

ANNUAL REPORT
TECHNICAL ADVISORY GROUP ON VIOLENCE PREVENTION
June 2004

Background

In September, 2000, the Acting Under Secretary for Health appointed a national task force to review violence prevention policies and programs, identify weaknesses, and recommend solutions. Annual reports and semi-annual reports to the National Leadership Board (NLB) Human Resources (HR) Committee (NLB HRC) are available on the 13/Public Health website at <http://vaww.vhaco.va.gov/pubhealth/OSHvp/index.htm>. The Technical Advisory Group on Violence Prevention met June to review the progress of the last year, evaluate existing program elements, and make plans for 2005. The current membership is listed in Attachment A

1. Review of Existing Programs

a. IMPLEMENTATION AND OPERATIONS

A major reason for the institutions of the Technical Advisory Group was the lack of coordination between written policies and implementation. Discussion among the group suggested the importance of remembering the original function of performance measures (PM), which was “to force people not on board to do the right thing” so that PMs should be structured in very specific ways. If the TAG cares about education, and feels that’s not being implemented appropriately, the PMs should explicitly address educational implementation.

2004 Network Director Performance Monitor

The 2004 Network Director Performance Monitor had two main components. The first was implementation of the Patient Record Flagging software with the necessary infrastructure. The PRF software has been implemented everywhere. A Disruptive Behavior Committee (DBC) under senior clinical leadership was established in each facility, with names and committee membership defined in a data call from 10N at the end of the second quarter, FY2004. A training tape was constructed and copies mailed to each facility on the implementation of the Disruptive Behavior Committee. That tape was mounted on the EES CDN website (<http://vaww.vakncdn.lrn.va.gov/>). Drs Dan McDonald and David Drummond developed a threat assessment curriculum, presented in monthly national telephone calls beginning in January 2004. The minutes of those calls are available at (http://vaww.ceosh.med.va.gov/SpecialReports/SpecialReports_Listings.htm#VIOLENCE).

The second element in the performance monitor requested reporting on the progress in training employees at high risk for violence. Results of the 2001 national survey

identified nursing, mental health, emergency departments, and geriatrics as being at high risk. Overall, 51% of individuals defined in those categories have been trained. There was a suggestion that some, like the administrative clerks doing patient intake, might not be trained and be at excess risk.

During implementation, one major weakness has been noted that requires correction. Apparently none of the facilities upgraded the local flags, from local flagging systems, into the national flagging system but are waiting for the biennial review to accomplish this. Facilities should review all existing flags and determine whether these should be upgraded and listed in the national PRF. The Committee agreed to request that the Chief Operating Officer send out a DUSHOM item requesting completion.

b. DATA

Database/violence registry

During the initial review of VHA data, policies, and procedures on violence prevention, there was widespread agreement that a registry would be useful. Peer-reviewed literature suggested that only one in fifteen incidents was captured in both police and injury reporting systems, so that reliance on a single system would always lead to massive under-reporting. A proposal was made to the SEC to fund the development of such a registry, but the proposal was turned down.

Work with OSLE identified overlapping categories between the assault definitions used in the scientific literature, Federal law enforcement, and VA statutory language. A cross-walk was developed that allows the construction of parallel reports from the national injury reporting system (ASISTS) and the newly-developed OSLE system (Attachment B). At the very least, the system should allow the distinction of types I through IV of perpetrators (patients, co-workers, family members, criminal activity) and needs five categories. The driver for the incident should be reported systematically, as in the attachment.

This was presented to the TAG as a potential solution, as with some programming support, such an annual report could be generated. The TAG agreed on the conclusions and suggestions and recommended that VHA request OSLE to incorporate similar categories into their reporting system.

VHA Violence data

A formal report on violence across VHA facilities addressing physical assault (“aggravated assault”, “assault with a weapon”, “assault with felony intent” by OSLE/ criteria) in press at the Journal of Occupational and Environmental Medicine (attachment C). VHA plans to include these questions in a future version of the national survey, after several years of performance monitors, documented training in high risk areas, and broad-based interventions.

VAMP

Drs Robert Zeiss and Marilyn Lanza presented an update of the Violence Mitigation and Assessment Project. Phase I, a cross-sectional questionnaire study, has been completed in two of the three facilities (Attachment: VAMP). Rates of assault and verbal abuse were almost identical to those identified in the 2001 survey. Strikingly, different personal factors were associated with increased rates of . Particularly coping skills demonstrated a strong relationship.

In general, relationships were strongly between “verbal abuse,” as defined in the national survey (“simple assault”) and work organization and psychological predictors than for “assault,” as defined in the national survey (aggravated assault, etc).

c. EDUCATION AND TRAINING PROGRAM EVALUATION

In discussions before the meeting, three items were identified that appeared worth formally reviewing, as below. A broader discussion addressed certification, facility training penetration and effectiveness, and overall program effectiveness.

At present the Master Trainers are “certified” by EES/PMDB without formal criteria. One approach to improvement might be the development of a formal accreditation process. A second level of “certification”, currently pursued in facilities like Oklahoma City, is the formal certification and documentation of each individual’s successful completion of the course with a visible marker on a name badge. A third, at the institutional level, might be the use of drills and exercises, as for other emergencies, using violent incidents. Finally, the broader implementation consistency of PMDB may warrant review and understanding. This can be achieved only by on-sight reviews.

There was substantial agreement that evaluation should happen on two levels. First, the effectiveness at the individual level was needed. This should happen both through a follow-up in the national survey and through follow-up questionnaires, as is frequently done on EES projects. Attachment D contains draft model questions and topics. Second, evaluation should occur at the facility level. This will require a substantial expansion of the NIOSH project.

PMDB

Dr Dan McDonald, Program Manager for PMDB, presented an update, focusing on several new tools, an implementation weakness, and an evaluation request.

Beginning with the December 2002 Master Trainer conference, PMDB has expanded its scope to consider aggression and hostility as one possible contributor to assaults and verbal abuse. Jim Scaringi was asked to present the results of an EES/NSF funded project on group work at the facility level identifying problems and solutions to inter-employee hostility. New products developed based on that work included four training tapes using vignettes. These are available for use by the trainers.

The PMDB program is running into problems in the field because of variable support from VISNs. Only 12 of 21 VISNs have master trainers, and several VISNs are

supporting those VISNs unable to reinforce training or train new facilitators. The 2002 performance monitor explicitly identified the need to develop master trainers from the newly trained facility trainers. VISNs must become self-sufficient, without parasitizing other VISNS.

An advisory group of PMDB Master Trainers will be meeting in July 2004 to a competency based certification program for PMDB master trainers. Target implementation will be October 2004. The PMDB master trainer advisory group will also examine and develop guidance for facility trainers regarding implementation of specific training elements in local facilities. This group will also discuss elements of a civility module (see HR Request / water cooler logic below).

NIOSH/EES/OHP Evaluation

In 2003, EES and OHP/136 each contributed \$50,000 to support NIOSH in an evaluation of PMDB implementation. An evaluation team consisted of both NIOSH and VHA content experts. They visited five facilities. A parallel, planned set of phone calls to a set of HR, safety, union, and clinical staff to query program implementation didn't happen because of logistics constraints. The NIOSH report exists in draft form and is under revisions.

Instrumented Mannequin

Ron Kempinski presented the development of an instrumented training mannequin. In the course of the last two years, VHA CO was made aware of several training injuries. As previously, these appeared generally related to inappropriate activities, in "violation" of PMDB principles. Still, their persistence and recurrence suggested the utility of expanding training modalities. John Lloyd, PhD, bioengineer at the Tampa Patient Safety Center of Inquiry, is leading the development of a an instrumented training mannequin. A CRADA was signed with the manufacturer of a simple dummy. A small technical advisory group identified training elements needed for various personal safety skills, self-defense, and immobilization holds. The mannequin is currently being fitted with joints and motors to power joist down to the finger level, with sensors to provide feed-back, and a gyroscope to maintain upright posture. These will allow the mannequin to stand, serve as a therapeutic containment trainer, and react to trainees. The mannequin sensors will allow down-loading of force to compare and evaluate trainees' progress over time. Development completion was anticipated in December of 2004. With some of the recent perceived needed upgrades (gyroscope, etc), completion may be delayed. A TAG meeting is scheduled for June 2004.

HR Request/Education

At the most recent HR NLB meeting, the committee discussed the results of its water-cooler logic assessment suggesting that some for of national civility training might be useful. The TAG discussed expanding the current high-risk employee focused education more broadly to address awareness, de-escalation, and personal safety skills and, as new elements targeted to the HR request, respect and civility. Dan McDonald agreed to work out content with the Master Trainers at their July meeting. A set of training modalities (web-based, video, CDM), in several blocks, could be developed but probably not

become available until late fall 2004. This might be too late to make it a performance monitor in 2005 but would still let the HR Committee work with it. That web-based program would be unable to address hands-on training needs such as personal safety skills. It may be able to address de-escalation / verbal skills.

DISCUSSIONS AND PLANS

1. Strategic Planning

Labor partners expressed substantial concern about educational program effectiveness. A lengthy discussion identified that this concern existed on two levels, for many participants. First, although over 20 violence prevention products are available, no formal evaluations of needed elements exist. PMDB has undergone changes since its initial development in the late 1970s. Still, it is not at all clear that the current program elements are necessary or that other program elements are not missing.

Facilities that have implemented other programs besides PMDB's "therapeutic containment" strategy, should not teach therapeutic containment strategies to employees to prevent misunderstandings and misplaced intervention.

Equally importantly, PMDB appears to be implemented differently in different facilities. Teaching and training specific elements may vary, in part because of the "drift" of skills. In addition, some program elements are not being implemented at specific facilities. Evaluation at the facility and individual level represent the next level of needed program development.

2. Performance Monitor

The National Leadership Board (NLB) Human Resources (HR) Committee requested that this group consider developing a performance tool on civility and respect, as described above.

A second possible monitor focuses on DBC activities. One approach is to request central transmission of the minutes, central aggregate evaluation, and subsequent facility-level strategic activities on systems prevention focus.

ATTACHMENT A: Membership

<u>Traveler Last Name</u>	<u>First Name</u>	<u>Attending</u>	<u>Skill</u>	<u>Location</u>
Ashby	John	Yes	Engineer	North Texas VHCS
Belton	Linda	Yes	VISN Director Director, Safety and Technical Support	VISN 11 VHA CO DUSHOM /10N
Bierenbaum	Arnie	No		VHA CO Facilities Management/ 183A
Colagrande	Daniel	No	Architect	Buffalo, NW
Converso	Ann	Yes	Nursing / ANA	VA CO
Denny	Frank	Yes	Industrial Hygienist	DASHO NCPS
DeRosier	Joe	No	Safety Engineer	
Drake	Audrey	No: Will try to send alternate	Nursing Chief Medical Officer	VHA CO 108 VISN 2
Flesh	Larry	Yes	Executive Assistant	NCA CO
Fritz	Anju	Yes		
Graves	Nina	Yes: No travel	Inspector Nursing Assistant / SEIU	VA CO OSLE Buffalo
Jones	Kimberly	No	Nurse	
Lanza	Marilyn	Yes: No travel, will attend by phone	Researcher	Bedford, Ma
Lehmann	Larry	Yes	Psychiatry	VHA CO Patient Care Services / Mental Health
Long	Jennifer	No	?	VBA
Manske	Jill	No	Social Work	VHA CO Patient Care Services 11C
McDonald	Daniel	Yes	Psychologist	EES Birmingham
Millas	Barbara	Yes	Information technology	VHA Health Information Program
Moorhead	Kathy	Yes	Food service	SEIU
Payton	Lorraine	Yes	Nursing	NFFE

Pitts	Ellen	No: No longer POC for NAGE	N/A	
Reynolds	Ron	Yes	National Safety Rep	AFGE
Reynolds	Ronald	Yes	National Safety Rep	NAGE
Ruzek	Joseph	No	Psychologist VISN violence prevention coordinator	National Center for PTSD VISN 11
Smith	Jim	Yes		
Stemmons	Jacqueline	Yes	Social worker	NFFE
Tollett	Jane	Yes	Social Work	VHA CO Residential Rehabilitation Program
Zeiss	Robert	Yes	Psychology Researcher	Palo Alto VAMC

ATTACHMENT B: Data recording elements

If answer to Nature of injury” is assault, the following menus pop up

1. What happened? Some
 - * Threw something at you that could hurt you
 - * Pushed, grabbed, slapped, hit, kicked you, etc.
 - * Hit you with an object
 - * Beat you up
 - * Threatened you with a gun, knife,, or other weapon
 - * Used gun, knife, or other weapon on you
 - * Raped you or attempted to rape you

2. Please describe the person who did this to you (perpetrator)
 - * Supervisor or manager?
 - * Someone who reports to you
 - * Other employee
 - * Customer
 - * Patient
 - * Family member of patient
 - * Visitor
 - * Spouse or significant other
 - * Other relative or friend
 - * Other non-employee

3. Please describe the cause the incident (cause of incident)
 - * Patient interaction
 - * Dispute about work
 - * Personal relationship
 - * Theft or robbery
 - * Other

ATTACHMENT C: Violence paper

Violence in health care facilities: lessons from the Veterans Health Administration

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Keywords: violence, health care, occupational, assaults, prevention

ABSTRACT

Goals: The authors examined assault frequency and risk factors in healthcare.

Methods: The authors conducted a cross-sectional questionnaire survey in 142 hospitals. Analyses are presented at the level of the individual and aggregated by facility

Main results: 13% of employees described at least one assault in the last year; the proportion assaulted per facility ranged from 1 to 26%. Patients were the most common assaulters. Working in geriatrics, mental health, and rehabilitation or in nursing represented a high-risk for assault. Hours of work and work patterns represented major risk factors for assault, as were higher measures of organizational stress. The penetration of training in alternate dispute resolution strategies was associated with lower rates of assaults

Conclusions: Although work in health care is associated with high rates of assaults, closer scrutiny suggests specific possible intervention strategies.

INTRODUCTION

Reports from surveillance programs (1, 2) and health care systems (3,4) have consistently identified patient assaults as a major problem in health care settings. The Bureau of Labor Statistics (5) identified that over 50% of all assaults and 10% of all back injuries in the workplace reported to the Department of Labor resulted from patient attacks on providers. The National Crime Victimization survey suggests that nurses, mental health workers, and police have, respectively, an approximately two-, four, and five-fold risk of occupationally-related assault over the population at large (6). Despite these data, under-reporting may minimize the dramatic importance of violence. Lanza et al. (3) identified under-reporting rates of 80%. A comparison of reporting systems suggested a 15-fold under-reporting (2). A substantial proportion of assaults results from “repeat assaulters” (7,8,9,10)

The Veterans Health Administration (VHA) has conducted systematic training and education in prevention and management of disruptive behaviors since the 1980s (11). These efforts have evolved from training consisting of a single day in the early 1980s to a two-day/16 hour block course, ideally attended by all individuals in a facility or at least in high-risk groups. This training is provided by local trainers, trained by a network of master trainers who attend an annual conference and whose skills are reviewed systematically, resulting in subsequent ‘certification’. The training consists of four modules: an overview/introduction to violence in the work place, personal safety skills, de-escalation, and therapeutic containment. The latter three require hands-on training and practice.

In 1999, the VHA formed a National Taskforce on Violence, with representation from important VHA organizational units, labor partners, and outside agencies. That group reviewed violence within VHA, identified policy weaknesses and potential solutions, and made recommendations that included conducting a national survey. The goal was to identify the actual prevalence, perpetrators, causes of incidents, and facility-level characteristics that might guide intervention strategies. The authors present the results here publicly for the following reasons.

- VHA is the largest integrated health care delivery system in North America and may provide representative data to guide other systems through the same issues
- No data have explored actual assault rates in health care environments in a large system to provide estimates of rates in the US
- This survey provides an opportunity guide strategic planning by defining rates of assault and characterizing higher- and lower risk areas in hospitals and work assignment
- The survey provides an opportunity to identify facility-level characteristics associated with higher and lower rates of assaults; these may be important in developing intervention strategies

METHODS

Instrument

The overall survey for the employee survey was assembled using previously developed items from a variety of tools. An organizational development survey (Organizational Assessment Survey “OAS”, developed by the Office of Personnel Management (12), provided 78 items that factor analysis identified as important indicators of employee satisfaction and organizational effectiveness. Factor analysis grouped these items into

14 constructs . 14 additional items measuring constructs related to job stress (job demands, job control, role conflict, social support, and safety climate) were derived from an instrument provided by the National Institute for Occupational Safety and Health (13, 14). Questions from the Bureau of Labor Statistics addressed hours of work and shift work. Frequency of work organization characteristics, such as mandatory overtime, switching shifts, and floating, were obtained from a survey on work stress developed by the Federal Aviation Administration. Finally, questions were included from the U.S. Postal Worker Survey (15) assaults (seven items), assessing the number of incidents experienced in the last year. Questions from the National Crime Victimization Survey (6) addressed perception of safety and physical infrastructure characteristics for violence prevention (key cards, guards, controlled entrance). The analysis reduced the original 7 response categories for assault frequency in the last year to 5: none, one, two to five, six to ten, and more than ten. These categories also served to examine risk factors for assaults. The survey inquired in greater detail about the perpetrator and cause of the most recent incident. A copy of the instrument is available from the authors.

Population

All full- and part-time VHA employees were eligible to participate. Contract employees, such as those who worked off-site, house officers who are not paid through the VHA payroll system, and *per-diem* nurses, who were paid through an agency, were not included.

Survey conduct

The violence survey was part of a broader national survey (Warren and Hodgson: Work Organization, Employee Health, and Quality/Safety of Patient Care, American Public Health Association 2002 Abstract #46578). A survey coordinator was identified at every facility. That survey coordinator received electronic posters for dissemination, a series of emails served as weekly reminders, and announcements were made on the national weekly hotline calls. A copy of the instrument was distributed to every employee. To assure anonymity, no personal identifiers were collected. No attempts at follow-up or identification of non-responders for response rate enhancement were undertaken, to respect labor partners' concerns about coercion and possible reprisals.

Data analysis

Data were returned to an independent contractor for scanning, data cleaning and editing. Data were examined using the Statistical Package for the Social Sciences, version 11.5 (16).

Data are presented at the level of individuals (72,349 usable responses) and of the facility (aggregated to 139 usable responses). Data for the former approach are contained solely within the survey. Additional data for the second approach come from records of VHA's Employee Education System, which manages the Prevention and Management of Disruptive Behaviors and Alternative Dispute Resolution programs and records delivered training and granted certificates.

Employee survey data were analyzed at the individual level, to derive factors using traditional data reduction strategies. Factor analysis (SPSS: principal components

analysis, varimax rotation) using the complete data set identified factors from the 94 individual items derived from the OAS and NIOSH instruments. 23 factors are reported with eigen values greater than one. Items that had no factor loadings greater than 0.3 were excluded from further analysis; the remaining items were assigned to factors based on their highest loading score. Factor scores were calculated as the mean value of the component item responses. Factors were labeled with self-explanatory terms agreed upon by the survey committee. Four of these factors represent employee perceptions of “outcomes” resulting from perceived working conditions. These include overall satisfaction, overall quality, turnover likelihood, and stress at work. The authors consider the remaining 19 organizational and psychosocial assessment measures as “exposure” measures, or determinants or drivers of outcomes. Table 1 presents the 23 factors and the items from which they were derived.

Regression models were developed initially using “complete” models (“enter” command in SPSS regression procedures) and further examined using step-wise procedures to explore interactions. Because of the strong colinearity between the 19 independent or “exposure” determinants, regression analyses were unable to develop stable models. Therefore a second-order round of factor analyses using the individual-level data on the 19 independent factors defined 2 “metafactors,” referred to as “exposure metafactors”. The first accounted for 45% of the variance in the 4 outcome factors, and was labeled “employee focus”. The second (accounting for 6%) consisted of the job demands and role conflict factors, elements of traditional “work stress” models (13, 14), here called “professional demands”. Similar analyses at the facility level identified four factors (the same professional demands, pay satisfaction as a single item, and two sub factors from the old “employee focus” factor, termed respectively social support and employee focus). For consistency, data are presented here using the four rather than the two metafactor analyses. Regression models for individuals were developed both as logistic (any) and continuous (number of assaults) Models were run both for individual-level (n=72,349) and facility-level (n=139) data.

RESULTS

Between October and November 26, 2002, 74662 responses were received for a response rate of 36.5%. Over 70% of administrative (17% of all respondents) and about 33% each of clinical/professional, clerical, technical, and wage-grade staff responded. No attempt was made to weight differential response rates in the summary presentations. There was a statistically significant relationship between facility response rate and the metafactor employee focus ($r = .29, p < .0001$). There was no such relationship between response rate and either professional demands ($r = .02$) or assaults ($r = .06$).

Overall 72,349 individuals provided responses usable for the description of violence. On average, across facilities, 13% of employees described at least one assault in the last year, with a range from a minimum of 1% to a maximum of 26%. Table 2 presents the frequencies of individual items in the survey instrument on assault within VHA.

Total bar height in Figure 1 represents the proportion of employees in each occupational category who were assaulted at least once in the last year; the bar segments represent the frequency distribution of the perpetrator of the most recent event. Patients were perpetrators of 64.4% of all assaults, overall. Individuals assaulted by co-workers were significantly younger; more likely to be non-Caucasian, veterans, and African-American;

and belong to a lower pay-grade. Occupational groups traditionally assumed to be of lower-income or educational status (nursing aides, wage-grade employees) had higher absolute rates of assaults by co-employees.

Identification of triggers may lead to intervention strategies. Most patient assaults were triggered by “patient interactions,” whereas the majority of co-employee and supervisor events were triggered by “disputes about work.” Root causes of incidents were not included in the survey, so that the authors are unable to provide further details. Figures 2 and 3 present the proportion of individuals experiencing at least one episode of assault as defined in traditional hospital departments and in “service lines”. There were substantial increases in mental health, geriatrics, nursing, and police/security. Surprisingly, the Readjustment Counseling Service, which serves among the highest-risk group of patients, and social work had relatively low rates.

Although working on average higher numbers of hours per week was not associated with increased proportions of assault, frequent or very frequent non-standard work assignments (floating, shift-switching, and mandatory overtime) were, with overall relative risks of 3.0, 3.4, and 6.0, respectively. (data not presented). For registered nurses, alone, the risks were, respectively, 2.4, 2.6, and 3.3. Further analyses, by various subgroups, consistently showed the same pattern of increased associations.

Figure 4 presents the relationship between at least one assault in the last year and the predominant shift pattern. Any shift work was associated with a 3.2 fold risk of assault. Again, scrutiny within occupational groups, such as all nurses, showed a somewhat higher risk (3.8). Figure 5 presents data on perceptions of security. Strikingly, nursing assistants and licensed practical nurses, the groups with the highest assault rates also described feeling safest. A only 16% of respondents completed the section on perception of security associated with infrastructure characteristics, and those results were deemed to unreliable for presentation.

Scrutiny of assault frequencies and characteristics showed no differences between individuals with up to ten assaults per year by increasing frequencies. On the other hand, individuals who described more than ten assaults per year tended to be non-Caucasian, of lower GS-rating job categories, and older, with more than 20 years of service. In addition, the perpetrator of most recent incident was substantially more likely to be “other”, i.e., neither patient, supervisor, co-worker, patient family member, family member, or institutional customer. The cause was similarly not defined.

Regression models using the two meta-factors as independent variables explored possible explanations of assault at the facility (table 3). Approximately 18% of the variance for a logistic model (“at least one assault” versus no assaults) was explained by the two meta-factors, employee focus and professional demands, and shift work, work assignments, and hours of work. Participation in alternative dispute resolution reduced the likelihood of assault by almost 40%. Data were then aggregated to the facility level, minimizing the influence of outliers and averaging out the perceptions of work climate as registered by individual respondents. At the facility level, 48% of the variance in assault rates was explained by the 2 meta-factors; hours of work, work assignments, any shift work, and the penetration of alternative dispute resolution (table 3).

No relationship was seen between the proportion of individuals in each facility receiving training on prevention and management of disruptive behaviors over the three years before the survey and the proportion of assaults.

DISCUSSION

A first issue to be discussed is whether a survey with a 36% response rate can yield results that are convincing or generalizable. Extrapolation of the number of assaults reported by quality managers in facilities to the total number of employees was within 10% of the total assaults identified in VHA in a survey two years previously (8), a survey with responses from over 95% of the facilities in the system. This suggests that no major over- or under-reporting occurred in the 2001 survey. Similarly, there was no association between response rate and the proportion of individuals assaulted in any given facility, suggesting that these two were in fact unrelated.

Health care is recognized as an occupation with over 50% of assaults in the U.S., despite comprising less than 15% of the US work force based on both federally reported injuries (5). Similarly, a random sample of the US population (6) suggested that mental health workers had a four-fold and registered nurses an almost two-fold risk. Some recent guidelines focus on the recommendations by OSHA (17, 18). The data presented here suggest that most (85%) of the assaults experienced by clinical staff result from patient interactions and generally represent clinical issues resulting from patient care. When those are subtracted, health care workers experience assaults at a rate substantially below those of postal service workers or the US population as a whole (15). No other large health care organizations were willing to examine this issue, although VHA approached several potential partners, so that we are unable to document that this is as widespread a problem as suggested by informal discussions. One reasonable hypothesis is that direct patient contact, where duration of patient contact serves as a measure of “dose”, represents one good measure of risk. This hypothesis appears both reasonable and supported by some evidence, as those with the higher rates (nursing assistants, wage grade employees) also generally have higher rates of physical contact with others. Still, no specific measure of contact with patients or employees, as an “exposure” measure, exists in the survey instrument.

Areas such as geriatrics, mental health, and security have been recently identified as high risk areas in Canada; these employees may have contact with patients who are more likely to be assaulters (19). These specialty areas, and nursing in general, are at greater risk, at least in our system. If such risks can be extrapolated to other systems, these employee groups require training with a greater degree of urgency and intensity than other groups. Similarly, they will benefit from prompt initiation of other recognized effective interventions such as flagging (9).

Whether individuals had received alternative dispute resolution did not appear to affect the likelihood that they would be victims of assaults. On the other hand, the facility-wide penetration of such training was strongly associated with reduced rates of assault. More widespread awareness and skill development appears effective. The generally low penetration of specific violence prevention training was not associated with decreased assault rates, either because of low statistical power or because simply too few individuals have received such training.

Individuals experiencing assaults from coworkers appear to represent a different population. Some intervention strategies (such as the development of personal safety skills and de-escalation abilities) may be effective for both. Some institutional strategies (environmental design) might be equally effective even though their overall effectiveness has been shown only in retail, cab driving, corrections, and community work (21). On the other hand, specific interventions targeted at root causes, such as conflict in the work place, may require very different and far more targeted approaches as patient and co-worker assaults appear to result from very different phenomena.

Several strategies appear important in the context of these results.

First, understanding drivers of patient-associated violence is important. The increased frequency of assaults associated with work reassignments may be due to a broad range of factors, from patient expectations to providers through co-worker support or individual fatigue associated with hours. Specific knowledge of patients (22) clearly helps reduce violence. Little information on the direct pathway for the other factors is recognized. These must be scrutinized systematically for root causes and generate intervention and prevention strategies as even repeat assaulters may have identifiable triggers.

Second, although violence prevention education did not appear effective, the penetration of an 8-hour session on alternative dispute resolution was effective at the facility level. In addition to de-escalation and personal safety skills, whose utility is self-evident even if not documented statistically, other approaches to violence prevention appear warranted. The failure of general violence prevention education as opposed to alternative dispute resolution training may reflect the higher (by an order of magnitude) penetration of the latter, and suggests that institutional commitment to education, and training more people, may be as important a factor to making the work place safer as great educational content.

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Table 1: Individual Level Factors (with metafactors onto which exposure factors loaded)

Initial factors	Number of Items	Cronbach alpha	Metafactor (Indiv. Level)	Metafactor (Facility Level)
Leadership	9	.9295	Employee Focus	Employee Focus
Resources	9	.8630	Employee Focus	Employee Focus
Rewards & Recognition	6	.8594	Employee Focus	Employee Focus
Planning & Evaluation	6	.8203	Employee Focus	Employee Focus
Diversity Acceptance	6	.8890	Employee Focus	Social Support
Employee Development	5	.8526	Employee Focus	Employee Focus
Cooperation	4	.8299	Employee Focus	Employee Focus
Supervisory Support	4	.8935	Employee Focus	Employee Focus
Innovation	5	.8935	Employee Focus	Employee Focus
Customer Service	3	.8195	Employee Focus	Employee Focus
Work & Family Balance	3	.5740	Employee Focus	Social Support
Conflict Resolution	2	.7964	Employee Focus	Employee Focus
Change Assistance	2	.7184	Employee Focus	Employee Focus
Pay Satisfaction	single item	--	Employee Focus	Pay Satisfaction
Job Control	3	.7834	Employee Focus	Employee Focus
Safety Climate	4	.8823	Employee Focus	Employee Focus
Coworker Support	2	.7460	Employee Focus	Social Support
Role Conflict	2	.3243	Professional Demands	Professional Demands
Job Demands	3	.7436	Professional Demands	Professional Demands
Outcome Scales				
Quality	2	.7523	Separate Outcome	Separate Outcome
Satisfaction	4	.7859	Separate Outcome	Separate Outcome
Turnover Intention	2	.6814	Separate Outcome	Separate Outcome
Stress	2	.8424	Separate Outcome	Separate Outcome

Table 2: Frequency of at least one assault within the last year for all occupations combined

Number of times for each event	0		1		2	
	N	%	N	%	N	%
Thrown something that could hurt you	70119	93.9	1974	2.6	819	1.1
Pushed, kicked, grabbed, slapped, hit you	67549	90.5	2479	3.3	1439	1.9
Hit you with an object	71374	95.6	1283	1.7	590	0.8
Beat you up	73530	98.5	246	0.3	76	0.1
Threatened with gun, knife, or other weapon	71833	96.2	1249	1.7	457	0.6
Used gun, knife, or other weapon	73619	98.6	180	0.2	76	0.1
Raped or attempted to rape you	73753	98.6	108	0.1	37	0.0

Table 3

	Individual level (logistic regression) Beta coefficient, standard error Odds ratio, and p-value (n=72,)			Facility (linear regression) Beta coefficient standard error, and p- value (n=139)	
	Beta	p- value	odds ratio	Beta	p-value
R2	.183		<.001	.476	.,001
Employee focus	-.007	.789	.993	-.336	.000
Social support	-.250	<.0001	.779	.116	.187
Professional demands	-.47	<.0001	.624	.061	.419
Pay satisfaction	-.044	<.0001	.957	.107	.134
Any shiftwork	1.218	<.0001	3.379	.549	.000
Floating	.486	<.0001	1.626	.058	.457
Mandatory overtime	.685	<.0010	1.983	.076	.346
Switching shifts	.829	<.000	2.291	-.112	.175
Hours of work	.003	<.906	1.003	.021	.796
Alternative dispute resolution	.015	<.536	1.016	.185	.004

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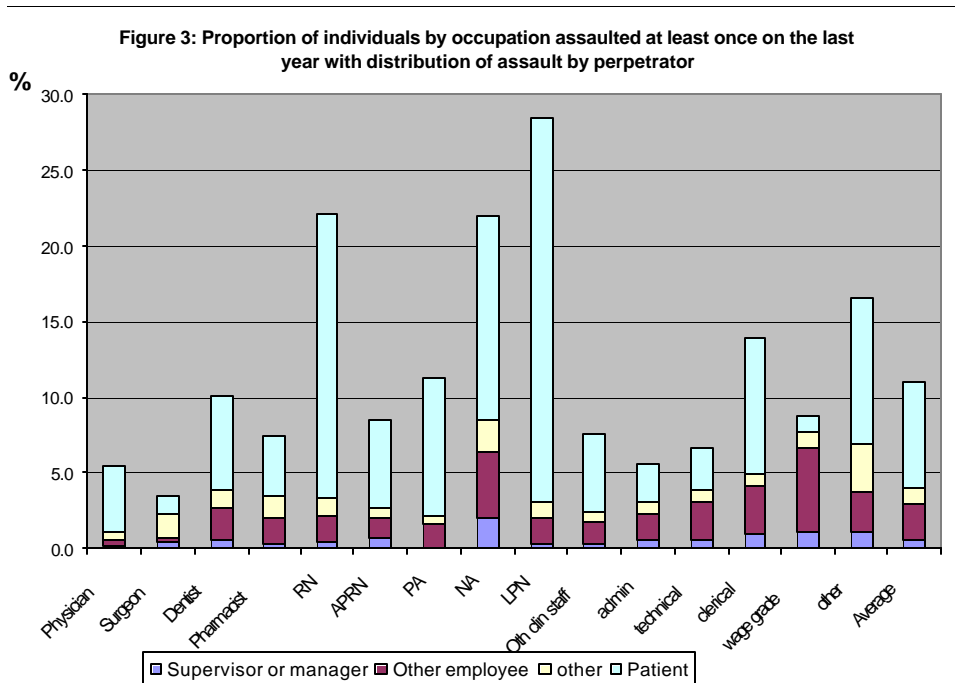
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ATTACHMENT D: FOLLOW-UP SURVEY TOPICS/QUESTIONS

Has participation in PMDB made you feel safer in the workplace?

Has participation in the PMDB course made you change your behavior? Can you name a specific instance where you did something differently?

Have you used any of the specific skills

Was participation in the course worthwhile?

What is your job series?