staff are assaulted. A nursing consultation support service. *Journal of Psychosocial Nursing* 1991;29:24-29.
2. Pane GA, Winiarski AM, Salness KA: Aggression directed toward emergency department staff at a university teaching hospital. *Ann Emerg Med* 1991;20:283-286.
3. Rose M: A survey of violence toward nursing staff in one large Irish Accident and Emergency Department. *J Emerg Nurs* 1997;23:214-219.
4. Lavoie FW, Carter GL, Danzl DF, Berg RL: Emergency department violence in United States teaching hospitals. *Ann Emerg Med* 1988;17:1227-1233.
5. Stultz MS: Crime in hospitals 1986-1991--the latest IAHSS surveys. *Journal of Healthcare Protection Management* 1993;9:1-25.
6. Mahoney BS: The extent, nature, and response to victimization of emergency nurses in Pennsylvania. *Journal of Emergency Nursing* 1991;17:282-294.
7. Keep N, Glibert P, 1990-1991 California ENA Government Affairs Committee: California Emergency Nurses Association's informal survey of violence in California emergency departments. *Journal of Emergency Nursing* 1992;18:433-439.
8. Levin PF, Hewitt JB, Misner ST: Insights of nurses about assault in hospital-based emergency departments. *Image: Journal of Nursing Scholarship* 1998;30:249-254.
9. Clairmont S. Emergency! *The Medical Post* November 18, 1997 :6.

10. Hewitt JB, Levin PF: Violence in the workplace. *Annual Review of Nursing Research* 1997;15:81-99.
11. Lion JR, Snyder W, Merrill GL: Underreporting of assaults on staff in a state hospital. *Hospital Community Psychiatry* 1981;32:497-498.
12. Liss GM, McCaskell L: Injuries due to violence: Workers' compensation claims among nurses in Ontario. *AAOHN Journal* 192;40:229-236.
13. Sullivan C, Yuan C: Workplace assaults on minority health and mental health care workers. *Am J Public Health* 1994;85:1011-1014.
14. Rees C, Lehane M: Witnessing violence to staff: a study of nurses' experiences. *Nursing Standard* 1996;11:45-47.
15. Nijman HLI, Merckelback HLGJ, Allertz WFF, a Campo J: Prevention of aggressive incidents on a closed psychiatric ward. *Psychiatric Services* 1997;48:694-698.

Table 1. Definition of violence

You define violence against yourself as an intense reaction from a patient/visitor/relative that includes:

- a. Hearing an individual shouting verbal abuse (screaming, calling names, etc.) at another staff.
- b. Witnessing physical threat and/or assault (raising fists, attempts to bite, kick, punch, etc.) towards another staff.
- c. Experiencing verbal abuse (e.g. screaming at you, calling you names, verbal threats).
- d. Receiving physical threat/intimidation (e.g. raising of fists, attempts to kick, or bite)
- e. Getting physically assaulted (liquid thrown, slapping, kicking, etc.)
- f. Other (please specify)

Table 2. During 1996, approximately how many times have you been...?

	Physically assaulted	Physically threatened	Witness to physical threat/assault	Verbal abuse*	Witness to verbal abuse*
Never occurred	45 (43%)**	11 (11%)	0	6 (6%)	2 (2%)
<5 times	39 (37%)	41 (39%)	28 (27%)	4 (4%)	1(1%)
6-10	6 (6%)	19 (18%)	22 (21%)	25 (24%)	13 (13%)
11-20	5 (5%)	10 (10%)	14 (13%)	33 (32%)	36 (36%)
>20	10 (10%)	24 (23%)	41 (39%)	35 (34%)	49 (49%)

*Verbal abuse and witnessed verbal abuse are categorized in descending order as follows: <1 per month, 1 per month, 1 per week, 1 per shift, and >1 per shift.

**Column totals vary due to missing responses on specific questions.